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Summary.

A DAIRYMAN has been fined at Greenwich for adding boric acid to milk.

WE give another useful collection of formulæ from a retired druggist's recipe-book.

A NEW edition of the Japanese Pharmacopœia has been published in the vernacular and in Latin.

DR. CARL SCHORLEMMER, the well-known chemistry professor of Owens College, Manchester, died this week.

WE give particulars in an Editorial note of the new Italian Pharmacopœia which is the first authoritative Pharmacopœia for that country.

MR. BEVAN, of Cross & Bevan, has been appointed analyst for Middlesex, the emoluments of which office amount to about 1,000*l.* a year.

THE number of festivities in connection with the drug-trade which we report in our News section seems to indicate a healthy state of trade at present.

THE Association of Owners of Proprietary Medicines write us intimating their intention to contest the action of the Pharmaceutical Society against vendors wherever practicable.

THE executive of the North British Branch met on Wednesday, re-electing Mr. Ewing as chairman, and discussing the arrangements for the Pharmaceutical Conference meeting next month.

OUR Irish News contains the report of the melancholy suicide of Mr. Harry Napier Draper, one of the best known and most respected of Irish pharmacists. Mr. Draper's mind had evidently given way.

IN view of the present high prices of henbane and its extract the account of a visit to a Hitchin drug-farm, which we publish, will be read with interest. The crop of henbane this year is below half the average.

IN response to many complaints we have had the debentures and other documents issued by the Half Price Closed Letter Company (Limited) carefully examined, and we publish an opinion in an Editorial note.

QUIETNESS reigns in commercial circles, and business is somewhat dull. Higher prices were obtained at the cinchona sales on Tuesday, and owing to the shortness of the present season's crop otto of rose has advanced.

ON Wednesday morning last a disastrous fire broke out at the premises of Sir James Haslett, chemist and drysalter, Belfast, and before it could be extinguished damage was done to the extent of 50,000*l.* All the property destroyed was insured, however.

THE chemist's assistant at Northampton indicted for having obtained money by false pretences by selling as Beecham's other pills in Beecham's boxes which he had obtained from chemists, has been sentenced to ten months' imprisonment with hard labour.

THE Judge of the Selby County Court, while giving judgment for two penalties of 5*l.* each against an unregistered person proved to have sold poison, has refused to order a further penalty of 5*l.* sued for by the Pharmaceutical Society from the same defendant for keeping open shop for the sale of poison. A case for a superior Court has been granted.

PUBLISHER'S NOTICE.

FIRMS who wish to produce a good effect in our Summer Number (July 30) should, without delay, set about preparing a handsome circular for insertion therein. We give the best distribution of druggists' circulars which can possibly be obtained, and we do it at a fraction of the cost of postage. This is the way to advertise profitably. Particulars will be supplied by the Publisher.

Multiply this by Eleven Thousand.

A South American firm (recent subscribers) writing to us on May 9, remark incidentally that last year (before they subscribed) we sent them our Summer and Winter issues, from the advertisements in which they spent 2,000*l.*

They Know its Value There.

The head of a large firm in Barbadoes writes: "Some time since I was glad to have the pleasure of seeing your representative, who told me he was having a pleasant and profitable trip, and finding everyone well pleased with your paper. I myself have reason to esteem THE CHEMIST AND DRUGGIST very highly indeed, as, living so far from headquarters, I am indebted to it for an incalculable fund of information of a very valuable nature."

Gazette.

PARTNERSHIP DISSOLVED.

Martin, C. J., and Martin, S. W., under the style of J. Martin & Sons, Chesterfield, veterinary surgeons.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Hyatt, William Herbert, Harlington, chemical and scientific engineer.

ADJUDICATIONS.

Burgess, Edwin, late High Holborn, W.C., present residence unknown, patent-medicine vendor.

Pew, Edward, and Roberts, Frederick Charles, trading as Pew, Roberts & Co., Egham, vinegar-brewers.

Trade Notes.

MR. FREDERICK BOEHM sends us some fine crystals of sugar of milk made by Mr. Carlo Erka, of Milan, for whom he is agent. It is supplied both in crystals and powder.

MESSRS. JOHN RICHARDSON & Co. (LIMITED), Leicester, ask attention to the circumstance that, under misapprehension, orders for them have been sent to a wrong address. They ask correspondents to be exact in addressing their letters to them at 10 Friar Lane, Leicester.

MESSRS. MAY, ROBERTS & Co., of 9 Clerkenwell Road, have just issued their revised half-yearly (July) price-list, and will send a copy to any member of the trade post free. The list is well illustrated. We notice that the price of Higginson's enemas has been lately reduced, and are quoted at a very low figure. The firm claim to give their customers the benefit of the circumstance that they employ no travellers.

We understand that Messrs. Hodgkinsons, Treacher & Clarke, of Upper Whitecross Street, E.C., have admitted into partnership Mr. John Slinger Ward, pharmaceutical chemist, who has been director of the firm's laboratories for the past nine years. Mr. Ward was formerly associated in a similar capacity with several London and provincial houses before entering his present firm's employment, having after his apprenticeship gone through the "Square" school, and thence to Messrs. John Bell & Co.'s laboratory. The new partnership dates from July 1, and the name of the firm will remain unaltered.

MARRIAGES.

AINSLIE—DICK.—At 4 Colinton Road, Edinburgh, on June 14, by the Rev. R. Dick, U.P. Church, Colingsburgh, assisted by the Rev. W. Lyon Riach, M.A., Grange Parish Church, William Wood Ainslie, of Messrs. Gardner & Ainslie, chemist, Edinburgh, to Sibella Mary, youngest daughter of the late William Dick.

GOLIGHTLY—CUTTING.—On June 22, at the Wesleyan Chapel, Selby, by the Rev. G. E. Cutting (uncle of the bride), J. W. Golightly, A.P.S., Pudsey, Leeds (late of Durham), to Edith Cutting, Selby.

HUNTRODS—HIRST.—On June 7, at Burley Lawn Free Church, by the Rev. E. Boocock, of Heckmondwike, Walter Huntrods, druggist, to Jennie, eldest daughter of Mr. Geo. H. Hirst, of Kikstall.

SHERA—TOWLER.—On June 29, at the Cathedral, Manchester, by Rev. Canon Winstanley, William Arthur Shera, pharmacist, Acton, W., youngest son of the late James Dundas Shera, of Horncastle, to Laura Edith, only daughter of the late John Henry Towler, of Rydal Mount, Levenshulme, Manchester.

DEATHS.

BOOTH.—The death is announced of Mr. John Booth, chemist and druggist, of Heckmondwike, Yorkshire. Aged 76. He was one of the founders of the Heckmondwike Gas Company, and for many years its secretary.

LASCELLES-SCOTT.—On May 30, at Ulverstone, Lancashire, Mr. C. W. Lascelles-Scott, chemist and druggist. In his 26th year. The deceased was a son of Mr. Wentworth Lascelles-Scott, F.C.S., &c., of the Laboratory, Forest Gate.

LEECH.—On June 27, Mr. Frederick Leech, chemist and druggist, of Tideswell, Derbyshire. Aged 65.

DR. CARL SCHORLEMMER died at Manchester on Monday, June 27, in the 58th year of his age. He was born at Darmstadt, and studied principally at Giessen. He came to England in 1858 as private assistant to Sir Henry E. Roscoe, who had shortly before been appointed to the chair of chemistry at the Owens College. On the resignation of Mr. Dittmar, as assistant professor of chemistry, in 1861, Schorlemmer became his successor. This gave him time for original research. He devoted his work principally to the hydrocarbons, and his studies went far towards revolutionising the ideas of chemists

as to the constitution of these bodies. His discovery of the identity of the two bodies known as dimethyl and ethylhydride paved the way for further advances in organic chemistry which have proved to be of much widespread importance. The Royal Society catalogue gives the titles of thirty-two papers by Mr. Schorlemmer, most of which mark an important step. His work was recognised by the Royal Society electing him a Fellow in 1871; and the University of Glasgow distinguished him by the honorary degree of LL.D. A chair of organic chemistry was founded for him at the Owens College, and in connection with Sir Henry Roscoe he has been for many years engaged on the great treatise on chemistry published in their joint names, which, as far as it has been published, goes already beyond what any other textbook has given us; but the volume which was to complete the series will remain unwritten. Dr. Schorlemmer was not a brilliant lecturer, but he was an eminently successful laboratory teacher.

SHUBOTHAM.—On June 23, at Sutton Coldfield, Charles Shubotham for thirty years in the retail establishment of T. & W. Southall, Birmingham. Aged 51.

WOOD.—On June 16, at his residence, Manor View, Barnsley, on the 57th anniversary of his birthday, Mr. Eugene Wood, senior partner in the firm of Wood Bros. & Co., of the Borough Flint Glass Works, Barnsley.

Notes of Nobelines.

MICROSCOPIC BOTANIC SPECIMENS.

MR. EDWIN TERRY, F.R.M.S., a chemist at 1 Clifton Terrace, Nightingale Lane, S.W., has produced in a very neat folding case a set of microscopic slides of botanic subjects, intended to illustrate and aid the study of elementary structural botany. There are twelve slides in the case, on one of which three specimens are mounted. We have been astonished to note what a wide range of instruction is comprised in the fourteen specimens thus submitted to the student by Mr. Terry. The structure of seeds, roots, leaves, the cellular arrangement of exogenous, endogenous, and acrogenous plants, stomata on the cuticle of the leaf, cystoliths, annular rings, spiral, pitted, scalariform, and laticiferous vessels are all represented by judiciously chosen examples. The student furnished with a fairly good microscope can lay a good foundation of botanical science with the aid of these specimens. We were at first inclined to suggest that Mr. Terry should enclose a short explanatory treatise with each case, but it is probably the better way to leave the student to investigate each subject for himself from the usual text-books. The sections are mounted and stained in the most skilful manner, and the case with slides complete is sold for 12s. Mr. Terry can hardly expect to make much profit out of his venture; but he is entitled to the credit of having contributed a very useful labour of love for the benefit of beginners in botany.

CARBOLINE.

THIS is the name under which Mr. Henry Ellison, jun., of Cleckheaton, has introduced a new disinfectant containing the active bactericidal principles of coal-tar combined with eucalyptus oil. Carboline is a blackish syrupy fluid, which forms an emulsion on the addition of water, and Mr. Ellison claims that, although it contains carbolic acid, it is non-poisonous, while proof is advanced showing that as a disinfectant it is as powerful as carbolic acid. As the fluid is cheap and neatly put up, chemists might do well to encourage the sale of it, if thereby the fearful mortality from carbolic acid would be decreased. The similarity in the names should aid in this, and carboline is not unlike crude carbolic acid in appearance.

PHOTOGRAPHIC NOTES.

"ROUGHEST" BROMIDE-PAPER.

THE Fry Manufacturing Company have for some time been selling a very rough-surface paper. They have just published a beautiful print, entitled "Going Out to Sea," on this paper, toned with uranium, from a negative by Mr. A. F. Golding. The effect of the rough surface is exceedingly artistic.

"HOW TO BE A SUCCESSFUL AMATEUR PHOTOGRAPHER."

THAT Mr. W. J. Lancaster, F.C.S., has a keen appreciation of the failings and possibilities of the average amateur a glance at his pretty manual amply demonstrates. It is a guide for the field and the dark-room, and a compact catalogue of his firm's (J. Lancaster & Son, Birmingham) manufactures. The hints and instructions which are given in the manual are thoroughly to the point, and really tell the amateur all that he should know to overcome the many difficulties which one meets in beginning photography. A proof of the great popularity of the manual is the fact that the present edition makes the fiftieth thousand. It is a prettily printed and illustrated book of 148 pages, and contains prices of the leading manufactures of the firm, aluminium mountings being a special feature.

FALLOWFIELD'S PHOTOGRAPHIC ANNUAL.

MR. JONATHAN FALLOWFIELD, of 146 Charing Cross Road, W., has sent us an advance copy of the thirty-sixth issue of his well-known annual. It is astonishing how rapidly this volume grows in bulk, for it now comprises 592 pages and 806 illustrations. It is truly a "comprehensive catalogue of photographic materials, chemicals, and apparatus," for it gives particulars, prices, and, in most cases, illustrations of every conceivable requisite for amateur and professional photographers, and the fact that the goods of all the leading manufacturers are included gives the catalogue a unique value to chemists who stock photographic apparatus. The "Annual" is very well put together, shows here and there originality in method, and is well worth the twelve penny stamps for which a copy will be sent to any who apply for it. We should add that the "Annual" contains instructions for developing all the leading plates and printing papers, and this section will be specially appreciated by chemists.

SHEW'S POCKET AND HAND CAMERAS.

MESSRS. T. F. SHEW & Co have had wonderful success with their "Eclipse" folding hand-camera, and, in order to meet present-day requirements, the firm have put upon the market a guinea "Pocket Camera," made much upon the lines of the "Eclipse." The lens, fitted with instantaneous shutter, works at F. 11. Each camera is sent out with three double backs, the whole weighing only 14 oz. The "Repeatograph" is a camera of the magazine type. The changing of the plates is exceedingly simple, one movement changing the plate and resetting the shutter. No metal sheaths

are used, and the plate, after exposure, falls into a well, and can be easily taken out.

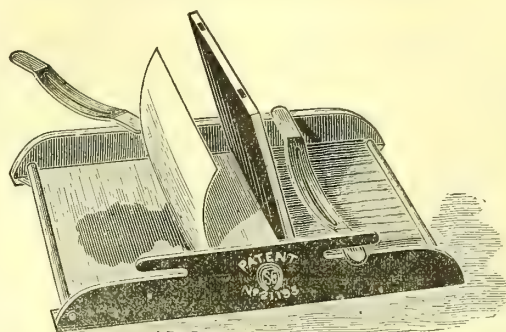
CARAVAN PHOTOGRAPHY.

THE Duke of Newcastle and Mr. Gambier Bolton, F.Z.S., have this week taken the road at Tunbridge Wells in the caravan "Bohemian" with the intention of making an extended tour with the camera. The caravan is most complete, both as a residence on wheels and a photographic atelier.

THE "DAISY" METAL PRINTING-FRAME.

THIS frame is of metal, very compact, light, and will stand rough usage; the negative is almost flush with the front of the frame, so that no shadows fall upon the print.

Being of metal, it does not warp or swell, as is too often the case with ordinary printing-frames. The weight is something less than half, and the frame measures considerably



less. The "Daisy" frames are manufactured by Messrs. T. F. Shew & Co., whose showrooms at Newman Street, Oxford Street, W., are worth a visit.

TWO NEW DEVELOPERS.

MR. T. HAUFF, of Stuttgart, has introduced two new alkaline developers, which are said to give excellent results when used with either gelatino-bromide plates or paper. The first is "Metol"—a salt of mono-methyl-para-amido-meta-cresol. The following formulæ are suggested by Dr. Eder:—

Metol-Potash Developer.

A.				Parts
Distilled water ..	..	..	..	1,000
Neutral sodium sulphite ..	..	..	..	100
Metol ..	..	..	..	10
B.				Parts
Distilled water ..	..	..	..	1,000
Carbonate of potash ..	..	..	..	100

For use mix 3 parts of A with 1 part of B. The developer will keep, or it can be used at once. For slow development, use 6 parts of A, 1 part of B, and add 2 parts of water. The "Metol" developer only loses slightly in activity by developing several plates in the same solution; the old developer acts less energetically, but may be used for over-exposed plates. Another form in which "Metol" may be used with good effect is the following:—

Metol-Soda Developer.

A.				Parts
Distilled water ..	..	..	..	1,000
Sodium sulphite (crystal) ..	..	..	..	100
Metol ..	..	..	..	10
B.				Parts
Distilled water ..	..	..	..	1,000
Carbonate of soda (pure crystal) ..	..	..	..	100

For use mix in equal parts. The developer keeps well. The second new developing substance is "Amidol," which, mixed with sodium sulphite, gives a developer of great energy, and exerts its full power without the addition of alkaline carbonate or caustic. The following formula acts as an excellent developer:—

				Parts
Amidol ..	..	..	..	5
Sodium sulphite ..	..	..	..	50
Water ..	..	..	..	1,000

Dr. Eder, writing upon it, says: "This develops the image on gelatino-bromide of silver considerably quicker than pyro. and soda; the image quickly gains density in developing, and shows beautiful half tones. There is not the slightest tendency to the formation of fog or blisters. The plates attain a sensitiveness in this developer which cannot be exceeded with any of the other known developing substances."

LEAVES FROM A RECIPE-BOOK.



COUNTER - PRESCRIBING in the pharmacy must not include such diagnostic operations as those exhibited herewith. The pulse will always have an honourable association with pharmacy, in that the first man to clearly appreciate the value of its variations, and to use them intelligently in the practice of medicine, was the first President of the Pharmaceutical Society of Ireland—Sir Dominic John Corrigan, M.D. This noted Irishman's studies of the pulse have had a universal recognition, and there are even some peculiar

liar beats which carry his name with them. The condition of the tongue as an aid to diagnosis is an old landmark in medicine, although it is only within recent years that anything like precision in its characters has been demonstrated. These things are, however, of little moment to many of those who read these lines, for woe betide them if they venture to look at a tongue or feel a pulse across their counter! Modern law regards such things with equanimity, for while the Medical Acts safeguard the qualifications and titles of educated medical practitioners, they avoid reference to anything approaching counter-prescribing, and make no pretence to prohibiting it. It is the time-worn Apothecaries Act which catches all who venture to poach on the medical practitioner's ground, and this Act applies solely to England and Wales. The public are not so cognisant of its provisions as chemists are, consequently in their innocence they daily lay many a pitfall for the obliging medicine-man in seeking remedies for common complaints. The most legitimate manner of meeting such demands is to have in stock put-up specialties of well-tried value, and general rather than specific in their effects. In a former selection from the recipe-book (*THE CHEMIST AND DRUGGIST*, January 30) we gave some excellent formulæ for well-tried remedies, and to these we now add some specialties for other classes of complaints.

Diarrhoea-mixtures.

(1)

Tinct. opii	3iss.
„ cinnamomi comp.	3ij.
„ kino	3iv.
Mist. cretæ ad	3viij.

M.

[Label.]

Compound Chalk Mixture.

For adults only.

Dose.—A tablespoonful every hour for three doses, then every four hours while the diarrhoea lasts.

This is a prescription of the late Dr. Bickersteth's, Liverpool. It is a simple and effectual remedy in cases of summer bowel-complaint.

(2)

Poly. cretæ aromat.	3ij. 9j.
„ rhei	3ij.
„ zingiberis	3j.
Magnes. carbonatis pond.	3j.
Sodæ bicarbonatis	3j.
Ess. menthæ piperitæ	3ij.
Tinct. opii	℥xl.
„ catechu	3ij.
Spt. ammon. arom.	3ij.
Tinct. kino	3ij.
Spt. camphoræ	3j.
„ chloroformi	3j.
Tinct. cardam. co.	3ij.
Aquæ	3ix.

Mix all the powders together and make into a thin paste with the water, gradually adding more water and the spirituous ingredients to form a uniform mixture.

Dose for Adults.—Three tablespoonfuls to be taken on the first appearance of the disorder, and half the quantity to be repeated every three hours, if necessary.

Dose for Children.—Between 10 and 12 years of age, a tablespoonful should be given every three or four hours; between 3 and 6 years, a dessertspoonful every three or four hours, mixed with a small quantity of water slightly sweetened.

From the length of this recipe it will be judged that it is an old one, and although it does not conform with modern ideas of prescribing, it is a good remedy, especially correcting the fermentative condition in the lower bowel, which is a prevailing cause of bowel-complaint. The mixture has been sold at the following rates: 4-oz. bottles, 1s. 6d.; 6-oz., 2s.; and 8-oz., 2s. 6d.

Hop Bitters.

Glycerini	3iv.
Spt. vini rectificati	3ij.
Tinct. podophyllini ammon.	3vi.
„ gentianæ co.	3vi.
Succi taraxaci	3iv.
Inf. lupuli concent.	3vi.
„ calumbæ concent.	3iv.
„ senegæ conc.	3ij.
Aquæ ad	cong. ss.

Mix in the above order, set aside for twelve hours, and filter through carbonate of magnesia.

Dose.—One or two tablespoonfuls twice or three times a day before meals.

A nice preparation, possessing veritable hepatic and tonic properties. It has sold well in 8-oz. bottles at 1s. 6d., and 16 oz. 2s. 9d.

Itch ointment.

(Suitable for cutaneous eruptions generally.)

Hydrargyri perchloridi	gr. xvj.
Pulv. ammonii chloridi	gr. xvj.
Hydrargyri ammoniati	9ij.
Plumbi acetatis	9ij.
Sulphur. præcipitat.	3ij.
Hydrarg. sulphurat.	q.s.
Adipis benzoati	3xvj.

Triturate the powders together with sufficient vermilion (3j.) to impart a pink tint to the ointment, then work in the benzoated lard gradually to produce a smooth preparation. Perfume with English oil of lavender and ess. bouquet.

“To be applied at bedtime, and after washing in the morning.”

Two-ounce pots of this retail at 1s. It is a good application for many skin-disorders, such as eruptions on the forehead and is a certain cure for itch.

Scurvy-ointment.

Zinci oxidi	3j.
Hydrarg. sulphurat.	gr. v.
„ ammoniat.	gr. xv.
„ subchlor.	5ss.
Adipis benzoat.	3j.

Mix intimately.

“To be applied morning and evening.”

Ointment for Sore Nipples.

Tannin	3j.
Bismuthi subnit.	3ij.
Vase lini	3xxx.

Mix intimately.

“The nipples to be well smeared with this, and kept so while the child is not nursing.”

VETERINARY MEDICINES.

There are few things which catch the eye of average horsey men so quickly as a good pedigree. Most of them can rattle off the forbears of a horse as “pat” as the latest music-hall ditty. If any man amongst them has a recipe, ten to one it has a pedigree also. He had it from Bill Jones, who had it from Lord Gumboll's trainer, and Lord Gumboll got it from the Duke of Wellington's vet., or something of that sort. The first formula, which we take from

the veterinary section of the recipe-book is a "card" of that kind. It is for the celebrated

Newmarket Physic-paste.

The note appended to it sets forth that "this paste was supplied forty years ago to the leading trainers and turfites—viz., the late John Scott, 'the Wizard of the North' in racing circles, the late Colonel Peel, Count Batthyany, the late Marquis of Exeter's trainer, the late John Day (Lord Palmerston's trainer), Jem Robinson (the celebrated jockey), Frank Battlis, 'Nat' (Colonel Peel's jockey), Sam Rogers, Job Marron (the rider of Teddington), and many others." There is a fortune in the recommendation, used with due discrimination, and the recipe is a good one too. It is this:—

Aloes barbadensis	℥xiiijss.
Saponis communis	℥ivss.
Potassæ carbonatis	℥xviij.
Ol. anisi	℥vj.
Aquæ	℥xx.

Cut the soap into small shreds and put into a pan with the water. Heat and when thoroughly melted and quite smooth add the carbonate of potash and the aloes. Let it simmer for some time, stirring frequently until the aloes is dissolved. If allowed to boil, the mass will come over before melted. Lastly add the oil of anise, and stir it well in.

A small piece of the mass taken out before the anise is added, and cooled on a slab, will tell whether the paste has been brought to a proper consistence or not. Twelve drachms of the mass contains 8 drachms of aloes. The paste used to be supplied to trainers in 3-lb., 4-lb., and 7-lb. tins. There is no reason why it should not be sold as balls.

Tonic-balls for Horses.

Pulv. cinchonæ	℥viij.
Pulv. gentianæ	℥iv.
Pulv. zingiberis	℥j.
Mellis	q.s.

Mix the powders, and make into a mass with the honey. Divide into twenty balls.

A ball may be given morning and evening.

Worm-balls for Horses.

Pulv. antim. tart.	℥iv.
" jalapæ	℥iss.
" zingiberis	℥ij.
" aloes barbad.	℥ij.
" sapon. hispan.	℥ss.
Ol. caryophylli	℥ss.
Syrupi simplicis	℥j.
Mucil. tragacanth.	℥ss.

Make a mass, and divide into 1-oz. balls.

Directions: Give a ball after a very light meal at night, repeating in two or three days if necessary. A tonic-ball should be given once a week or else a tablespoonful of tonic and condition powder every other day to horses which are subject to worms.

Cough-balls for Horses.

Pulv. ammoniaci	℥iij.
" scillæ	℥j.
" camphoræ	℥j.
" zingiberis	℥j.
" sapon. hispan.	℥ij.
Potassæ nitrat.	℥ij.
Syrup.	q.s.

Make into a ball.

"One ball to be given twice daily."

Lotion for Grease in Horses' Heels.

Poly. aluminis	℥j.
Acid. sulph. dil.	℥j.
Aquæ ad	℥xx.

M.

"To be used frequently."

Stopping for Horses' Heels.

Stockholm tar	℥viij.
Tallow	℥viij.
Lard	℥viij.
Beeswax	℥ij.

Melt the last three ingredients, then add the tar, and stir up well.

Worm powders for Horses.

Sulphur. nigri	℥j.
Pulv. antim. tart.	℥j.
Bol. armen.	℥j.

Mix thoroughly in a mortar.

Directions: To be given after a very light mash or other meal. For ponies, a half to two-thirds of the powder is sufficient. A physic-ball should be given next morning.

One powder, 8d.; three, 1s. 9d.

Diuretic or Farcy Balls.

Resinæ flavæ	℥ij.
Potassæ nitrat.	℥viij.
Saponis hispan.	℥viij.
Syrupi simplicis	q.s.

Make a mass, and divide into 5x. balls.

These have sold at 5s. a dozen. They are a good and efficacious medicine.

Stimulating White Liniment

(for Cattle).

Ol. ricini	℥ij.
Ol. rapii	℥ij.
Ol. terebinthæ	℥ij.

Shake well, and add—

Liq. ammoniæ fort.	℥iij.
Aquæ	℥iij.

Shake vigorously again and for some time.

An excellent liniment, to be used as other popular preparations of the same nature.

Mixture for Ewes after Lambing.

Tinct. opii	℥ss.
Æther. rectificat.	℥ss.
Tinct. lavand. co.	℥vj.

M.

Directions: Three tablespoonfuls mixed with a teacupful of water to be given for a dose.

Distemper-balls for Dogs.

Antimon. tart.	gr. iij.
Hydrarg. subchlorid.	gr. xvij.
Pulv. jalapæ	℥j.

Make a mass with glycerine of tragacanth, and divide into six balls, or twelve balls if for dogs under six months.

[Label.]

Distemper-balls for Dogs.

Prepared from a Newmarket Recipe.

Give one ball every morning. The dog must be kept shut up, so as to prevent infection of other dogs.

Balls for Red Mange in Dogs.

Hydrarg. subchlor.	gr. vj.
Pulv. jalapæ	gr. xvj.
Antim. tart.	gr. ij.
Glycer. tragacanth.	q.s.

Mass, and divide into four balls.

"Give one ball every morning."

Lotion for Red Mange.

Sulphur. vivum	℥ss.
Turpentine	℥j.
Train oil	℥iij.

Mix.

"To be applied to the parts several times a day."

Mange-ointment for Dogs.

Sulphur. nig.	℥ij.
P. hellebor. alb.	℥vj.
Adipis	℥iv.
Ol. olivæ	q.s.

Make an ointment.

"To be used frequently."

DECEIT AND FRAUD.

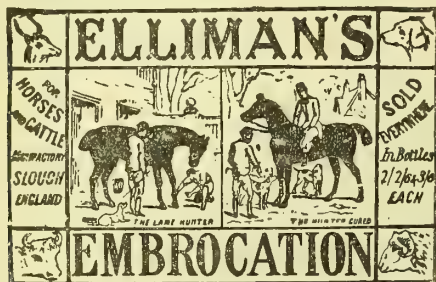
Registered "SANITAS" Trade Mark.

The "Sanitas" Company, Limited, having ascertained that a Chemist has been selling a disinfecting fluid in bottles, wrapped to imitate in colour and effect the 1/- bottles of their Fluid, respectfully request the trade to kindly furnish them, in confidence, with the names and addresses of all persons so offending, or passing off goods made by themselves and supplied when executing orders for "Sanitas" preparations, so that immediate proceedings may be taken against parties guilty of such contemptible dishonesty.

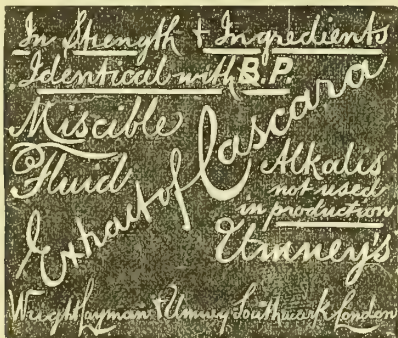
The "Sanitas" Company, Limited, would also like to be favoured with the name and address of any printer who offers to supply such wrappers to the trade.

THE "SANITAS" CO., LIM., Bethnal Green, E.

SHOW CARDS, 24×17 or 17×12,
Free to any address in the United Kingdom.



See first page, facing inside of front cover, in this issue, for latest particulars.



YOU CAN'T READ THIS
WITHOUT YOUR SPECTACLES!

Day's Oil of the Night.
Is an Embrocative Balm for the People, and a source of profit to the Retailer.
1s. 1½d. and 2s. 9d. NO CUTTING.

DAY & SONS, CREWE.

SILICATED CARBON
FILTERS

PATENT SELF-AERATING
MOVEABLE BLOCKS
WORKS, BATTERSEA LONDON. S.W.

MOSS'S Mixes with Water.
Certain and Pleasant.

Not Nauseous.

"A great improvement."

"A very elegant preparation of this drug."

"Superior to anything yet introduced."

—Extracts from Letters.

See the Medical and Pharmaceutical Press.

In 1-lb. and 5-lb. bottles, through any Wholesale House, or from the only makers—

JOHN MOSS & COMPANY,
Galen Works, New Cross Road, LONDON, S.E.

MEDICAL ELECTRICITY.

EVERY DESCRIPTION OF

Galvanic, Faradaic, and Electro-Magnetic
Machines and Electrodes, Galvano-Cautery and
Lighting Instruments.



Lists Free. Descriptive Catalogue, 100 Illustrations,
32 pages, 4 stamps.

GENT & CO., LEICESTER.

IMPORTANT TO CHEMISTS.

NOVEL "COUNTER ADJUNCT"
FOR JULY.

See page 48 (bottom folio).

EVANS, LESCHER & WEBB, LONDON. | EVANS, SONS & CO., LIVERPOOL.

Savaresse's Sandal Wood Oil Capsules are now in White Enamelled Metal Boxes.

MAKE YOUR OWN SYRUP. FERRI IODIOI WITH

Fletcher's
Concentrated Liquors

Editorial Comments.

THE PATENT-MEDICINE TRADE.

It will be observed that we are favoured this week with a communication from that interesting body "The Association of Owners of Proprietary Medicines," which we print with pleasure. This Association has not been particularly obtrusive, and though most of us were aware of the existence of some such body, we have always had, and have still, but vague notions of its constitution and labours. The Association has, we believe, been in existence a great many years, and though reluctant to assume a militant attitude, is generally believed to be well provided with the sinews of war. However that may be, we are certainly right in asserting that the Association, if select and modest, is influential and determined. The letter which we now publish indicates that it is putting its back against the wall.

We can understand the feeling of soreness with which the patent-medicine makers contemplate the threatened attack on their interests by the Pharmaceutical Society. We presume they have some definite evidence as the basis of their

reference to "an engagement entered into by which, in consideration of this Association not objecting to the Pharmacy Act, 1868, they [the Pharmaceutical Council] expressly, and as absolutely as possible, agreed that *bonâ-fide* stamped medicines, known then and now as 'patent medicines,' should be exempt from the operation of the Act." It was a curious engagement to enter into, and we must say that the patent-medicine proprietors showed less than their usual acuteness in accepting an exemption clause so loosely worded as that on which they now want to rely. But it is undoubtedly the fact that there was a general sort of understanding in the trade, though not perhaps in the Legislature, that medicines such as those alluded to should be unaffected by the Act. It does not seem that the question of the meaning of the clause in question was raised at all in Parliament, and it is quite conceivable that the members who gave careful consideration to the Act may have argued to themselves that the exemption was reasonable, understanding, as they would do, the term "patent medicine" in its strict sense. For, they might have thought, the composition of such a preparation being revealed to the public, and its preparation being protected in consideration of heavy fees, there was less necessity, and it would be hardly fair, to put special restrictions on its sale.

However this may be, the question is, we suppose, to be fought out, and we are glad to hear that the Association of Owners of Proprietary Medicines intends to contest cases thoroughly. We shall, at least, get definite interpretations of the Act, and the public and unregistered traders will learn with more certainty what is really the law on the subject.

With this letter from the Association of Owners of Proprietary Medicines, we print another from "One of the Large Proprietors" individually. We can testify to the justice of this signature, though we understand the preference shown by this proprietor for anonymity. His letter is, however, a sign of the times. We do not suppose his dream of the Pharmaceutical Council negotiating with mere traders is realisable. Apart from the fact of their dignity, it must be remembered that they would have no right to barter away their statutory duties under the Pharmacy Act for any trade advantage. Neither should we regard with anything like the same hopefulness as our correspondent manifests the parliamentary prospects of a Bill such as he sketches. But we confess we do not perceive that either the Pharmaceutical Council's support or a new Act of Parliament is essential to the scheme which the proprietor aims at as his ultimate purpose. He wants to ensure the favour of retailers of his medicines. He does not think it possible to legally prevent others than chemists from selling such articles, and on this point we agree with him. But he looks on chemists as the natural and the best agents for such articles, and is evidently willing to take some risk to secure their sympathy and interest. Like the majority of the manufacturers, he believes it would be to the benefit of his own business if he could make it better worth the while of chemists to deal in his articles. Then why not step boldly out on the road which has already been partially cleared by several of the very good friends of the trade? We have now some half-dozen firms who have pioneered in this direction. They have not grudged a good deal of personal trouble, and they have met with many discouragements in their efforts to establish an exclusive system of trading which shall ensure, at least, a fair profit to everyone who shall handle their goods. And the reports so far from them indicate that they are satisfied with the general results. The way is much easier now for those who think fit to walk therein, and the trade—and, to a large extent, even the cutters—are ready to

welcome any fairly-constructed system which shall lift particular articles out of the miserable slough into which they have sunk.

INTERNATIONAL PHARMACEUTICAL QUALIFICATION.

THE overthrow of the Irish pharmaceutical coach, which we reported last week, is worthy of some consideration. The Council of the Irish Pharmaceutical Society have manifested a very creditable determination to make their Act known and respected by all whom it may concern, and until they ventured on this Cork case they seem to have always secured both public and magisterial sympathy. Some of us at a distance, whose knowledge of Ireland and Irish affairs is acquired from the daily papers, from speeches in Parliament, and from travellers' tales, might have expected this latest action to have been one of the most popular which the Council could have undertaken. We have a suspicion that the Council themselves shared that anticipation. There, in the capital of Nationalist Ireland, a gentleman with a Scotch name, and furnished with only a British certificate, has been carrying on a pharmaceutical business ever since the Pharmacy Act of 1875 was passed—before that date, we believe. The Cork people, regardless of what was expected of them, gave all their sympathy to the invading Saxon, and reserved their indignation for the Society which was fighting the battle of Ireland for the Irish. There were scathing letters in the newspapers, the magistrates made no secret of their partisanship, and when the prosecution was defeated on a technical point, one of them expressed his pleasure from the bench.

The point taken for the defence, and which proved successful, was that as the prosecuting solicitor could not produce his authority under seal to represent the Society, he was by an old Act of James I. concerning corporations debarred from proceeding, and the case became one in which there was no prosecutor. The Recorder thereupon dismissed the summons. The defence was, as the counsel who raised it admitted, a purely technical one, justified by the fact that the prosecution was also a technical one. The Council in Dublin have some hopes of getting the decision on this point of law reversed in the superior court, in which case the Recorder would have to hear the case on its merits. But at present the Society has got the worst of the contest.

We confess to an inclination to assume the attitude of Mr. Facing-both-Ways in this interesting dispute. It certainly seems hard that a gentleman who has established a prosperous business, who has gone in and out among his fellow-citizens for some twenty years or more, and has evidently won their respect, and whose actual qualification to conduct his business is not for a moment questioned even by his antagonists, should be ordered to shut up his pharmacy or dispose of it, under an Act which has not been set in motion against him all these seventeen years that it has been in existence. The Council, on the other hand, may most reasonably urge that they have an Act of Parliament entrusted to them for execution, and that Act says as plainly as language can express it that it shall be unlawful for any person other than a person registered under the Act to keep open shop for compounding poisons or medical prescriptions. How can they differentiate between persons? If they let two or three British pharmaceutical chemists carry on their business in Ireland they open the door for two or three hundred, and they might as well be without their Act.

The Select Committee of the House of Commons which in 1874 considered the condition of Irish pharmacy reported in

favour of a Society for Ireland to be independent of that of Great Britain, but that there should be a common register, and that licentiates of each Society should have equal rights and privileges in the three kingdoms. And the Irish Pharmacy Bill, as introduced by that eminent Home Ruler Sir Michael Hicks-Beach, provided expressly for such reciprocity as had been indicated by the Committee. This provision was only abandoned in consequence of the determined opposition of the Pharmaceutical Society of Great Britain. As we have already pointed out, a person qualified in Ireland has been fined in England for infringement of the Pharmacy Act of Great Britain.

That a difficulty thus created by Act of Parliament to gratify the jealousy of a few individuals is intrinsically an absurd one, is obvious. And as the world grows older and narrower it will have to be removed. At present all British colonies where special pharmacy laws are in force admit for registration the mother-country certificates, and we believe in practice the Irish certificate is similarly received throughout Greater Britain. But the colonial certificates, though all of them guarantee a fair competency, and some of them involve severer conditions than those in force here, are none of them valid in any degree within the United Kingdom. A Colonial pharmacist who has learned his business thoroughly and has passed all the examinations of his country can only transfer himself home, as a pharmacist, by going through all the examinations and formalities again. The colonies will certainly not stand that sort of all-on-one-side reciprocity for ever. Even with regard to French, German, and American diplomas it is likely enough that some mutual arrangement will be come to some day. The Medical Act of 1886 makes certain provisions for the registration in the United Kingdom of foreign and colonial practitioners, and it would be an undoubted convenience, and no possible injury, if some mutual arrangement were come to in regard to the pharmaceutical registers. The subject is not, perhaps, ripe for action yet, but the case of the Pharmaceutical Society of Ireland *v. Selkirk* should certainly have the effect of developing its maturity.

THE ITALIAN PHARMACOPŒIA.

It has long been a reproach to Italian pharmacy that it was without a recognised standard medicine-book for the guidance of physicians and pharmacists. Although in one sense amongst the oldest of the nations of Europe, it is the youngest amongst the first-rate Powers, and to that fact we ought probably to attribute the singular circumstance that its first official Pharmacopœia should only appear at the end of the nineteenth century. But while there has been no uniform standard for the country, Italy has not been without its Pharmacopœias in recent times. Indeed, it is inconceivable how a country with about 11,000 licensed pharmacies could get along without some regulated methods for preparing medicines. What is by courtesy called the Sardinian Pharmacopœia ("Tarif de Pharmacie pour les Etats Sardes," published at Turin about forty years ago) was recognised in a large part of the country. Tuscany had a Pharmacopœia of its own, which was in use until a very recent date, was taken as the basis of the new publication, and was also followed in the Papal States. The two Sicilies had a Pharmacopœia to themselves, and all over Italy the French Codex was almost as well known as it is in France. It was about six years ago that the resolution was taken to compile a book which should replace the many obsolete and private formularies which were in use, but not until 1888 did the matter take definite shape, or assume a form that was hopeful of completion, and every year since we have heard that

the book was ready for publication. At first it was expected that the Pharmacopœia would not have official sanction, but happily that expectation has not been fulfilled, for the volume appears as the "Farmacopea Ufficiale del Regno d'Italia." A committee of seven, presided over by Professor J. Moleschott, have had the matter in charge, and on May 3 this work received the official sanction of Home-Secretary Nicotera. It is a handsome octavo volume of 443 pages, of which 372 are devoted to what is commonly called the "text," 26 tables constituting an appendix. The Pharmacopœia is printed in the Italian language, and even the chief heads of the articles are given therein, the sub-heads appearing in Latin, with ample provision of Italian synonyms. This arrangement is not altogether satisfactory for outsiders, Latin names being decidedly preferable to the vernacular for the chief titles. As it is, however, the Pharmacopœia follows the English and French styles in these chief titles; thus, bromide of potassium appears under "Bromuro di potassio," whereas the commoner continental plan is to place the name of the base first—*e.g.*, Kalium bromatum. There are peculiarities about the nomenclature, in consequence of the vernacular groupings; but on the whole the names are consistent, and in accordance with the usage of the country, which is undoubtedly wise in a first authoritative Pharmacopœia; but in future editions it would be an improvement to make the Latin names the chief titles, to reject the word "gomma," which is applied to such drugs as ammoniacum, and generally to equalise the groups of galenicals under specific names, bringing ointments and pomades together, instead of keeping them in two groups as at present. The choice of medicines which is given is distinctly liberal, there being 597 articles, including many that are obsolete in other countries and a good selection of new remedies. Amongst the latter, for example, are acetanilide, antipyrin, apomorphine hydrochlorate, cocaine hydrochlorate, guaiacol, ichthyol, iodol, lanolin, mannite, menthol, sulphonol, salol, and many others more or less new. It is apparent that great care has been exercised in drafting the characters and tests of the medicines; indeed, the Pharmacopœia is distinctly in advance of the British regarding the potency of the more active drugs. For example, belladonna root and leaves should yield about 0.5 per cent. of hyoscyamine; colchicum-corm should yield 0.08 to 0.2 per cent., and the seeds 0.2 to 0.4 per cent. of colchicine, and dried aconite-root should contain from 0.2 to 0.8 per cent. of aconitine; cinchona-bark (Calisaya, Ledgeriana, and Succirubra are recognised) should yield 5 per cent. of total alkaloids, of which at least 1½ per cent. must be quinine determined by Kerner's method; and opium, when estimated by the Flückiger process, should yield 10 per cent. of morphine, while it should contain on the average, only 10 per cent. of moisture. Considerable care is also exercised in fixing standards for essential and fixed oils; in the case of the former there is a table of specific gravities and boiling-points, and the tests for the latter include specific gravities, congealing-points, and iodine absorption rates. The ash and resin content of many drugs are declared, while the purity of chemical substances is liberally provided for by appropriate chemical tests and assays, and such physical references as specific gravities, melting-points, and boiling-points. In this connection we may note that the melting-points of alkaloids are amongst the criteria of purity. This is an advance upon British ideas and even American; but the presence of Vitali on the committee probably accounts for it, although other continental Pharmacopœias have also adopted similar tests for alkaloids. The appendix contains a large number of useful data in tabular form, such as atomic weights, strengths of acids and alkali solutions,

alcohol tables, ratios of solubility, reagents and volumetric solutions, maximum doses, &c. In the text there are indicated 124 medicines which every public pharmacy must have in stock, and in the appendix there are further regulations regarding domestic remedies and the storage and sale of poisons. From this glance at the main features of the Pharmacopœia, it is evident that it is a compilation which does the committee credit, and considering the legislative reforms which Italian pharmacy has undergone during the past seven years the excellence of the volume is no more than could have been expected. In Italy there are two grades of pharmacists—the unadorned and the doctor grades. Both are university-trained men, the former spending four and the latter five years in professional studies, the last year in each case being spent in pharmacy, the longer first period being purely collegiate.

HALF-PRICE CLOSED LETTER COMPANY.

WE have had numerous letters on the subject of the above Company from correspondents who have taken 10 $\frac{1}{2}$ debentures, some having paid the full amount, and others having only paid 1 $\frac{1}{2}$ deposit or something on account. The latter are now being pressed for payment of the balance they owe, and some of them have asked us if they are bound to pay the sums demanded.

The Company, through their managers, appear to have made certain statements during the negotiations for taking the debentures, and if these statements are not true they might amount to misrepresentation and avoid the contract. Many chemists complain that, after payment of their money for the debenture, or the requisite deposit, they cannot, after repeated applications, get any envelopes to sell, and that their agency has been a mere barren appointment.

In the formal documents which are alleged to constitute the agreement to take the debenture there is nothing said on the part of the Company that they will supply any envelopes; but we think that the whole of the correspondence would have to be read in accordance with the decision of the House of Lords in *Hussey v. Horne-Payne* (4 App. Ca. 311). If this is so, the case would appear to fall under the head of a case recently decided by the Court of Appeal—*Turner v. Goldsmith* (1891, 1 Q.B. 544). This latter case gives the agent a right of action against his principal in case the principal fails to provide the agent with the necessary materials for carrying on the agency. Assuming, for the sake of argument, that the alleged default can be substantiated, this would appear to give those who have paid in full a right of action for damages for breach of contract, and to those who are still the holders of the balance claimed a right of set-off on the same grounds.

There is another possible ground of action and defence, too, that may avail, and that is, if it can be maintained that the company's conduct shows an intention on the part of the company to repudiate the contract. There was a case of this kind reported in the *Times* of last week, *Booth v. Bowron* (8 T. R. 641), and there are numerous similar cases.

We have, of course, only before us the statement of one side, and it is difficult to say whether those who have not paid the balance on their debentures can successfully resist payment, but it might be worth while to test the matter. It is no answer, however, to an action by a company on a contract to take shares or debentures to say that it is not a successful concern. But in this case it is alleged that the company have not carried out their share of the bargain, unless profuse apologies and promises can be taken as such.

The company, on the other hand, write saying that they are doing a flourishing business, and among the letters received by us it is right to say that some are from chemists who appear not to be dissatisfied.

If there is delay in payment of interest, and the debenture-holders have duly forwarded their coupons, they can, of course, sue the company.

If any debenture-holders wish to take united action in this matter, and will advise us to that effect, we will put them in communication, but we cannot take further action ourselves.

COMMENTARY.

FLAME OF BURNING NITROGEN.—Mr. W. Crookes explains in the *Chemical News* that in the spectroscope the flame of nitrogen shows no lines, the spectrum being faint and continuous. The temperature is a little higher than that of a good blowpipe-flame, easily melting fine platinum wire. The hot gases rising from a flame have a strong odour of nitrous acid, and when it is produced in a closed globe, the interior rapidly fills with red gases.

ORIGIN OF FLUID EXTRACTS.—Says Professor Remington in his work on pharmacy, "fluid extracts may be justly called 'American preparations'"—and so they are, for the U.S. Pharmacopœia gave formulæ for them as early as 1850, but it appears from the *Pharmaceutical Review* that the credit for their manufacture is due to England. Mr. Charles Ellis, of Philadelphia, in an article giving a formula for fluid extract of senna, read before the Philadelphia College of Pharmacy, November 25, 1834, used these words:—"A class of pharmaceutical preparations has, within a few years past, been extensively introduced into use in England, and to a limited extent in this country, under the name of concentrated essences or fluid extracts." It was at least two years later before they began to find a real place in American pharmacy, and since then they have developed so rapidly that people have got to think that the States deserve all the credit for producing and perfecting them.

THE NUTMEG GENUS.—Ten years ago, less than a hundred species of *Myristica* were described, but Dr. Warburg, who is at present at Kew engaged on a monograph of the order, estimates the number now in herbaria at about two hundred. This great augmentation is almost wholly from discoveries in the Malayan Peninsula and Archipelago, New Guinea, and Eastern Polynesia. Dr. King, in his "Annals of the Calcutta Botanic Garden," abstains from any attempt to trace the geographical distribution of the species, on the ground that he believes many yet remained to be discovered. But on running through his work we find (says Mr. Botting Hemsley, in *Nature*) that about fifty-four of his sixty-eight species are from the Malayan region, eight from the Deccan and Ceylon, and about six from the Assam and Chittagong region, only two apparently being found as far westward as Sikkim, in North India. Most of the new species are from Perak, a country exceedingly rich in endemic trees. Beyond the distribution indicated, there is one species in North Australia, and four each in Madagascar and Tropical Africa, and perhaps about forty or fifty in America, extending from South Brazil through the West Indies and Venezuela to Central America and South Mexico.

MEDICINE FOR A WEAK HEART.—Edinburgh medical circles are somewhat disturbed at present in regard to a question which was given at the final M.B. examination on

June 14. It was in prescription-writing, and was as follows:—

Prescribe for a case of weak heart, with anginous pain, a mixture containing tincture of strophanthus, strychnine, arsenic, and iodide of potassium.

We do not suppose that the teachers of the Edinburgh Medical School would sanction, from a therapeutic point of view, such a combination as is here indicated, but it was the pharmacy of the prescription which disturbed the equanimity of the examinees. They considered it a mess of incompatibles, and, through the "College Column" of a local evening paper, a protest was made against it. We presume that there is a bit of "catch" about the question, the object being to test the student's knowledge of what is good to give and what is not in cases of angina, but apart from that the question is a good test of the knowledge of prescribing. Although potassium iodide precipitates alkaloids, it does not do so in the presence of a large volume of water, and the medicines indicated can be sent out as a clear 8-oz. mixture (tablespoonful [doses]) containing medium doses of the remedies. Doubtless that fact is taught in the practical pharmacy class of the University, but, if not, the sooner "The Art of Dispensing," is used as a text-book there the better.

NEW JAPANESE PHARMACOPŒIA.—The first Japanese Pharmacopœia of interest to Europeans was published in 1886, and came into force on July 1 of the year following. It was notable for its strong German characteristics—a fact which was admirably brought out by Dr. S. M. Suzuki, a Japanese medical practitioner, in a paper communicated to THE CHEMIST AND DRUGGIST of June 11, 1887. But the Pharmacopœia had not been long in force before its revision was resolved upon. A Commission, consisting of ten gentlemen, was appointed early in 1888, and from then until the end of 1890 they held eighty-three meetings. The work which they have revised has been published in Japanese characters; but, as in 1886, there is also a Latin translation of this. We gather from the *Apotheker Zeitung* that some slight changes have been made in nomenclature, which was formerly, in some respects, American in style, such as "Jaborandi" for "Folia Jaborandi." The latter form is now adopted, and generally this style is followed throughout the Pharmacopœia. Further attention has been given to reagents and tests, and standardisation has been adopted on the British Pharmacopœia lines, the strength of extractum opii being fixed at 13–15 per cent. of morphine, rux-vomica extract at 15 per cent. of alkaloids, and cinchona extract at 18 per cent. of alkaloids. Dry extracts are directed to be diluted with powdered liquorice. Japanese scopola-root is introduced into the Pharmacopœia, and an extract of it is officialised. Strophanthus also finds recognition, and all tinctures have specific-gravity factors attached to them. When will the British Pharmacopœia follow that good example?

OIL OF LAUREL-LEAVES—BAYBERRY—OIL OF BAY—BAY-RUM.

By C. S. ASHTON.

ON page 43 of the current volume of THE CHEMIST AND DRUGGIST there is an interesting note on an essential oil of the leaves of *Laurus nobilis*, introduced by Messrs. W. J. Bush & Co. The note refers to the rarity of this product, and states that books of reference are silent on the subject. Some time afterwards I met with the following in Cooley's "Cyclopædia":—"Oil of Laurel—syn. oil of sweet bay, ol. lauri volatile, ol. lauri essentielle, from either the berries or the leaves of *Laurus nobilis*, or sweet bay tree.

Pale yellow, clear, odorous, aromatic, stimulant, and narcotic. Sp. gr. .871. The leaves yield fully $\frac{3}{4}$ to 1 per cent." This made me curious to know whether there really were any specimens of the oil in the market besides this "novelty" of Messrs. Bush. So I made inquiries among the leading wholesale houses. Only one firm among those applied to could supply an oil distilled from the leaves, while one other was able to furnish an oil drawn from the berries. All the remaining houses assured me that the oil was not an article of commerce, one of them adding, "it could only be obtained by special distillation of the berries." It must therefore be admitted that, Cooley notwithstanding, the note is not far wrong in describing Messrs. Bush's oil as somewhat of a "curiosity."

The two samples which I obtained differ slightly from Messrs. Bush's oil, as well as from each other, both in odour and sp. gr., but all three unmistakably recall the familiar fragrance of the sweet bay-tree. In my opinion Messrs. Bush's new name for the oil is scarcely a happy one. Doubtless, the true "laurel" is *Laurus nobilis* (N.O. Lauracæ), but what is generally understood by that name is the common or cherry laurel (N.O. Rosacæ), which yields an oil similar to essential oil of bitter almonds; and by the term "oil of laurel-leaves" one would naturally suppose the latter to be meant. There already exists quite enough confusion in botanical nomenclature, and Messrs. Bush would have obviated the risk of mistake by styling their article "oil of bay laurel-leaves," or "ol. fol. Lauri nobilis."

But if there exists ambiguity in the case of the name "laurel," confusion is worse confounded over the name "bay." The "noble laurel" is known as the "bay-tree" wherever the English language is spoken, but in America there are a shrub and a tree, both called "bayberry," which are liable to be confounded, pharmaceutically, with the bay and with each other. The first is the wax-myrtle, *Myrica cerifera* (N.O. Myricacæ), whose fruit exudes the substance known as "myrtle-wax." The chemical term "myrcin," used to describe the insoluble portion of beeswax, is hence derived. Unfortunately, the same term is applied by the eclectics to a powdered extractive prepared from the plant. Bayberry-bark is much esteemed for its stimulating and astringent properties by herbalists generally, and is an active ingredient in the "composition" powder and essence so popular in the Midlands and the North. Powdered bayberry is very apt to be mistaken for powdered bay-berries—pulp. bac. lauri.

The other bayberry referred to is the *Myrcia acris* (N.O. Myrtacæ) also known as *Myrtus acris*, *Pimenta acris*, and *Eugenia acris*, or wild clove (Gray). Here, again, the similarity of names often causes confusion—*myrcia* and *myrica* being so much alike. The *myrcia* is a handsome evergreen tree, indigenous to the West Indies, very closely resembling *Eugenia pimenta*, but distinguishable therefrom by its flower having five calyx lobes instead of four. It is from the leaves of this tree that the genuine "bay-rum" is distilled, though for many years the secret was undiscovered. The name "bay" was probably adopted rather as a blind than to indicate its real origin, for we do not hear of the name "bayberry" being applied to the tree till after it was found to be the source of bay-rum. The bay-laurel was long supposed to be the plant employed, but as far back as 1860 bay-rum was made "official" in the U.S. Pharmacopœia, where it was referred to as *spiritus myrciæ*—"a spirit obtained by distilling rum with the leaves of *Myrcia acris*." In the last edition of the U.S.P. (1883) a spirituous solution of the volatile oil (known in commerce as West Indian "oil of bay") is substituted for the distilled spirit. The following is the formula:—

Oil of myrcia..	..	..	..	1 fl. oz.
" orange-peel ..	..	..	..	40 minims
" pimento ..	..	..	..	25 "
Alcohol ..	..	..	..	4½ pints
Water..	..	..	..	3½ "

N.B.—Alcohol U.S.P. is rectified spirit of sp. gr. .820, containing 94 per cent. (volume) of absolute alcohol. The 16-oz. pint is that indicated.

It is claimed that the distilled spirit has a superior aroma. For my own part, having had the opportunity of comparing the U.S.P. formula with specimens of the original West Indian brands, I prefer the former.

It may not be generally known that bay-rum was intro-

duced as a perfume pure and simple, to be used—as I believe it still is in America—in the same ways as we employ eau-de-Cologne. Being a distillate, it was, of course, practically colourless, as is the U.S.P. formula. But in this country it is rarely heard of except as a hair-wash, and its colour is usually that of Jamaica rum.

It is remarkable, too, that though its real origin has been so long known there should be so many people who still believe it to be a preparation of the bay-laurel. The first and best-known English makers perpetuate the error. Their label reads: "American Bay-Rum, distilled from the leaves of the *Laurus nobilis*." This, by the way, is a colourless spirit. Other makers use an infusion or tincture of bay-laurel leaves with rum and water; others, again, add a little expressed oil of bay to a mixture of rum, spirit, and water; while I have heard of yet others who rub down ol. bac. lauri with magnesia and water, filter, and colour with burnt sugar! Then, again, there are chemists who, while using the volatile "oil of bay," or "oil of bay-leaf," imagine it to be the product of *Laurus nobilis*, especially when their drug-houses foster the illusion by labelling it "Ol. Lauri Essent.," as I have seen done in more than one case. But, however labelled, the oil which is universally supplied by the wholesale trade for making bay-rum is ol. myrciæ acris. This, of course, is the correct thing to use, and the majority of firms now label it by its real name.

Ol. myrciæ U.S. is officially described as "a brownish or dark-brown liquid of an aromatic, somewhat clove-like odour and spicy taste. Sp. gr. about 1.040. Soluble in its own weight of alcohol." The taste and aroma of all the trade samples that I have examined have answered this description, though the colour has varied (according to age) between light and dark amber, rather than brown. But the specific gravity in every case has fallen far short of the standard. Genuine oil of myrcia resembles the oils of cloves and pimento in being heavier than water. But all these specimens were lighter. Moreover, none of them was soluble in alcohol, thus proving conclusively their sophistication with fixed oil. Cooley (6th edition, page 257) drew attention years ago to the frequency and extent of the adulteration of this oil, and his strictures would appear to be as much warranted to day as they were then.

I believe most of the British supply hails from the West Indian Islands of St. Thomas and St. Kitts—Danish dependencies. If, then, we should be asked, "What is the state of Denmark?" we should be inclined to reply, "Rotten!"

Since the foregoing notes were written I have come across statements put forward two or three years ago by Messrs. Schimmel and others to the effect that the U.S.P. description of bay-oil is inaccurate. These investigators say that the oil distilled by themselves from leaves imported from St. Thomas is invariably lighter than water and insoluble in alcohol. If this be so, the above charges of falsification are unfounded. But it would be interesting to learn how these two sets of authorities have arrived at such different results. Can it be that the fruits yield an oil richer in eugenol, and consequently heavier, than that yielded by the leaves? If so, this may possibly account for the disparity in the figures given for the specific gravity. Then there remains the question of solubility. The persistent turbidity of commercial oil of myrcia in any proportion of absolute alcohol is an unusual feature for an essential oil to exhibit, and one would like to know to what constituent of the oil this peculiarity is due. It is to be hoped that the compilers of the U.S.P. will clear up these points in their next revision, and publish some reliable data on the subject.

AMERICAN PHARMACEUTICAL NEWS.

MR. W. R. WARNER, of pill fame, of Philadelphia, has left for England.

MR. J. H. STALLMAN, of Stallman & Falton, arrived in New York, per steamer *Enus*, on June 19, having spent several months in looking after the European interest of his house.

MR. JUSTICE BEACH, of the Supreme Court of the State of New York, has rendered a decision supporting the claims of Keasley and Mattison to the exclusive right to use the

name "Bromo-caffeine." The case has been pending some two years.

MESSRS. MERCK & Co., of New York, having protested against the payment of 40-per-cent. duty on imported empty glass bottles, on the ground that the new tariff entitled them to entry at 1 cent per lb., the appraisers have admitted the correctness of their protest.

THE ECONOMICAL DRUG COMPANY is starting in Chicago to sell drugs at cut rates. The druggists of the city are retaliating by opening a shop next door to do the same thing at less—in fact, they will give the things for nothing, if necessary, and the wholesalers are to back them up.

DR. ROBERT W. GREENLEAF, who succeeded the late Dr. Pengra as Professor of Materia Medica and Botany in the Massachusetts College of Pharmacy, Boston, has sailed in the *Westernland* for Antwerp. He will devote the summer to studying methods of teaching, principally in Germany, returning *via* London.

THE NEW YORK COLLEGE OF PHARMACY has at last procured a site for the erection of the new college buildings. The location selected is on Sixty-ninth Street, between Ninth Avenue and the Boulevard, and is in the growing and more fashionable part of the city. The building will be begun as soon as the preliminaries can be arranged. Messrs. Fraser, of the Fraser Tablet Triturate Company, and S. W. Fairchild, of Fairchild Brothers & Foster, have been among the most active workers towards the erection of new buildings.

THE newspapers keep standing headlines, "A Drug-clerk's Blunder," "Another Druggist's Error causes Death," &c., if one may judge from the facility and promiscuousness with which they use them. A young man in New York bought some oxalic acid this week, and gave it to a young girl for Rochelle salt. Though he claimed that he asked for Rochelle salt, the police justice, on the evidence heard, exonerated the druggist. Notwithstanding the fact that they announced the exoneration of the seller by the justice, the usual "blunder" and "mistake" headlines were used by the dailies in giving an account of the occurrence.

REVIEWS

AND

LITERARY NOTES.

Aids to Health.

THIS is the title of a rather clever illustrated descriptive price-list issued by Messrs. Gilbert & Hall, chemists, Bournemouth. It is what we may call a speciality and surgical list, with many old things served up in a novel way along with lots of new ideas and novelties. The book shows excellent enterprise, and how profitable a thing it is to read THE CHEMIST AND DRUGGIST intelligently.

Catalogue of the Hanbury Herbarium.

THE Pharmaceutical Society of Great Britain has published, and is presenting to its adherents, a catalogue of the pharmaceutical herbarium collected by the late Daniel Hanbury. The herbarium contains 610 distinct species of plants, but the actual number of specimens is far more than that; and very few of the specimens are without historic interest. Mr. E. M. Holmes, the curator, has made a good catalogue of the collection. It is not a mere compilation of Hanbury's notes, or the names strung together, but comment is added where the knowledge gained during the last sixteen years adds light to Hanbury's observations or opinions. The catalogue will be very useful to pharmacognosists.

"SCOPOMILINE" AND "GEORGE SANDFORD WEBB" are slips which we cut from a respected New York contemporary.

Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

ASSAY OF HYDROGEN PEROXIDE.

IN assaying peroxide-of-hydrogen solution with potassium permanganate it sometimes happens that the permanganate is not immediately decolorised. Engel says that this is due to the presence of a trace of a manganous salt in the mixed solutions; this results from the action of traces of sulphurous or nitrous compounds in the hydrogen-peroxide solution on the permanganate; the manganous salt is then oxidised to manganic sulphate, which is unstable in presence of hydrogen peroxide. The addition of a trace of manganous sulphate to the hydrogen-peroxide solution before running in the permanganate solution determines decolorisation at the onset.

LIGHT QUININE SULPHATE.

IT is generally believed that chemically pure quinine sulphate cannot be obtained light—it is, in fact, asserted that the lightness of any sample is an index of the amount of inferior cinchona alkaloids which it contains. But according to Carles the addition of ammonium sulphate to the warm saturated solution of pure quinine sulphate throws out the latter in a remarkably light form. The way to do it is to dissolve the salt in 30 times its weight of boiling water, add some crystals of ammonium sulphate (about 4 grammes to a litre of the solution gives the best results), and agitate. In from one to two minutes after these crystals dissolve the quinine sulphate crystallises out.

A LABORATORY DEVICE.

MOST practical chemists are painfully aware of the unsightly appearance of reagent bottles caused by the drops of the solutions running down the outside and crystallising thereon. This may be prevented by simply painting the rim with melted paraffin. Care should be taken to cover only the side of the lip—none should be put on the upper surface. This can be accomplished most easily by using a small hog-hair brush and a wax of low melting-point, such as is used for embedding sections. It will be found that, besides preventing the solution trickling down the outside, it enables one to deliver the reagent easily in single drops without resorting to the plan of only partly withdrawing the stopper. —R. E. B. in *Chemical News*.

VOLUMETRIC DETERMINATION OF PHENOL.

DR. R. BADER finds (*Zeit. f. Anal. Chem.*) that if to an aqueous solution of pure phenol mixed with a few drops of an alcoholic solution of symmetric trinitrobenzol we drop in slowly dilute soda solution, the liquid remains colourless as long as free phenol is present, but the slightest excess of alkali is recognised by a distinct "onion-red" colour. The solution of trinitrobenzol required is prepared by shaking up repeatedly a knife-pointful of pure symmetric trinitrobenzol (melting-point 122°) with 50 c.c. of absolute alcohol and filtering. It must have only a very faint yellowish colour, and must be preserved in a dark place. For determining phenol in a watery solution he proceeds as follows:—He prepares colourless solution, not too dilute, containing, if possible, not less than 20 grms. per litre; of this 50 c.c. are poured into a beaker, and there are added 2 or 3 drops (not more) of the trinitro-solution above mentioned. The liquid must remain perfectly clear and colourless. Thereupon normal soda is allowed to run in drop by drop, whilst the beaker is constantly shaken. Towards the end of the reaction the liquid takes a scarcely perceptible yellowish tint. When this point is reached the titration is best continued in the following manner:—2 or 3 drops of soda-solution are added at once, the glass is shaken up, and this is repeated until the reddish-yellow colour produced by the soda no longer disappears. The last 3 drops must be deducted from the total quantity of the normal soda consumed. The end of the reaction is best recognised if we place the beaker during the experiment upon a white porcelain plate. As regards the accuracy of the results they leave nothing to be desired if the solutions of phenol are sufficiently concentrated.

VITALI'S ATROPINE TEST.

MR. NAGELVOORT, referring in the *Bulletin of Pharmacy* to Flückiger's "Reactionen," commends the manner in which Vitali's reaction for mydriatic alkaloids is described therein. The "Reactionen" prescribes that the alkaloid (atropine), 1 mgrm., must be rubbed together with sodium nitrate, 1 mgrm.; that to this mixture one drop of concentrated (184) sulphuric acid has to be added, and when this is spread out in a film coarsely-pulverised potassium hydroxide (5 mgrms.) is laid over it, and at last a few drops of alcohol (0.83) added, to obtain the lilac colour.

A BRILLIANT FUTURE.

LITTLE is known as yet about the connection of colour with composition and constitution. The investigations of Krüss, Liebermann, and more recently Vogel, all indicate that the property is in great measure constitutive, becoming additive only within the narrowest limits of closely-related compounds. This renders correspondingly difficult a recognition of the connections at hand. Some time later, on the contrary, directly on account of this marked constitutive character, the colour will be an important aid in the determination of constitution; at the same time, when we shall have learned to recognise this connection with some certainty, the discovery of new dyes with definite properties will be no longer a matter of a lucky hand and of an unconscious feeling for this connection, Professor Ostwald thinks, but will rest upon just as broad a basis as, for example, the technic of the metallurgical processes.

TURPENTINE IN OIL OF LEMON.

IN supplement to the note on this subject on page 151 of last volume, we give a few of Oliveri's figures on the polarimetric observation of mixtures of lemon oil and turpentine:—

Pure oil of lemon	+60°0
with 2 per cent. turpentine	+58°25
" 4 " " " " " " " " " "	+56°5
" 6 " " " " " " " " " "	+54°75
" 8 " " " " " " " " " "	+53°00
" 10 " " " " " " " " " "	+51°25
" 15 " " " " " " " " " "	+48°87
" 18 " " " " " " " " " "	+44°25
" 20 " " " " " " " " " "	+42°5

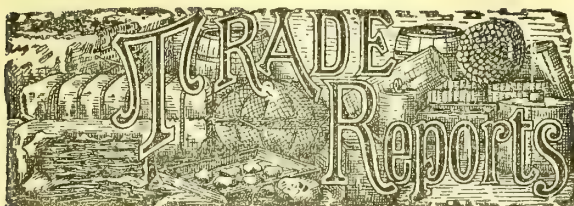
This for the 100 mm. column. It is well to note that oil of lemon does not invariably show a specific rotation of +60°.

RESTORING OLD ESSENTIAL OILS.

DR. WERNER has recently described in the *Phar. Zeit.* a method for improving essential oils which have become resinified by age. After neutralising the oil to be treated with caustic-soda solution, then place the oil in a short-necked, round-bottomed flask connected with a Leibig's condenser. Next generate steam in a tin vessel and conduct the steam by a bent glass tube to the bottom of the flask containing the essential oil. The oil is carried over with the steam. From the condensed distillate the oil is separated by means of a Florentine receiver, and redistilled from caustic soda or potash. If small quantities are to be improved, treat the oil with the alkali only and then distil, whereupon the resin is left behind.

TEST FOR OIL OF WINTERGREEN.

IN order that pharmacists may be able to detect readily any adulterations in oil of wintergreen (natural or synthetic)—such as the oil of sassafras, camphor, or turpentine, and petroleum—the following simple test is suggested by Professor Power. If 1 c.c. of oil of wintergreen be heated for a few minutes in a water-bath with 10 c.c. of a 5-per-cent. solution of sodium hydroxide, a perfectly clear and complete solution should result, whereas foreign oils, by their insolubility, form turbid mixtures, and on cooling separate drops of oil, while at the same time the odour of the wintergreen gives place to the distinctive odour of the adulterant. On adding sodium-hydroxide solution to the oil, a bulky, white crystalline precipitate is at first produced, which, upon heating, is completely dissolved, with the formation of sodium salicylate and methyl alcohol.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., June 30.

The London Markets.

Adulterated Gum Arabic.

At a recent meeting of the Philadelphia College of Pharmacy, Professor Maisch read a letter from a correspondent in Canada, who referred to a curious adulteration he had met with in a sample of acacia—namely, rock salt. The percentage was not stated. Professor Maisch said that the present source of gum arabic is further east than formerly—nearer the Red Sea; the old habitat being inaccessible. Chemically, gum senegal is identical with gum arabic, but physically the difference is quite marked. To make the former more closely resemble the latter, it has been the practice of some to wet gum senegal, and expose it to sufficient heat to cause fissuring, when it will more closely resemble true acacia.

Servian Customs Tariff.

Amongst the changes which have recently been effected in the import duties of Servia the following may be noted:—Vegetable medicines generally, such as barks, seeds, leaves, resins, flowers, copaiba, manna, opium and camphor, acids and salts, mercurials, and animal products, such as cantharides and musk, are raised from 50f. to 100f. per 100 kilos.; sulphur, alum, soda, and other alkali products have been increased from 2f. to 8f. per 100 kilos.; mineral acids, arsenic, zinc white, and other dry substances of a similar nature rise from 5f. to 12f.; cochineal and indigo, with several other similar colours, are now to pay 80f. per 100 kilos.; they paid 50f. before. A considerable change has been effected in the oils and fats class of goods, all the rates being increased by two to five times what they were formerly; thus olive and seed oils will henceforth pay at the rate of 100f. per 100 kilos.; it used to be 20f.; waxes will pay the same as against 40f., and candles of paraffin, tallow, &c., will pay 150f.; crude petroleum is reduced to 140f., and the purified raised to 20f.

New Portuguese Customs Duties.

The following are some of the new duties which are given in the tariff authorised on May 10:—Camphor 200 reis (10½d.) per kilo. (= 35½ oz.); cotton-seed, almond, and other seed oils, the same; essential oils, 750 reis (3s 3d.) per kilo.; nitrate of silver, 350 reis per kilo.; quinine salts, 2,000 reis (9s.) per kilo.; and chemical products generally will pay 13 per cent. *ad val.*

Quinine from Cupreine.

The rapid disposal of cuprea-bark on Tuesday was doubtless due to the fact that the prices were low considering the quinine content of the bark; but, apart from that, the recent researches on the conversion of cupreine into quinine may have something to do with the renewed demand for the bark. These researches have resulted in the patent process formulated by a Paris firm, to which reference has recently been made in this journal. Whether this process can be

economically worked or not is doubtful, as sodium is employed in the process, as well as methyl bromide, which is not a particularly cheap article, and the use of these will determine the practicability of the process. In it 310 kilos. of cupreine is treated with ½ kilo. of sodium, 30 kilos of methyl alcohol, and 1 kilo. of methyl bromide or an equivalent of a similar methyl compound. This mixture is heated for twelve hours at a temperature of 120° to 130° C.; then the alcohol is recovered by distillation. The result of this treatment of the cupreine is that a methyl group (CH₃) is introduced into the cupreine, methyl cupreine being thus formed, and methyl cupreine is identical with quinine. The product can be combined with acids to form sulphate, hydrochlorate, &c., identical in appearance with the quinine salts obtained from cinchona-barks. We mention this matter as being one of scientific interest rather than commercial importance, for the profitable working of the process, should it ever be adopted on a commercial scale, will always require low-priced cuprea-bark.

Manufacture of Castor Oil in Jamaica.

The director of the Botanic Gardens at Jamaica considers that the following letter shows that Jamaica can compete with India in this manufacture:—

You will remember the sample of castor oil I showed you in the exhibition. Only a few weeks ago I sold my first oil to the St. Cruz Hospital at the rate of 7½d. per lb., delivered in the hospital. The oil kept very well, which only shows that our castor-oil seeds, manufactured in the way you directed me, are as good as the East Indian ones, and much better than those grown in America. My oil was clearer than the hospital oil in Kingston, which Mr. Foster showed me.

CARL HINDERMANN.

But where is the competition? India can supply the oil at half the price.

ACID (ACETIC).—It is expected that slightly higher rates will rule by-and-by, and the demand for acetate of lime has improved in this anticipation, higher prices being obtained for both grey and brown acetate. The price for 25-per-cent. acid from this source is now 7½, in ton lots or more.

ACID (CITRIC).—This acid is still obtainable at last week's quotation.

ANTIMONY (CRUDE) is firmly quoted, and has been sold at 27½. Powdered black antimony and crocus are correspondingly dearer.

BORAX is firm at the last quotations, and boracic acid also remains firm at 24s.

CAMPHOR.—English refined in bell is now quoted at 1s. 6½d. to 1s. 7d., according to quantity, and the prices of other makes continue firmer.

CINCHONA.—The auctions on Tuesday were neither largely attended nor was the supply of bark quite up to the average, but it is seldom that one sees bidding so brisk and purchases so full as they were then. In consequence, some of the selling brokers exhibited a cheerful tone, and while some reckoned that the unit was a shade better, the general feeling was that it had advanced an eighth of a penny. The maximum touched was a unit of 1½d. The total quantity of bark offered was 302,078 lbs., and of this 283,253 lbs. were disposed of publicly, but there were understandings between sellers and bidders regarding the balance of 13,820 lbs. The bark originated as follows:—

	Packages	Packages
East Indian cinchona ..	838 of which	838 were sold
Ceylon cinchona ..	672 "	634 "
Cuprea bark ..	285 "	220 "
South American cinchona ..	216 "	206 "
Java cinchona ..	65 "	65 "
	2,076	1,993

CUPREA BARK.—The 235 bales have been lying in London for four years, and by this time have eaten their heads off. The selling broker reached the rostrum some time after his turn, and immediately the bidding became brisk. The prices obtained were 1½d. and 2d., and in the case of over 100 bales the broker insisted upon the 1½d. and 2d. for alternate lots. No one would go that length

at first, but ultimately a bargain was struck on a compromise, but a number of cases were bought in. The purchases were made on behalf of French and German houses, neither English nor American trying for the bark.

CEYLON CINCHONA.—The assortment of bark was, on the whole, very good. The bulk of the bark sold was *Officinalis*. *Original*, chippy and quill mixed, went for 2*d.* to 2½*d.*; and *Renewed* mostly at 4½*d.* to 5*d.*, a small dark lot fetching only 4*d.* Bold root-bark sold at 5½*d.* and 6*d.* A large volume of *Succirubra* was also sold at the following rates:—*Original* chips and shavings, somewhat dusty, 2*d.* to 2½*d.*; *Renewed* chips, 2½*d.* to 3½*d.*; low stem, 2*d.* and 2½*d.*; brighter and bolder, 3*d.* and 3½*d.* Several bales from the Lanka plantation sold at 4*d.*, the highest figure obtained in this class. One lot of red root bark sold at 2*d.*, but 3½*d.* was the price generally obtained; while 5 bales of bark, said to be "half-rotten," brought ½*d.* more. *Hybrid* stem shavings and chips took the honours of the day for lowness of price, ½*d.* per lb. being accepted for 2 bales of somewhat twiggy bark; from 2½*d.* to 3*d.* was the common range of price for stem shavings. *Crown* stem chips, *Original*, sold at 2½*d.*, and *Renewed* at 3½*d.* and 3½*d.*

EAST INDIAN.—Fair Travancore bark in bright chips sold at 2*d.* There were only 9 bales of it, and the other 734 sold was equally divided between grey, red, and Ledger barks. *Original* kinds of *Succirubra* sold as follows: Fair to good bold and clean chips, 1½*d.* and 2½*d.* to 3*d.*; bold flat quill, 2½*d.*; fine druggists' quill, large and well formed, 7*d.* (one small parcel). *Renewed* fetched 1½*d.* to 2½*d.* for ordinary chips and shavings, and 5½*d.* for a specially good lot. Several bales of mixed *original* and *renewed*, 2*d.* and 3*d.* For *Ledger* bark the bidding was brisk and liberal, and the following were the values ultimately set upon the offerings:—*Original* branch chips and shavings, dull to fair bright, 2½*d.* and 3*d.*; good bright and clean, 3½*d.* to 4*d.*; and fine chips and shavings, 5*d.* to 6½*d.* *Renewed* stem chips, 3½*d.* and 4*d.*; fine ditto, 8*d.*; *renewed* broken quill, 6*d.*; and root, 4*d.* One parcel of *Crown*, 1½*d.*—a poor lot; *Officinalis* *renewed*, 3½*d.* and 3½*d.*; *Andamanea*, ordinary stem and branch chip, 2*d.*; root bark, 3½*d.*

JAVA.—*Ledger*: Branch chips, dull to fair bright dusty, 2½*d.* to 3*d.*; stem chips, 4½*d.* and 5*d.*; and fine root, 6*d.*

SOUTH AMERICAN.—Of cultivated Bolivian in good quills, 156 bales sold at prices ranging from 4½*d.* to 6*d.* The rest of the 206 bales that were sold were damaged more or less seriously, and sold at 3½*d.* to 5½*d.*

The cinchona auctions to be held in Amsterdam on July 14 will consist of 112 cases and 3,629 bales, about 305 tons, divided as follows:—From Government plantations 51 cases and 265 bales, about 28 tons; from private plantations 61 cases and 3,363 bales, about 277 tons. This quantity contains, of druggists' bark—*Succirubra* quills 81 cases, broken quills and chips 16 cases and 75 bales; manufacturing bark—*Ledgeriana* quills 15 cases, broken quills and chips 2 648 bales, root 646 bales; *Officinalis* broken quills and chips 23 bales, root 6 bales; *Hybrid* broken quills and chips 211 bales, root 20 bales. Further particulars will follow as soon as all the analyses have been published.

CINNAMON.—The market is decidedly firmer, and good business has been done this week at the following rates:—Seconds, 6½*d.*; unworked thirds, 6½*d.*; and fourths, 5½*d.* Higher rates are at present ruling at Colombo.

CLOVES.—The market is by no means brisk. In auction middling to fair *Zanzibar*, 2½*d.* to 2¾*d.*; good, 3*d.*; good picked *Penang*, 9½*d.* to 9¾*d.*

CREAM OF TARTAR.—There is no difficulty in getting quantities of first white in crystals at 87s.

GINGER.—Jamaica, although in large supply, has met with less demand, and sales have been made at easier rates. *Rhatom*, common dark, 49s. 6*d.* to 52s.; ordinary dull and lean, 55s. to 58s.; dull washed, 59s. 6*d.* to 62s.; middling to bright bleached, 65s. to 70s. *Cochin* flat: B cut, 68s.; fine bold A, 100s. These were the principal items of Wednesday's sales.

HENBANE EXTRACT.—For the B.P. preparation made from English leaves we have heard that 6s. per lb. has been paid to the makers. *Belladonna* extract is also much firmer in price.

ISINGLASS.—The periodical sales were held on Tuesday, when 155,500 lbs. of the 183,150 lbs. offered were sold. Brazil was in good demand at steady prices, but excessive supplies of Bombay held to make those varieties go off flat; thus leaf was 1*d.* to 2*d.* lower, but purse 1*d.* dearer. *Penang* leaf was held for steady prices and little sold; purse dull. *Saigon* leaf 2*d.* to 3*d.* lower. Fine lump Brazil, 2s. 7*d.* to 2s. 9*d.*; good to fair, 2s. 2*d.* to 2s. 6*d.* West India lump, 1s. 9*d.* to 2s. 3*d.* *Penang* leaf pickings, 1s. 7*d.*; ordinary to good leaf, 3s. to 4s. 1*d.*; fine tongue, 3s. 10*d.* *Saigon* leaf, 5s. 11*d.*; fair, 4s. 9*d.* to 5s. 3*d.* *Bombay* good old-style tongue, 1s. 6*d.*; fair bladder, 1s. 10*d.*; fine, 2s. 8*d.* to 3s.

MAGNESIA.—Calined is quoted at 10*d.* to 1s. 2*d.* per lb., according to the nature of the package, f.o.b. at works; carbonate, 32s. 6*d.* per cwt. on same terms.

OIL (COD-LIVER).—Our Norway correspondent writes under date of June 13:—"The Finmarken fishing is now over for this season, with a better result than last year. The total production of liver and cod-liver oil is 44,398 and 3,899 hectolitres respectively, against 29,172 and 772 hectolitres last year. Below I give you the total figures for the whole of Norway for 1892:—

	Liver	Cod-liver Oil
	Hectolitres*	Hectolitres
Soendmoere	4,600	1,200
Nordmoere	7,737	5,300
Vesterdaalen	14,400	2,827
Tromsøe, Senjen, &c. ..	1,000	1,440
Finmarken	44,398	3,899
Lofoten	23,003	8,100
Total	95,135	22,763

The quantity of medicinal cod-liver oil is thus fully 1,600 hectolitres below that of last year, and 2,800 below the average of the previous four years. The quantity of liver available for other oils is 31,000 hectolitres over that of last year, but 9,500 below the average of the previous four years. Last year the lowest prices touched were 65s. to 67s. 6*d.*, but at the close of the Finmarken fishing prices went up to 70s. and 75s., and remained steady at about 75s. till the beginning of this year. Price is, therefore, unwarrantably low at present, and it must not be forgotten that a great deal of Finmarken oil is of an inferior quality this season, which makes the quantity of really good cod-liver oil considerably less than for many years past. No surprise must therefore be felt if the price should move up a little ere long. It cannot be avoided later in the summer or autumn, although at present there may be sellers who will accept ridiculously low prices, just to turn their small stocks into cash. Sales have lately been made at 65s. c.i.f., U.K. east coast."

OIL OF CLOVES.—English distilled oil now commands 2s. 3*d.* per lb. from the distillers.

OIL OF PEPPERMINT.—The H.G.H. brand is dearer, and is no longer procurable at 13s. 4½*d.* per lb., but 13s. 6*d.* can buy it.

OILS (FIXED).—*Linseed* easier; spot, 18s. 6*d.*; land, 18s. 6*d.*; barrels, 18s. 7½*d.*; July-August, 18s. 10½*d.* *Rape* steady; refined, 24s. 6*d.* *Cotton-seed* quiet; refined, 19s. 6*d.* *Cocunut*, Ceylon, 22s.; *Cochin*, 24s. *Palm*, Lagos, 23s. *Olive*, Spanish, 34s. 6*d.*; *Messina*, 34s. 6*d.*; *Mogadore*, 34s.

OTTO OF ROSE.—We have before us a letter from Constantinople confirming the statement made herein regarding the short supplies of otto of rose this year. Our correspondent states that "9 to 12 okkas of rose-leaves yield in a good season one metical of oil, whilst it was necessary this year to take 18 to 24 okkas. It is therefore believed that the result of the whole crop will probably not be more than about 250,000 meticals, against 450,000 in 1891; and when including the stock of last year, amounting to about 50,000 meticals, there will be only 300,000 meticals, against 500,000 in 1891. The stock in the hands of dealers cannot be very large, and no doubt there will be higher prices. Two hundred and fifty thousand meticals are equal to 37,500 Turkish ounces of

* 100 hectolitres are equal to 86 barrels, or about 9 tons.

10 Turkish drachms. Three hundred thousand meticals equal to 45,000." The following comparison of the crops of recent years shows the exact position:—

Crop in 1892 ..	280,000 meticals = about 42,000 oz.
" " 1891 ..	450,000 " " 67,500 "
" " 1890 ..	520,000 " " 78,000 "
" " 1889 ..	550,000 " " 82,500 "

The finest qualities of otto have been sold in London at 30s. 6d. per oz. to wholesale buyers, and from 28s. to 28s. 6d. has been paid for the ordinary.

OPIMUM.—A correspondent at Smyrna, writing on June 11, states that within the past fortnight the position of opium has remained almost the same. The sales for the fortnight amount to 30 chests, manufacturing sorts, with a slight fall of 1d. on the closing sales. Advices from the provinces state that the rains have caused slight damage, but it is quite certain that the harvest for the whole of Turkey will reach a minimum of 8,000 chests. Arrivals from the new harvest amount to 40 chests, against 103 last year at same date. From another source, we have the following sanguine statement:—"The opium harvest of Sandikli, Kutahya, Bolvadin, and some other localities of the vilayet of Huda-vendighiar, promises to be more abundant than last year; the total produce of the whole province, including the district of Broussa, Karissi, and Ertoghroul, is estimated at 15,000 cases." This is at least 30 per cent. more than the most liberal estimates which have yet been made. Our Smyrna correspondent writes on June 25:—"The only sale this week consisted of 5 cases Karahissar talequale at the equivalent of 6s. 6d. per lb. f.o.b. Hitherto only 101 baskets of new opium have come forward, as against 205 at the same last year, but the gathering in of the crop in the lower districts commenced ten days later than usual. Moreover, it will be about 30 days less than the last owing to the unfavourable weather which prevailed during the harvesting. This, however, is not the case in the northern districts, where the crop is now being collected, and should the present favourable weather continue there is no reason to doubt that the total outturn this year, including the Malatia and Salonica kinds, will not be less than 9,000 baskets."

PARAFFIN WAX.—Refined rules at $3\frac{1}{2}$ d. to $4\frac{1}{2}$ d. per lb., according to melting-point.

PEPPER.—Business was done in auction on Wednesday at the following prices:—*Black*: Singapore, grey, $2\frac{1}{4}$ d.; fine bold washed, 3d. to $3\frac{1}{2}$ d.; fine bold Mangalore, $5\frac{1}{2}$ d. to $5\frac{1}{2}$ d. *White*: Penang, $3\frac{1}{2}$ d.; Singapore, dull brown to middling, $4\frac{1}{2}$ d. and $4\frac{3}{4}$ d.; fine, $6\frac{1}{2}$ d.; and superior bold, $8\frac{1}{2}$ d. Prices are easier.

PHOSPHORUS.—Dearer. Sticks are quoted at 2s. 1d., but an easier price could be obtained.

PIMENTO is steady at prices ranging from $2\frac{3}{4}$ d. to $2\frac{5}{8}$ d., according to quality.

POTASH CHLORATE continues to hold its firm position at 7d. per lb., but a shade less (say $6\frac{3}{4}$ d.) would be taken.

QUICKSILVER.—Second-hand holders are selling at 7l., but the official quotation remains at last week's rate—7l. 2s. 6d.

QUININE remains in a lifeless condition, $8\frac{3}{4}$ d. being the price taken for German.

SEEDS—*Canary*: A firm tone has been prevailing during the last fortnight, and the demand is somewhat more active and prices are higher—viz., Turkish, 46s. to 50s.; Morocco, 48s. to 51s.; Spanish, 60s. per 464 lbs. ex warehouse. *Hemp*—Russian, 33s. to 35s.; fine bold hemp-seed is scarce. The firmness of *linseed* continues and values are advancing. Sicilian seed, 54s. to 56s.; Russian, 39s. to 42s.; East Indian, 40s. to 42s.; River Plate, 39s. to 43s.; Calcutta, 39s. 6d.

SHELLAC—Sales were held on Tuesday, when three times more of the article was brought forward than was required. The supply consisted of nearly 1,200 cases, and of these 454 were sold. Orange sold at a decline of 4s. and 5s., the prices being, orange fine unworked pale, 90s. to 91s.; dull broken, 88s. to 89s.; pale to good second, 82s. to 87s.; poor to medium flat, dull to red, 71s. to 75s. Button, 79s.; fair 2's and thirds, 73s. and 77s. Garnet, good unworked AC, 69s. to 71s. To day there is a better feeling, and 200 cases of TN have changed hands at better prices.

SODA BICARBONATE is very firm, the price at the works being 6l. 15s. per ton in 1-cwt. kegs, and 15s. more in London.

SODA CRYSTALS easy, at the last quotations.

SODA PHOSPHATE quiet, at 14l. 10s. in Liverpool.

SUGAR OF LEAD.—White English can be bought at 28s.

TEA.—The new Monings being now so close at hand, Congou buyers are waiting to see what the new crop will be like, though small lots of fine old teas at recent low prices have been sold here and there, and are now not very plentiful. Newmakes, 1892-93, are in excess of the demand, and really good tea is selling at 6d. per lb. Capers are quiet, and lower grades easy again. Fine capers are very scarce, but new teas will be here next week. Assams and Ceylons are quiet, and a "sick" market. Terminal quotations for Assam are $6\frac{1}{2}$ d. for spot, and as low as $6\frac{3}{8}$ d. for the late months of the year. A light sale of Ceylon on Tuesday went slowly for common tea, but with a good demand for the very few really fine teas catalogued. N.S. Darjeeling are easier, though still too dear.

THE LIVERPOOL MARKET.

ARSENIC.—The price is now fixed at 12l. per ton.

CASTOR OIL.—Good seconds Calcutta firm at $2\frac{5}{8}$ d.; first-pressure French is selling at $2\frac{5}{8}$ d. to $2\frac{11}{16}$ d.

CHILIAN BEESWAX.—Sales of pale yellow at 7l. 15s.; grey to yellow, 7l. to 7l. 10s.

CREAM OF TARTAR.—Easier, and 89s. now asked for first white.

GRAINS OF PARADISE.—A small parcel of 11 bags bright sold at 24s.; 27s. 6d. is generally asked by holders.

HONEY.—Californian and Chilian continue dull and uninquired for.

QUILLAIA.—The steady tendency upward continues, and some ask 18l. now.

TURPENTINE.—Demand being quieter, this has now touched 23s. 6d.

THE NEW YORK DRUG MARKET.

Writing on June 23, our New York correspondent says that the trade in general is quiet, the excessively hot weather being apparently a factor in the dullness. Coca is very firm, at 40c. for Huanoco, and as much as 60c. in some quarters for Truxillo leaves. Opium is quiet, and both it and quinine are selling only in a jobbing way. Lycopodium is dull and slow of sale. H. G. H. peppermint oil is strong at 83, with sales of 25 cases at that figure, though some holders ask \$3.10, and the largest holder (Horner) wants \$3.25, but might shade a round lot; no transactions are reported, however, since last Thursday's noted above. Texas snake-root is offering rather more freely from the country at 20c., but 18c. is about the figure at which buyers would take it up. Senega is also offering more freely from out of town at 45c. for southern, 35c. for south-western, and 36 $\frac{1}{2}$ c. for Minnesota, but no business has been done, buyers holding aloof; stocks are fairly full both here and in the country. Some 36 bales of Mexican sarsaparilla have been taken up and mostly exported on private terms, and no more is in first hands at present. Golden-seal has eased off, and there has been a sale made for export at 21 $\frac{1}{2}$ c. The indications are that the usual "bear" tactics are being inaugurated against the indigenous root in view of the approaching season for gathering. The absence of export demand is, however, a very forcible and legitimate "bear" argument.

THE SMYRNA OPIUM MARKET.

TELEGRAPHING on this date, our correspondent at Smyrna states that: "Fifteen cases have been sold this week at the last-quoted prices."

A VISIT TO THE HITCHIN DRUG-FARM.

PASSENGERS from Peterborough to King's Cross have now an opportunity of observing several acres of henbane and belladonna in flower, just before entering Hitchin Station. The field, which is some twelve or fifteen acres in extent, runs directly by the side of the line, and fully half of it is this year cropped with belladonna and henbane. It is one of six or seven fields owned and farmed by Messrs. Ransom, and which are distributed impartially around the little town. The plants are placed in symmetrical rows, about two feet apart, whilst in between the young seedlings have been planted this spring. The henbane, which is large and handsome, struck our visitor, however, as a trifle smaller than usual. This way of putting it was, indeed, a good way below the truth, for Mr. F. Ransom informs us that the crop is under half the average. In this strip, where it is estimated about two tons of henbane is flourishing, they would have expected, under ordinary conditions, to have had five tons. This depletion is due to the winter having destroyed a large number of the older roots. The plants are about $3\frac{1}{2}$ feet high, and in spite of the generally delayed season, were flowering well, although it was but the second week in June. The seedlings were only about 10 inches high, but looked strong and healthy. Some few years ago Messrs. Ransom had a phenomenal crop of henbane, and it could neither be disposed of nor converted into extract fast enough, so a large quantity of seed was obtained. This supply of seed has not been exhausted yet, and the first year's biennial plants that we saw were from that same stock.

The belladonna appeared to have been still more retarded by the winter, only a small percentage being in flower, whilst the gaps in the rows were very frequent. The plants were only about $2\frac{1}{2}$ to 3 feet in height. A few elaterium-plants were growing here also, but they, too, have suffered severely during the winter. The portion nearest the line has been planted this spring with peppermint, and the plants looked fairly well, although showers were much needed to bring them on. The flowering of both lavender and peppermint will be late this year, and cannot be expected before the end of July or beginning of August. A peculiar red or coppery colour that some of the peppermint leaves were tinged with is due to a kind of blight, which, if the plant is strong and vigorous, will be thrown off after a time. Labourers are required through the spring and summer to hoe up weeds and break the soil between the rows. This is particularly necessary, or the young plants are rapidly choked by their rivals. It may here be mentioned that the soil all round Hitchin is admirably suited for plant-cultivation, consisting of good sandy loam on chalk.

Another field belonging to Messrs. Ransom, which we visited, contained last year a good quantity of elaterium, but is now nearly empty. We ventured to suggest that the demand for elaterium was getting small by degrees and beautifully less, but Mr. Ransom was not inclined to agree with us. Some reason for the demand not increasing may be due to the foreign article being used, as Mr. Ransom finds that the latter contains from 5 to 10 per cent. less elaterin. The English elaterium will usually yield about 30 per cent. of elaterin, and the foreign only about 20 per cent. Close by Messrs. Ransom's laboratory and factory, which are situated in another direction, is a bed of aconite, the plants so close together that, in spite of their tall and graceful racemes, the whole appearance is that of a bluish-purple tablecloth upon a green table.

The green extract of aconite is not so much used, the non-official alcoholic extract of the root having to some extent replaced it. Adjoining the aconite is a large plot devoted to hemlock, which, in this cool and shady spot, is growing luxuriously. It is already nearly 6 feet high, although there are no signs of flowering, and it will yet grow another 2 feet or 3 feet after flowering and before running to seed. This is the best time for conium, says Mr. Ransom, *Pharmacopœia* notwithstanding. [The actual date when this was said was June 11.] The average yield of juice from 1 cwt. is from 35 lbs. to 0 lbs., or from $3\frac{1}{2}$ gallons to 4 gallons. The application of heat to fresh juices is unnecessary, in Mr. Ransom's experience, if the liquid, after the addition of spirit, be

allowed to stand for some time before attempting to filter. A large quantity of hemlock as well as digitalis is collected in the neighbourhood of Hitchin and brought to Messrs. Ransom's laboratory.

Turning towards the private residence of Mr. W. Ransom we pass a few more fields devoted to drugs and herbs. Some belladonna and a good deal of lavender is flanked with the sorry remains of rosemary. There is no doubt that the English rosemary crop is a failure this year, and this report is confirmed from Mitcham. We cannot help expressing our pleasure that, fortunately, English oil of rosemary is one of the few English essential oils that we can do without, as everything points to the price being very high indeed.

On the brow of the hill which overlooks the railway-cutting, only a quarter of a mile away, are the last of Messrs. Ransom's fields. The one nearest the house is full of lavender and peppermint, the latter being nearly all the black variety. The other contains, besides lavender and peppermint, another good-sized plot of henbane. Although these fields are more exposed than the others, the henbane is the finest we have seen. Some of the troubles which drug-growers have to meet are here pointed out. A large plant of henbane was lying over in a very withered condition, its neighbours, however, looking healthy enough. On pulling up the root tiny holes are seen in it some 3 inches below the ground which have been caused by a wireworm. The whole area which Messrs. Ransom & Son have under cultivation at Hitchin is a little over 50 acres. Of this amount practically one-third is devoted to medicinal plants and two-thirds to lavender and peppermint. It is impossible to maintain the same crops in the same field for more than four years, as the soil is exhausted of the peculiar constituents required by that herb. It is usual to change the crops completely, from a medicinal plant to peppermint or *vice versa*, or again to give the soil a rest.

Amongst some of the interesting information given by Mr. F. Ransom we learn that succus digitalis is being preferred to extract, that salted elder-flowers are quite things of the past, and that extract of *Scopola carnioica* or *Scopola atropoides* meets with no inquiry. Mr. Ransom is naturally not a little disappointed at this, as, in conjunction with the work done in the research laboratory of the Pharmaceutical Society on the subject, he worked out an assay method and produced stable standardised preparations of scopola.

HOW JUJUBES ARE MADE.

JUJUBE-MAKING may be divided into two branches, viz. ordinary jujubes—such as voice, delectable, and magnum bonums—which are cut from the sheet, and pastilles, which are moulded. The bases in both cases are practically the same, gum arabic being the principal constituent. The gum is made into a thick mucilage with cold water, both being placed in a large copper which has a mechanical arrangement for constantly stirring. Thereafter it is strained and boiled up with sugar and the other component parts of the basis. For jujubes the mass is poured into a tin, such as the jujubes are sent out in, to a depth of about one-third of an inch, which is then placed in the hot-chamber for at least a month. It takes this time before the basis comes to a condition of maturity in which it is fit to cut into jujubes. When it has reached this stage it is cut by a machine fitted with a double set of knives, so arranged that they cut both ways. Pastilles, we have said, are moulded. The method is as follows:—The workman fills a wooden tray with starch-powder, and smooths the surface; now, taking a mould with half-a-dozen figures of the pastilles on it, he presses this into the powder again and again with great rapidity, until the tray is full of moulds. Next the workman takes a large ladle with six outlet tubes which exactly correspond in setting with the moulds in the tray, and with this ladle he quickly makes a trayful of pastilles. At this stage the top of the pastille is convex, but in the course of a month's drying it becomes concave. After they have matured the pastilles are glazed or crystallised according to their nature.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Patent-medicine Men Speak.

SIR,—I am desired by the committee of the Association of Owners of Proprietary Medicines to explain, in reference to the remarks in your journal of June 18, that no case was stated by way of appeal by Mr. Davenport from the magistrate's decision, because the course taken by the advocate in closing the case without calling evidence precluded any real or satisfactory discussion; it was thought better to leave all points open.

I am also desired to thank you for the offer to subscribe to a fund to obtain an authoritative decision on the subject, and am requested to point out very clearly that the late prosecution, or any arising out of it, if promoted or undertaken by the Pharmaceutical Council, was or will be a breach of faith of an engagement entered into (as must be well known to some members of the Council) by which, in consideration of this Association, not objecting to the Pharmacy Act, 1868, they expressly, and as absolutely as possible, agreed that *bona-fide* stamped medicines, known then and now as "patent medicines," should be exempt from the operation of the Act, and this Association deeply deplores, in the interest of the trade, that no endeavour has been made by the Council to settle the matter in an equitable manner. Under these circumstances, it is the intention of this Association to defend any member, as each occasion arises, who may be proceeded against under the Act, and to carry the matter to the High Court if the facts and evidence are such as may lead to a decision which all can accept as an authoritative exposition of the Act.

Yours truly,

W. WHITAKER, Secretary.

Association of Owners of Proprietary Medicines,
6 Great Winchester Street, London, E.C., June 29.

SIR,—In asking you to insert the enclosed, I wish to make it plain that, so far as I am concerned—and I hope it is also the feeling of every one of us—not the slightest antagonism to the chemists is intended, but, on the other hand, an earnest wish that some way could be found to benefit the trade.

While we are year after year menaced by the Pharmaceutical Council, it would be suicidal for us even to attempt to restrict the sale of medicines absolutely to chemists, neither do I believe it would ever be legally so restricted. On the other hand, what is more natural than for the public to go to the chemist for their medicines, and he to expect a decent profit for supplying them? This he often utterly fails to get, as much from the dealings of cutting chemists as stores, grocers, &c.

I have both directly and indirectly in the past approached the Council, believing that if they would only deal with the patent-medicine proprietors, instead of ignoring them on the one hand and fighting them on the other, then a benefit to the retail trade must ensue, but without result; indeed, I understand they consider themselves a purely scientific body, and hardly at all recognise what a help they could be to the trade. I venture now to ask every chemist who has to obtain his living, the same as each of us has to—viz., by the sale of his medicines—whether this is the way to treat such a question. The importance of the

subject is measured by the fact that we pay the Government over a quarter of a million every year, and it will in the future be double that, for stamps alone. This is a good trade, and I say, squarely, I should like to see it in the chemist's hand.

I indicate what I believe to be a distinctly feasible remedy, and if the trade will only induce the Council to act on the lines indicated, I believe it would be the commencement of a new era; at any rate, it would be worth a trial.

These lines are simple, and I believe the Government would be inclined to assist or pass a Bill on this basis—

(a) Let all patent medicines be registered, an annual registration fee to be paid for each medicine; if not paid the article to be erased from list.

(b) All existing patent medicines to be registered on application, but any new ones not to be registered, unless they satisfy a board that such medicines are not dangerous for human use.

(c) If danger to those using the medicine be alleged and proved in a court of law against any patent medicine, then the Board to order such label to be affixed as in their judgment shall be necessary, and without this label it shall be unlawful to sell such medicine.

(d) The Board to consist of a paid President nominated by the Government, and two medical men, two members of the Council, and two members of the Association of Patent-medicine Proprietors.

I suggest that the Council should take this as a rough basis of agreement, on the understanding that a certain number of the proprietors, together with the wholesale houses, shall agree that steps be taken by which no retailer shall be supplied unless he covenants to, say, sell at not less than 1s. for all 1s. or 1s. 1½d. goods, and so on.

The absolute effect of this will be, not only will every chemist get a good profit on the quantity he now sells and be delivered from the wretched competition now going on, but practically the bulk, and perhaps the whole trade, would in time fall into the chemists' hands. At present the sole object that appears to be aimed at by anyone is to confine the sale of poisons to chemists, and even (which is most unlikely in the extreme to be realised) if this extends to all articles containing poison, still it would only result in giving the public the impression that chemists sold "dangerous and dear" medicines, grocers and stores "good and cheap" medicines, whilst if the above arrangement is carried out all will sell, say, at one uniform price, and it is inevitable that the public, if they can buy at the same price, will prefer to buy their medicines at their own chemist, whom they are sure to credit with more knowledge and experience than grocers.

The only point where the arrangement could fail would be as to whether a sufficient number of proprietors would come in. This is a matter within the discretion of those to be appointed by the Council (or, failing any action by them, if the chemists themselves would, under the leadership of THE CHEMIST AND DRUGGIST, take up the question it could be doubtless dealt with in that way). My firm belief is that if the Council would only take the matter well in hand they would be surprised how easily a great change could be arrived at; for although many proprietors would stand out, yet success does not depend upon everyone joining, and when it was found that those who started were doing well, then the very success would bring in the others.

We are now at a crisis in the chemists' trade, for the proprietary question affects everyone, as there is hardly a chemist who does not put up one or more medicines, and according as the Council work with or against the large, so are they just as much for or against the interests of the small, proprietors—indeed, still more, for the large proprietors are more able to take care of themselves than the others.

I am, Sir, yours faithfully.

ONE OF THE LARGE PROPRIETORS. (61/58.)

SIR,—I enclose you a price-list of patent medicines issued by a branch of the International Tea Company, just started in this town, where you will see Eno's Salt (2s. 9d. size) quoted at 1s. 10d., Beecham's 1s. 1½d. pills for 9d., Lamplough's Saline, 1s. 10d., &c.

As we have for years sold 1s. 1½d. Beecham's, &c., for 10½d., I do not think the public have much to complain of; but the I.T.C. list prices are really too philanthropic. In

fact, I think they ought to be prayed for in church even by all good citizens—i.e., if they supply all their teas and groceries at the same percentage of profit. I would respectfully suggest to Messrs. Beecham, Eno, Lamplough, Dinneford, Cockle, Scott, and other well-known manufacturers that they should adopt a plan similar to Messrs. Elliman—after a certain time refusing to supply any dealers who sold under a price to pay a small profit. Ten per cent. would satisfy me.

I think the manufacturers would find it to their advantage to meet the chemists in this way. You will also notice patent medicines containing scheduled poisons still listed. Another job for the Society, when ready for the fray.

I beg to remain, yours faithfully,

EDWARD J. EATON, M.P.S.

The Pharmacy, Church Street, Woodbridge, June 28.

Mr. Harry Iron, Shrewsbury, says he sent to the Pharmaceutical Society particulars of the sale of a poisonous proprietary medicine by an unregistered dealer, and he sends us the official reply he has received. It is to the effect that while no doubt the Council will take the necessary steps to enforce the Act in cases such as the one referred to, they consider it "undesirable that any local action should be taken which might embarrass the Council in the proceedings they are about to institute." What do they mean?

The Insane Root.

SIR,—I shall be much obliged if you or any of your readers can tell me what plant it is that Clusius describes under the name of *Pruna insana*. I cannot find the name in any of the English herbals to which I have access here in Boetia, but there is in William Ramsey's treatise "Of Poysons" (London, 1660), of which I happen to possess a copy, a very graphic and curious account of the effect of its fruit upon a ship's crew, by which I am led to suspect that this plant (whatever it may be) is none other than Shakespeare's "insane root that takes the reason prisoner" ("Macbeth," i. 3). Had the plant been described by Lyte or Gerard I should have cried "Eureka!" at once, but apparently it is not. Still, it is possible that Shakespeare may have read of it elsewhere. The effect of the fruit, says Ramsey, is to make men "extraordinary sleepy, Cause Laskes, seise on the Heart, spirits and Braine, exciting divers strange phansies and Chymeraes in their heads;" but his account of the case of certain Dutchmen who partook of it too freely, my modest pen refuses to transcribe.

Yours, &c.,

C. C. BELL.

June 28.

Improving the Opportunity.

SIR,—I give you below copy of two circulars I have written to-day, got signed by chemists here, and posted to each of the candidates for Bassetlaw parliamentary division.

The hint I took from one of your correspondents, and think, if you could stimulate others to similar action, good results might follow.

I will let you know candidates' decisions.

I remain, yours truly,

30 Castle Street, Worksop,
June 27.

J. A. WOOD.

[COPY.]

To—

SIR,—We, the undersigned chemists and druggists of Worksop, should like to know whether or not you would give your support to a Bill—which in all probability may be placed before the next Parliament—having the following object:—

That all medicines intended for internal administration shall be vended only by duly qualified medical men and chemists.

We are, Sir,

Yours faithfully,
(signed)

TOM MORRIS,
GEO. W. JONES,
GEO. BAXTER,
THOMAS E. PASK,
JAS. A. WOOD.

Mr. Arthur Coke, of 339 Oxford Street, has prepared some election handbills advocating voting for candidates favour-

able to leasehold enfranchisement, graduated income-tax, and the suppression of trading by public servants. Mr. Coke wants to supply these to chemists' associations, clubs, &c. Will secretaries and others please write to him?

Chemists' Assistants' Union.

SIR,—Ever since the decision in the Wheeldon case, the services of qualified men have been, properly, more valued.

The qualified assistants have for some time really had the power of stopping much of the store business, and so increasing the status of the trade. No better opportunity can occur than now. Let them, now that the demand for their services is so great, refuse to accept less than double what is offered elsewhere, as it must be pretty evident that, if employed long enough to have a reference from such a source, the likelihood of obtaining a really good berth would be very small indeed. Their career would be seriously jeopardised. So long as the public can have prescriptions dispensed for less than half the usual chemists' charge by qualified men will masters be unable to afford what should be a good remuneration for valuable services. When qualified men can be found who are foolish enough to work for 30s. a week at stores, simply because the hours (not the work) are "easy," how can unity be obtained?

No man who has been at so great expense to qualify, and undertakes such directly responsible work as dispensing and the sale of poisonous preparations, should, in my opinion, think of accepting less than an equivalent of 50s. a week at least, which, reckoned at 100 hours a week, is still only a miserable pittance of 6d. per hour.

With reference to these long hours, I see no reason why they could not be considerably reduced in the great majority of cases, except that masters will not agree as to the hour of closing. What can be done by stores surely cannot be too much for chemists.

Assistants could do much to assist this end if they only valued their services more, and charged so much per hour.

Yours faithfully,

MANAGER. (60/43)

SIR,—I have read with interest the letters from assistants for a union. If we could obtain one, we could blackmail all who would not give hearty support to it. For we could then have shorter hours, better pay, and chance of obtaining good situations.

Yours respectfully,

REGISTER. (58/46)

[We cannot congratulate the advocates of the scheme on this indiscreet declaration of an intention to "blackmail" the masters.]

SIR,—Your article on "Assistants' Grievances" seems to me to be pervaded by the spirit of how not to do it. Undoubtedly, assistants show a want of delicacy in applying to you for aid in the matter of a union. They ought to bear in mind that but few of them help to support THE CHEMIST AND DRUGGIST; and one cannot afford to offend one's patrons nowadays.

Still, I fancy a union might accomplish a lot of good, and that assistants might move in the matter now, as they will never have a better opportunity. Your discovery that there are only 2,000 qualified assistants is probably a true one; but the assumption that the most of those men are satisfied with their lot is not quite correct. No doubt those employed in large establishments and in the despised stores are so, but the men in those "comfortable homes" we read so much about in advertisements, and meet so few of afterwards, can hardly be said to be content. And the great army of the young unqualified, are they content? Chemists cannot do without them, and they will have to be reckoned with in some way in the next Pharmacy Bill. A recent writer in a French magazine, in commenting on the great stores, pointed out that they were in perfect accord with the principles of political economy, and that they were come to stay. He showed how much better was the position of their employes than that of small tradesmen, and gave some advice which assistants might lay to heart. An Assistants' Union would scarcely exist to encourage stores; but it might

protect those benefits which the store-system bestows, and extend them to all its members.

I mean greater personal freedom, and the minimum of 72 hours' weekly work. The greatest difficulty it would have to contend with would be the indoor system, which is the assistants' greatest curse. Besides being made to feel how much a stranger he is in the house, an interloper on all occasions, he is never free from business "grind." Were a union only to abolish this iniquitous system, it would well earn its existence. Surely someone sufficiently disinterested can take the initial steps for organising such a work. He would have a good cause to fight, and, I am persuaded, many willing helpers.

I am, yours obediently,

IVAN. (60/10)

SIR,—Chemists' assistants' grievances really and truly exist. Speak with whom you will in the drug trade, you will hear the same complaint—"The business is not so bad, but the hours taken to conduct the same are abominable." Even for qualified men in the best West-End houses, let us just see how they work simply to earn "bread and cheese," with not as much salary in the majority of cases as would be given to assistants in other businesses. These establishments employ three or four qualified men, and hours of business are from 9 A.M. to 7.30 or 8.30 P.M. In these places (where hours are considered short) there is a lot of work to be done in the time, and work requiring the utmost care and attention. Those whose position you speak of as a somewhat enviable one are engaged in their calling 80 hours per week. Of course I am reckoning night and Sunday duty, which one must do, as it is time employed in little else than business; and I am sure that this is a fair average. Is not this too long to be engaged in the duties of a pharmacist? The majority of us will say, "Yes, certainly." But we go on with pale faces, grumbling, discontented with our lot, and only satisfied by the thought that it will not be for long, as we hope soon to have a business of our own, when we can arrange our own time. But the principle is a wrong one, and should be "put down." A business that requires all this attention for a bare living must be a bad one.

In your article you point out that there are only 2,000 qualified assistants in Great Britain. Surely these ought to be able to form some sort of combination when they are nearly all "harping on the same string." It seems to me that the Chemists' Assistants' Association is the body to take this in hand. These would then have the game in their own hands, as stores cannot be conducted but by their aid. Our employers must not stand still in the movement. They must give their employés more freedom. This is the first thing needed, and they will be better able to do their work to the satisfaction of the former and contentment of themselves. In my opinion chemists in business are largely responsible for the success of the stores; they have driven many a good assistant there by their excessive hours.

Your obedient servant,

A BROTHER PILL. (61/9)

[We give a fair space to the letters of assistants on this subject, but we have been obliged to cut down unmercifully some of the inordinately lengthy communications we have received.]

A Curiosity in Dispensing.

SIR,—A customer of mine, through reading *The Review of Reviews*, was induced to get a supply of Count Mattei's medicines, and, finding the directions somewhat intricate, asked me to prepare them. According to my calculation it will take him above eleven years before he gets the whole of one globule; there are 170 in the bottle. He appealed to the agent at my suggestion, pointing this out, who replied, "Strange as it may seem to you, the directions are correct." Briefly, these are as follows:—Put one globule in 8 oz of water for No. 1 dilution; one teaspoonful of this in 8 oz more of water makes No. 2 dilution, and one teaspoonful of No. 2 in still 8 oz more of water makes No. 3, which take each day. No. 2 will at this rate, of course, last 64 days, and No. 1 will make 64 bottles of No. 2. Homœo, a hy does not seem in the running at all. Yours,

GILGEN. (61/8)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Prescriber and Dispenser.

SIR,—Your comments on "Fyfe's" note regarding the iodide and ferric-chloride mixture (47/14) are not quite severe enough. Had he been a "Fifer," instead of a "Fyfe," he would have known better how to blow his horn. Druggists never gain anything by nursing bad feeling against doctors.

I have for years past been in the habit of dispensing prescriptions of a similar composition to that quoted by "Fyfe," and never had any hesitation in sending them out without a "poison" label. If "Fyfe" would consult good medical authorities, and learn a little physiology and medicine, he would have much more confidence in himself and in prescribers. Such knowledge would enable him to conjecture what takes place in the system of a patient who gets the following mixture:—

Potas. iodid.	..	..	..	..	3vj.
Ammon. carb.	..	..	..	..	3j.
Aque ad	..	..	..	..	3vj.

M.

A tablespoonful every four hours in water.

Each dose of this mixture contains about 22.9 grains. How many "poison" labels would "Fyfe" put on the bottle in such a case?

For years past there has been much growling and grumbling among chemists, but it strikes me that if many had learnt their business a little better, not to say civility to doctors and customers, they would be more prosperous as shopkeepers.

DISCRETION. (59/57.)

Polypharmic Prescriptions.

SIR,—I recently observed in your columns a copy of a prescription containing eight ingredients, to which four more were afterwards ordered to be added. The subjoined is a *bonâ-fide* copy of a prescription of a doctor of "the old school" (now deceased), who practised in N.S.W. I have also dispensed prescriptions by the same practitioner which contained as many as twenty-two ingredients, but the subjoined was about his average "shot-gun." It was the practice to set aside the bottle in a safe place for a time before corking to allow the incompatibles to "fight it out."

Warialda, N.S.W.,

I am, yours, &c.,

May 18.

EX-PHARMACIST. (59/38.)

Decoct. seneg. ad	..	..	..	..	℥ss.
Bals. canadens	..	..	..	..	℥ij.
Mucil. acac.	..	..	..	..	℥j.
Sir. hemedis.	..	..	..	..	℥ij.
Carb. ammon.	..	..	..	..	℥ss.
Liq. bismuth.	..	..	..	..	℥ss.
Tinct. calumb.	..	..	..	..	℥ss.
Succ. taraxaci	..	..	..	..	℥ss.
Tinct. scillæ	..	..	..	..	℥vj.
Tinct. campb. co.	..	..	..	..	℥ij.
" lupuli	..	..	..	..	℥ij.
" digitalis	..	..	..	..	℥ij.
Spt. eth. chlor.	..	..	..	..	℥ij.
Acid. hydrocy. dil.	..	..	..	..	℥j.
Tinct. belladon.	..	..	..	..	℥j.
Liq. cinchon. cordifoliae	..	..	..	..	℥j.

M. ft.

Sig.: ℥ss. ex aq. ℥j. 3ts horis. Agitat.

53/52. *Dies* asks:—"What length of day does the prescriber mean in writing the following directions?—'℥ss. in water every four hours until relieved, and then thrice daily.'"

[A twenty-four hours' day in the first instance, in the second a day of the waking hours. Patients who are asleep in the former instance should not be awakened when the dosage time arrives, but should get the dose when they awake naturally, then four hours after that, and so on.]

Who can Read it?

A Carmarthen chemist (55/39) has been asked to dispense the following prescription. It is believed to be of Spanish origin. Will one of our subscribers in the Peninsula give us a version of it in some human language?—

D. de Quina 2591 16 July 192
Quina 192 69.
Filicon en cañon 103
Can 1190 1003
Clidogum 5003
Resolutor de flavo 303

Our correspondent informs us that he is told the article supplied was about a pint of a port-wine colour, tasting bitter (like quinine), was taken as a blood-purifier for boils, &c. Dose: Two tablespoonfuls before meals, twice a day.

29/6. The prescription is for tincture of gossypium (Parke, Davis & Co.). Send 10 grammes (rather more than one-third of an ounce). Direct 20 drops to be taken every two hours until the required effect is produced.

57/70. *Enquirer* wants to know the best method of mixing the following:—

Zinci oxydi	3vj.
Glycerini	3iv.
Ol. olivæ	3vj.
Liq. calcis ad	3vj.

M. Ft. lotio.

Rub the zinc oxide with the olive oil, add the lime water gradually, and lastly the glycerine.

60/49. *Perseverance*.—Fifteen grains is supposed to be the size of bougie-moulds, but some are larger. Yours is apparently a 20-grain mould. When a new mould is got it is always wise to determine the weight of cocoa-butter which it holds. Usually no allowance need be made for quantities of salts under 2 grains in each bougie. (2) You will find particulars regarding the Apothecaries' Society's examinations in our Educational Number. The address of the company is Blackfriars, London, E.C. Enclose a stamped and addressed envelope.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-6.

For stamp duties, licences, Customs regulations, &c., see the DIARY pp. 151-9.

58/37. *Enquirer*.—We have replied on the point you raise to a number of correspondents. You are required, when you sell a poison, to label the article with the name of the poison, as well as with the word "poison," and with your name and address. It is open to argue that in the case you suggest the name of your proprietary article is the name of the poison, but we cannot tell how that argument would be received by a Court.

59/17. *H. J. I.*—We cannot give you an opinion whether your fly-papers will infringe this or that "or any other

patent." Your order is too comprehensive. The two fly-paper patents that we know of are Mr. Wilson's (10,781, 1887) and Messrs. Tunbridge & Wright's (10,767, 1889). Get the specifications from the Sale of Patents Office, Cursitor Street, W.C., and judge for yourself. Have we not answered you before on this same subject?

60/14. *Victory*.—You are not justified in using a still for any purpose without being licensed, or without the permission of the Board of Inland Revenue. You had better apply for such permission.

60/33. *Hair Restorer*.—It is not necessary to attach a poison-label to a lotion because it contains a little cantharides. Only the cantharides themselves, and "the tincture and all vesicating liquid preparations" thereof are scheduled as poisons.

58/37. *Enquirer*.—Refer the inspector to section 45 of the Weights and Measures Act, 1878, which says: "A weight or measure duly stamped by an inspector under this Act shall be a legal weight or measure throughout the United Kingdom, unless found to be false or unjust, and shall not be liable to be re-stamped because used in any place other than that in which it was originally stamped." The inspector has a right to seize and detain any weight, measure, &c., found to be false or unstamped, but he has not the right to break up and destroy the same (unless you consent) until he has proved his case before a Court.

61/25. *L.* asks:—"May an unregistered person sell a cough-mixture into the composition of which tinct. opii camph. enters?" [No.]

61/63. *Branch Shop* says:—"I have noticed that firms having branches do not invariably have separate labels, address and otherwise, for each shop. How does this work under the poisons law? Will one label—that of the central shop, say—do for four or five others? It does not seem to be quite the thing even, as some do, to put all the addresses on one label."

[The Act requires that the name and address of the seller of the poison should appear on the label. We do not think the law is fulfilled when the address of the head shop is used for a branch shop, but we should think it would be when all the addresses are given. It is better to have distinct labels for each shop.]

82/26. *Alpha*.—Your label is an infringement of two persons' trade-marks. You are not entitled to use a registered trade-mark in this way.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

73/55. *Queensland*.—Paste Blacking.—Bone black, treacle, of each, 8 oz., powdered gum arabic, 1½ oz.; sperm oil and oil of vitriol, of each, 1 oz., vinegar sufficient to work to a suitable consistency. Mix in the order given and allow all action to cease with the oil of vitriol before adding the vinegar, or some prefer sour ale.

41/14. *Parazone*.—We cannot occupy space in this section by quoting formulæ from the Pharmacopœia.

55/65. *F. I. L.*—Your sample of powder for Improving the Colour of Canaries is the usual mixture of Nepaul pepper, turmeric, rice, and sugar. See back numbers—about July or August of the past two years—for formulæ.

55/69. *Carbou.*—To Prevent Coloured Liquids in Show-carboys Freezing you may use glycerine instead of spirit—2 oz. to a pint.

50/67. *Cymro.*—The reason your Dr. Locock's Lotion for the Hair separated was using spt. rosmarini, B.P., which is made with S.V.R., instead of one made with weak alcohol. There is a well-known preparation in the trade which contains traces of other essential oils, generally lavender and cassia. By thus modifying the formula, we obtain a nice preparation:—

Expressed oil of mace	..	..	..	..	½ oz.
Olive oil	..	..	..	..	2 drachms
Liquid ammonia (strong)	..	..	..	..	½ drachm
Rose-water	..	..	..	..	2½ oz.
Spirit of rosemary (as above)	..	..	..	..	1 "

Dissolve oils with heat, put into a warm mortar; mix the ammonia and rose-water, add gradually, and then add spirit of rosemary.

57/31. *Salop.*—Beniseed is another name for til or sesame seed, which yields the well-known sweet oil. It is largely exported from Africa and India.

54/69. *Cryolite.*—Cryolite is obtained from mines situated in Greenland. Thirteen cargoes were exported in 1889—all, so far as we can trace, to the United States. We do not know where you could get it in this country.

59/22. *Benzoin.*—See note from our Australian correspondent last week. If you are qualified you might do fairly well in Australia; if not, do not go out as a chemist. There is not such a demand for qualified men as to make it likely that you could make sure of a situation before you started.

30/30. *Jean.*—Take your master's or your parents' opinion on subscribing to the society. We cannot tell what opportunities you may have for making use of its resources. You can reduce the colour by filtering the spirit through animal charcoal.

41/60. *Apprentice.*—The postal course would be useful to you. But if you know nothing of Latin you should study carefully Ince's Pharmaceutical Latin Grammar as well.

30/6. *Guarana.*—For weed-killer see back numbers. A very good one is given June 11, 1892, page 852; see also March 12, page 383.

55/62. *J. J. C.*—Silvering solution, to be used without a bath.—Try this:—

	Drums
Mercury	.. .. 2
Nitrate of silver	.. .. 1
Nitric acid	.. .. 4
Water	.. .. 2

Mix in flask and dissolve; add water q.s. to 2 oz.

After applying bring up the polish with prepared chalk. To silver iron, you must first have the surface clean and bright, then dip in a solution of sulphate or nitrate of copper before applying the solution. Brass requires no other preparation than having the surface bright and free from grease. A very effective silvering-paste was given about August of last year.

58/47. *Ireland.*—The Powder for a Debilitated Calf seems to consist simply of powdered nitre and Brazil wood (3j. to 3i.). We can find nothing else in it.

55/13. *Baffled Scot.*—Liq. Ammon. Acet. Fort. (1 to 7).—See issue February 27, 1892, page 322. You say, "When in doubt ask THE CHEMIST AND DRUGGIST." Don't you think it might not, in many cases, be altered to, Consult the index of THE CHEMIST AND DRUGGIST, and thus save time?

59/63. *Antipyrin.*—Bull Burnt is a form of gonorrhœa, and is contagious. It is best treated with salines internally, as follows:—

Pot. nit.	..	..	..	..	3iv.
" bicarb.	..	..	..	..	3ij.
Mag. sulph.	..	..	..	..	3xiiij.

M. Ft. haust. Bis terve die ex aqua.

A cooling diet should be observed, and an injection into the sheath of—

Zinci sulph.	..	..	..	..	gr. x.
Aq. dest. ad	..	..	..	..	Oj.
Sæpe utendum.					

52/54. *Derbyshire.*—Essence for making Stone Ginger-beer.—

	Parts
Soluble essence of ginger	.. .. 3
" " lemon	.. .. 1

It is almost impossible to make a really fine stone ginger-beer from the essences. You must have in addition, 1 lb. of sugar and 4 oz. of honey to each gallon. Pour boiling water on the sugar and honey, allow to cool to blood-heat, add sufficient essence to flavour, and ferment with yeast floated on pieces of toasted bread for two days or so; then bottle, and keep in a cool place.

53/74. *Statim* sends a sample of Hair-wash with the following notes:—

"Prepared from herbs,"
 "Not greasy,"
 "Does not irritate the scalp,"
 "And seems to be a dilute form of
 "Locock's Lotion."
 "Being harmless it is therefore efficacious."

It is a form of Locock's lotion; you will find a formula given in this issue to another correspondent; you might try it diluted to about half strength.

58/64. *J. Barlow.*—Heading-powder for Ales.—Equal parts of alum and sulphate of iron form the old-fashioned and orthodox heading; but we have seen, a few years since, in your district, a lumpy brownish powder, which seemed a dried aqueous extract of quillaia-bark, and was sold at a fancy price. To Restore Sour or Tart Ale use either carbonate of soda or freshly slaked lime.

52/57. *B. Purst.*—It depends upon the dose of the mixture; say 1s. to 1s. 6d.

56/15. *H₂O.*—Warklyn's "Water Analysis" (Trübner, 5s.).

59/64. *Country.*—Your harness-blackening is soft, but it is none the worse for that. The additional lampblack would stiffen, but that should be done in preference with wax.

60/29. *Mortar and Pestle.*—Professor Charteris has recommended chlorobrom (a preparation of chloralamide and potassium bromide) for sea-sickness. His paper is printed in the last volume of the *Lancet*, page 517. The Professor gives 1 cz. of chlorobrom (chloralamide and bromide of potassium, of each 30 grs.), and he states that in ten cases where it was given, after the first stage of active vomiting had ceased, it was not rejected. Sleep followed, and there was marked relief from the sickness.

60 69. *Jap.*—Barium-sulphide Depilatory acts by rotting the hair, and thus facilitating its removal. The roots are not affected. The skin may be inflamed if the depilatory remains too long on, and thus produce an eruption. It is as safe a depilatory as any.

61/45. *Pilula.*—Lady Hesketh's Pills are:—

Pulv. aloes	..	..	..	..	3vj.
„ mastic	..	..	..	..	5ij.
Conf. rose	..	..	..	..	q.s.

Make a mass, and divide into 3-grain pills.

61/48. *R. S. P.*—The sample is gypsum.

57/26. *Chemicus.*—You say you are a subscriber for many years. Why not give us your name? If you think fit to do so, please repeat your question.

Information Supplied.

43 19 Hart's Solution—See Hart & Barbour's "Gynecology," page 150, which says:—"Messrs. Duncan & Flockhart, chemists, Edinburgh, have made a special bottle containing 5 oz., with a cup glass stopper, of 1 drachm capacity. The solution is of strength that one cupful added to four tumblers of water (1 quart) gives a solution 1—2,000. This solution contains $5\frac{3}{4}$ grains of perchloride of mercury and 3 grains of sodium chloride in 1 drachm of water. It may be ordered thus:—

Lotic hydrarg. perchlor.

$5\frac{3}{4}$ grains $HgCl_2$ and 3 grains $NaCl$ in 1 drachm of water.

To be dispensed in a special bottle with cup stopper.

Sig.: Poison; for external use."

The quantity of mercuric chloride given here is surely wrong. A quart equals 40 oz., or 17,500 grains, and 17,500 divided by 2,000 gives the required quantity of $HgCl_2$ —viz., $8\frac{3}{4}$ grains—instead of $5\frac{3}{4}$ grains for 40 oz.

STUDENT. (59/57)

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

61/10. The pharmaceutical coat of arms in crystallograph or gelatine for placing on shop-door to imitate stained glass: where obtainable?

57/4. Composition to take the place of indiarubber to render articles waterproof: where obtainable, or how made?

61/71. Makers of camphylene in square blocks, for urinals.

Personalities.

MR. HENRY P. CHANDLER, of the Theatre Drug Stores, Ramsgate, has disposed of his business to Messrs. Arden & Milne.

MR. THOMAS SAMUEL HORROD, proprietor of the old-established business of Swire & Co., The Broadway, Brixton Hill, has recently opened a new and handsome shop at Streatham Hill.

MR. GEORGE R. THARRATT, pharmaceutical chemist, lately with Messrs. Clare & Hunt, of Scarborough, has purchased the business of Mr. John Smith, 55 Myrtle Street, Liverpool. We understand that Mr. Smith is leaving the drug trade, and is about to commence business as a fruit-grower in British Columbia.

DR. A. P. LUFF, lecturer on medical jurisprudence, and physician to St. Mary's Hospital, has been appointed official analyst to the Home Office, in the place of the late Dr. Mymont Tidy.

Medical Cleanings.

CALCIUM SULPHIDE IN TONSILLITIS.

DR. F. P. NORBURY recommends calcium sulphide for the acute parenchymatous inflammation of the tonsils in strumous patients, which has a tendency towards rapid supuration. Small doses ($\frac{1}{2}$ to $\frac{1}{4}$ grain), frequently repeated, best suit.

SEA SICKNESS.

PROFESSOR CHARTERIS, of Glasgow, has a favourable opinion of the value of chloralamide in the treatment of sea-sickness. Writing to the *Lancet* about a few ailments, he says that chloralamide, in combination with potassium bromide, gave him excellent results in the second stage of the sickness. He prescribes Burgoyne's chlorobrom, giving a tablespoonful to females and a tablespoonful and a half to males. It may be used for short voyages, and Professor Charteris advises these two rules to be observed:—*First*, the passenger should prepare for the voyage by taking for two successive nights an antibilious pill containing mercury and podophyllin. *Second*, when on board, and if the passage be made by the night service, the passenger should avoid taking any food, but retire to the cabin, undress, lie down, and take an ounce dose of the solution.

SOME HIGHLAND CURES.

A CORRESPONDENT of the *Lancet*, who seems well acquainted with the Highlands of Scotland, writes about the medical folklore there, and mentions amongst rational cures that for whooping-cough some recommend that the child should be taken across a ferry; others that he should above all go to live in another property; others that he should go to a house where master and mistress have possessed the same surname. All these procedures involve change of air, which has in such cases no doubt been found beneficial. On the same general principle, coltsfoot is used in asthma, warts are washed in pig's blood, and a person with weak lungs takes with great advantage a preparation of twenty-four different herbs, which occupy several weeks to collect. An infusion of adders' heads is used as a dressing in snakebite, and, it is said, with excellent results. That is on the homœopathic principle.

THE CATTLE-SPICE TRADE.—The Crown Corn Feed Cake and Chemical Manure Company, of Hull, has sued the *Star* newspaper for damages for an alleged libel. The case came on before Mr. Justice Mathew and a jury in the Queen's Bench Division, on Wednesday and Thursday, but is not finished. The *Star* had published an article, which was summarised by the plaintiffs' counsel as imputing to John Henry Milestone, their manager, that he, under the false pretence of employing tradespeople as agents to sell the goods of the company, entrapped them into giving trade orders for the goods as if sold to them by the company, and compelled them to pay bills of exchange for goods they had never bought; that the plaintiff company and John Henry Milestone were cheats and swindlers, and systematically robbed the public; and that they sold worthless goods, injurious to animals fed on them; and that John Henry Milestone had brought himself within the criminal law. The defendants admitted the publication of the article, but maintained that the words, taken apart from the innuendoes put upon them by the plaintiffs, were true in substance and in fact. It was declared by Mr. Wilt, Q.C., that the company was a most respectable and substantial one, having a turnover of upwards of 40,000% a year; that Mr. Milestone was chairman of the company, and very well known in Hull. The *Star* counsel declared that he did not shrink from the position of justifying the statement made by the *Star*. He should call witness after witness to show that their signatures to orders were obtained by a trick, by representing that they were to be sole agents for their districts. Certain tradesmen, who said they had been induced to sign orders in the belief that they were merely giving the traveller their names and addresses for the company to send them some of the spice on sale or return, were examined as witnesses for the defence.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

THE "Pink Circular" for the Edinburgh Conference has been issued, and is referred to in our News section.

THE drug-markets are in a very quiet condition, but the sales on Thursday were heavy, and vanilla occupied the time up to 12 o'clock.

THE desirability of controlling the sale of carbolic and muriatic acids has been spoken of at coroners' inquests reported in this issue.

WE have a parliamentary column this week containing items of special interest to the trade. Mr. Townsend, of

Ferris & Co., Bristol, has been returned as a Liberal member for his town.

WE report a case in which the addition of salicylic acid to raspberry-wine was challenged as an offence under the Sale of Food and Drugs Act, but on scientific evidence that the addition was not injurious the summons was dismissed.

A CORRESPONDENT sends us a lively sketch of an inquest in 1900, when from his point of view the word "poison" will have lost its terror. The moral is rather contrary to what we have advocated; but we like to give the ideas of the *alteram partem*.

THE conversion of the business of Messrs. Thompson Walters, Hole & Co. (Limited), wholesale druggists' sundries-men and patent-medicine dealers, into a Chemists' Association (Limited), on co-operative principles, forms the subject of an interview which we report.

MR. JUSTICE HAWKINS has given judgment in favour of the lady who claimed 100% from the Carbolic Smoke Ball Company in view of their advertisement offering that sum to any purchaser of their article who should acquire influenza after using it according to directions.

THE Pharmaceutical Council met on Wednesday for the transaction of routine business. A new departure was made in the appointment of Mr. Shenstone, of Clifton College, as an examiner for the Council prizes. A general meeting of the Society will be held on July 20 to confirm a by-law.

MR. SARGENT, the pharmaceutical letter-writer, has been brought up for judgment in the case of the libel on Mr. Bottle, of which he was convicted at the last Kent Assizes. He has had to pay the costs, and the Judge lectured him very seriously; but another chance of keeping quiet has been given to him.

WE print a second letter from a Kizanlik correspondent regarding the otto-of-rose crop. The letter deals with the peculiarities of this year's distillation of the harvest, the quality and quantity of the new crop, and the state of our market, with all the possibilities and necessary particulars regarding it, and the price of the new otto.

Gazette.

PARTNERSHIPS DISSOLVED.

Hynes & Davidson, Nottingham, physicians and surgeons.

Sloman & Sons, Farnham, Surrey, surgeons, apothecaries, and accoucheurs; as far as regards S. G. Sloman.

Wrightson, W. P., Haigh, F. G., and Haigh, W. C., under the style of the Fluid Soap Company, Manchester, fluid-soap manufacturers; as far as regards F. G. Haigh and W. C. Haigh.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Hyams, Hyam, Middlesex Street, Aldgate, mineral-water manufacturer.

Worfolk, Alfred Egbert, Wandsworth, chemist and druggist.

ADJUDICATIONS.

Goodliffe, George, Folkestone, pharmaceutical chemist and optician.

Worfolk, Alfred Egbert, Wandsworth, chemist and druggist.

PUBLISHER'S NOTICE.

FIRMS who wish to produce a good effect in our Summer Number (July 30) should, without delay, set about preparing a handsome circular for insertion therein. We give the best distribution of druggists' circulars which can possibly be obtained, and we do it at a fraction of the cost of postage. This is the way to advertise profitably. Particulars will be supplied by the Publisher.

THE Summer Number of 1892 will be of notable interest and attractiveness, and it is high time that circulars and advertisements should be arranged for it.

THE immediate attention of firms who wish to make an effective display in that issue is requested.

English News.

Edison an Albert Medallist.

The Society of Arts has decided to award the Albert Medal this year to Thomas Alva Edison, "in recognition of the merits of his numerous and valuable inventions, especially his improvements in telegraphy, in telephony, and in electric lighting, and for his discovery of a means of reproducing vocal sounds by the phonograph." The award is sanctioned by the Prince of Wales.

An Errand-boy Incendiary.

At Norwich, on Monday of last week, John Green, errand-boy to Mr. J. C. Pentney, chemist and druggist, St. Benedict's Street, Norwich, was charged with having on the previous Sunday evening maliciously set fire to his master's shop, and also with having stolen 3*l.* from a drawer in the shop. Ernest Larn, draper's assistant, living next door to prosecutor's shop, said he saw prisoner on Sunday night in a yard behind the house, and he said he had set fire to his master's premises. Police-sergeant Martins said that he and a constable smelt smoke, and he saw the flicker of a flame through the letter-box in the door. They burst the door open, and found the place full of smoke and a fire burning at the back of the counter under the window. The woodwork under the window had got alight, but he extinguished the flames with a few pails of water. Prisoner said he did not take the money, but admitted that he set fire to the shop. The Magistrates committed him for trial at the assizes. Bail was accepted, the boy's father in 20*l.* and two sureties in 10*l.* each.

Poisons as Beverages.

The bottle was labelled "Old Tom." It contained carbolic acid. A shipkeeper's widow, Ellen Spolton, 69, residing with her son at Caroline Street, Commercial Road, E., drank a wineglassful of it and died. A friend of hers, Mary Ann Alsford, also a widow, who drank half a wineglassful, took some salt as an emetic and recovered.

In another case, a little boy, living at Wicklow Street, found something in a ginger-beer bottle, and drank it. Of course this was carbolic acid. The mother ran with the child to the Royal Free Hospital, but he died in a few hours. In commenting upon the number of similar misadventures the Coroner protested that poison should be kept in proper bottles. Persons could go to oil-shops, and no matter what vessel they took, the poison was placed in it, and the vessel was not labelled. If the person went to a chemist, then the bottles would have to be labelled.

An engineer at Poplar, while the worse for drink, took some muriatic acid and died. There was an inquest on Saturday last, at which Dr. Leslie, who had attended the deceased, suggested that some restrictions should be placed on the sale of muriatic acid, which could be purchased by a child at any oil-shop.

Assault on a Chemist.

At the Derby Police Court on Saturday last, William Matthews, a herbalist, of Siddals Road, was summoned for assaulting Robert Dixon, a chemist and druggist, of 163 Siddals Road, on June 29, and also with damaging a glass case to the extent of 10*s.* Complainant stated that the defendant entered his shop and asked to be supplied with a quantity of very strong poison. Complainant refused to serve him with the drug, as he was under the influence of drink. Defendant then created a disturbance, and left the premises. Shortly afterwards he returned and struck the complainant six blows on the breast, and smashed a glass case with his stick. Defendant, who made no defence, and behaved in a strange manner in the court, was fined 10*s.* and costs for the assault, and 2*s.* 6*d.* and costs, and ordered to pay the amount of the damage, 10*s.* for breaking the case, or one month's imprisonment with hard labour.

Shoplifting by Ladies.

At the Bournemouth Police Court, on Thursday of last week, Isabella Wallace and May Kayes, both well-known and

respectably-connected women, were charged with having stolen, amongst other articles, a bottle of eau-de-Cologne, two scent-sprays, puff-boxes, shaving-sticks, nail-brushes, combs, tooth-powder, scent-bottles, soap tablets, &c., the property of Mr. J. J. Shipman, chemist and druggist, Commercial Road, and Mr. William Jones, pharmaceutical chemist, Old Christchurch Road, Bournemouth. The defendants admitted having stolen the articles. They had visited the shops on two different occasions, and soon after they had gone the articles were missed. Police-sergeant Cooper said he went to search Mrs. Wallace's house for articles that had been missed from the shop of Mr. Jones. Mrs. Wallace said she had nothing but what she paid for. She then went upstairs and produced several articles, and afterwards told witness that Mrs. Kayes had several other articles. He subsequently saw Mrs. Kayes, who said Mrs. Wallace had given her several things, which he produced. She further said Mrs. Wallace took the things and handed them to her whilst she was in the shop. She knew it was wrong, but she did not know how to break off the acquaintanceship. The Magistrate said it had seldom come within his province to hear a more distressing case. It was quite evident that Mrs. Kayes had been drawn into her present position by the other prisoner. He had listened to the plea of mercy which had been put forth, and had decided not to send them to prison, but Mrs. Wallace would be fined 15*l.*, and Mrs. Kayes 5*l.*

Sporting Intelligence.

A cricket-match was played at Nunhead, on July 2, between teams from the South London School of Pharmacy (Muter's) and the Westminster College (Wills's), and resulted in a draw. Score:—

SOUTH LONDON SCHOOL.			WESTMINSTER COLLEGE.		
F. J. Gillett, b Lewis ..	1		Martin, b Taylor ..	0	
B. W. Samways, b Lewis ..	0		Buckland, b Taylor ..	0	
A. H. Palmer, b Martin ..	3		A. Tate, b Bartlett ..	1	
A. J. Spearing, b Lewis ..	4		J. S. Tate, run out ..	3	
H. Howarth, b Lewis ..	0		H. Watson, b Bartlett ..	2	
A. Winterbottom, stumped ..	8		W. S. Lewis, b Bartlett ..	11	
P. Bartlett, b Nash ..	16		A. H. Nash, absent ..	0	
E. W. Taylor, run out ..	0		A. V. Horton, b Taylor ..	16	
J. Stephens, b Lewis ..	5		T. V. Salmon, l b w, b Taylor ..	0	
C. J. Eynon, b Nash ..	0		E. Moorman, retired hurt ..	2	
Marshallsay, not out ..	0		C. T. Rackham, run out ..	7	
Extras	29		Extras	23	
Total	66		Total	65	

A Druggist Beats his Wife.

At the Guildhall Police Court, on Monday, Stephen Finch, an Islington druggist (there is no one of that name on the register), got a month's hard labour for beating his wife in a cab last Friday evening. It was stated in court that Finch had led his wife a wretched existence for twenty-nine years.

A Chemist Commits Suicide.

Mr. Cook, chemist, Littleport, Ely, committed suicide last week by taking solution of cyanide of potassium. Evidence was given at the inquest which showed that he had been much depressed in consequence of financial difficulties.

Fifty Shillingworth.

Mark Frater, of 179 Albert Road, Portsmouth, a chemist's assistant, was summoned for an assault, committed on June 25, on Thomas Watts, a master-tailor of the R.M.A., of Southsea. Complainant swore to the assault, saying it was unprovoked. Defendant had blacked his eyes and hit his nose severely. The defence was that the assault was justified, but the evidence called did not sustain it, and defendant was ordered to pay a fine of 20*s.*, and the costs—30*s.* in all.

Suicide of a Chemist's Apprentice.

John A. Hamar, 17, son of Mr. A. Hamar, surveyor, Bishop's Castle, committed suicide at Bridgnorth on Tuesday. He was apprenticed to Messrs. Deighton & Smith, chemists, High Street in that borough, and was sent to the warehouse for certain goods. As he did not return, the errand-boy was sent in search of him, and on entering the warehouse he

found Hamar hanging by a rope from one of the beams. Mr. W. T. Smith at once cut the unfortunate youth down, but life was extinct. It is not known what caused Hamar to commit the rash act, as his manner had not been such as to cause the least suspicion.

The Colleges of Pharmacy are active.

On the invitation of the directors of the Manchester College of Pharmacy a large number of ladies and gentlemen assembled in the College rooms, Oxford Street, on Tuesday night, for a *conversazione* and microscopical evening. Twelve microscopes were shown by the Messrs. Turner and students, and eight others by friends. Some very good electrical experiments were shown by Mr. Charles Turner, and some practical chemistry and dispensing by the students. The visitors numbered eighty, including several members of the Manchester Pharmaceutical Association and of the Microscopical Society, and six ladies.

The Sheffield College of Pharmacy made an interesting botanic excursion on July 2 to Conisboro'. This place, which is delightfully situated on the River Don, is noted for its castle, which dates from the reign of Richard I. A large number of specimens were collected, among them being *Tamus communis*, *Conium maculatum*, *Bryonia dioica*, *Potentilla anserina*, *Verbascum Thapsus*, *Helleborus viridis* and *H. fatidus*, *Orchys pyramidalis* and *O. maculata*, *Roseda luteola*, *Eupatorium cannabinum*, *Geum rivale* and *G. urbanum*, *Lamium album* and *L. purpureum*, *Linaria vulgaris*, *Tanacetum vulgare*, *Solanum Dulcamara*, *Hypericum perforatum*, *Hippuris vulgaris*, &c.

The students of the Northern School of Pharmacy, Manchester, had a botanical excursion on Saturday last. A large number, accompanied by Mr. Clayton, visited Taxal and the Valley of the Goyt. A great variety of useful specimens was obtained. The students were afterwards entertained at tea at the Royal Oak.

Unstamped Weighing-machine.

Mr. John Frederick Harston, chemist, High Street, Lincoln, was on Thursday summoned for having in his possession a weighing-machine which was unstamped, and a fine of 1*l.*, including costs, was imposed.

Disinfectants for the London County Council.

At the meeting of the London County Council on Tuesday last, the Main Drainage Committee reported that offers had been submitted for the supply of manganate of soda and sulphuric acid for deodorising purposes. The quantities offered ranged from 200 tons to 1,200 tons of manganate of soda, and the prices from 12*l.* per ton of 25-per-cent. quality to 15*l.* 15*s.* per ton of 30 per cent. For sulphuric acid the quantities varied from 300 tons to 1,000 tons, and the prices were from 34*s.* to 35*s.* per ton of 80-per-cent. quality. The offer of Messrs. Tennant, Sons & Co. to supply 500 tons of manganate of soda of 25-per-cent. quality at 12*l.* per ton was accepted. With regard to sulphuric acid, the offer of Messrs. Krayer, Back & Co. to supply 500 tons of 80-per-cent. quality at 34*s.* per ton was decided upon. The Committee's recommendations were agreed to.

The Chemist to the Council has been instructed to report on the desirability of the Council itself undertaking the manufacture of the manganate of soda.

Irish News.

Drug Contracts.

Messrs. Stocker & Hoffe (Limited), wholesale druggists, Dublin, have been appointed contractors for drugs, &c., to the Guardians of the Milford Union.

"A Reprehensible Practice."

Sir Charles Cameron having reported favourably on samples of medicines forwarded by the Maryboro' Guardians, Mr. Cobbe, guardian, asked who took the samples. Being informed that it was usual for the medical officers to send them *via* the Clerk, he denounced the practice as "reprehensible," and said the Clerk should himself send them

when the medicines were fresh, as otherwise it was unfair to the contractors. The Clerk objected that it would be wrong to interfere with the doctors in sampling medicines, but Mr. Cobbe maintained that the Guardians, or some independent party, should possess the power of sending the samples for examination.

Pharmaceutical Examinations.

Fourteen candidates presented themselves for the Preliminary examination on Monday last, and twelve were examined for the licence on Wednesday. The results have not yet been announced.

Apothecary v. Pharmaceutical Chemist.

The board of management of Dr. Stevens's Hospital, Dublin, lately advertised in the local papers for "a resident apothecary at a salary of 80*l.* per year, with apartments, fuel, and light," and received a solitary answer from an apothecary. Two pharmaceutical chemists also applied, but were informed that they were ineligible. As the Board did not, however, come to terms with the apothecary, they had to fall back on the chemists, and have appointed Mr. E. M. Darcy, pharmaceutical chemist, as their compounder. The salary now offered is much less than that which was paid to the previous holders of the position.

The Local Government Board Refuse to Increase Salaries.

Mr. Neade, compounding chemist to the Rathfarnham dispensing district, was lately voted an increase of salary, 10*l.* per annum, by the Guardians of the South Dublin Union, but the Local Government Board have refused to sanction the increase. The Guardians have since adopted a resolution pointing out that Mr. Neade's salary of 40*l.* per annum is lower than that of any other chemist in the Union.

Fire.

On Monday, July 4, about noon, a serious fire occurred at the stables in Nassau Lane, Dublin, attached to the works of Messrs. Cantrell & Cochrane, mineral-water manufacturers. The factory and offices escaped.

Scottish News.

Forfar Waters.

The *Forfar Herald* gives a glowing report of the refitting of Cameron's aerated-water factory in West High Street. Mr. Cameron has discarded the old machinery entirely, and a new complete set of Bratby & Hinchliffe's prize-medal aerating-plant has been fitted up by Messrs. M'Beth & Milne. The plant also includes a Ryland patent turn-over filling-machine and other smaller pieces of apparatus, the whole factory being very complete.

The Photographic Convention.

This convention will open on Monday first at 6.30 p.m., with a reception by the President, Mr. George Davison, in the hall of the Royal Scottish Geographical Society, Queen Street, Edinburgh. The meeting will be of a practical character. Thus Tuesday, Thursday, and Friday will be devoted to excursions, when there will be ample opportunities for using the camera. Papers will be read on Wednesday and Thursday evenings. The social arrangements are complete and attractive, and include a dinner and smoking-concert on Friday evening.

Glasgow Druggists Ventilate their Grievances.

A correspondence has been going on in one of the Glasgow newspapers during the past week exposing the grievances of druggists. "Never Venture, Never Win" complains of the high fees charged for the Preliminary and Minor examinations. No wonder, he says, druggists stick in the mud. He cannot see how the unqualified were able to pay such a large sum as 5*l.* 5*s.* for the Minor, when the majority of them only earn 1*l.* per week, and some less. He thinks that as he passed his first examination before the new regu-

lations came into force, he is not bound to pay the 2*l.* 2*s.* extra now demanded. He calls for the formation of a druggists' union. "Fiery Cross" says that many of the unqualified work from 70 to 75 hours a week, at wages which are seldom over 1*l.*, and generally 15*s.* When they wish to qualify the minimum fees to be paid are 7*l.* 7*s.*, and with the paltry wages received it seems impossible for them to enter for examination. What is needed is a union. "Agreeable" urges that a meeting should be called to take steps to have the proposed union instituted.

British Pharmaceutical Conference.

The Edinburgh Committee have now issued the "pink circular" giving the preliminary arrangements of the meeting; and a business-like circular it is. The programme, in brief, is as follows:—

Monday, August 22, 8 P.M.—Reception and *conversazione*, in the Waterloo Rooms, Waterloo Place.

Tuesday, August 23, 10 A.M.—Official welcome by the Right Hon. the Lord Provost of Edinburgh. 10 A.M. to 1 P.M., and 2 P.M. to 4 P.M.—Sessions of conference. 4 P.M.—Drive to Rosslyn.

Wednesday, August 24, 10 A.M. to 1 P.M., and 2 P.M. to 4 P.M.—Sessions of conference. 4 P.M.—Drive to Dalmeny and Forth Bridge. 9 P.M.—Smoking-concert in the Waterloo Hotel.

Thursday, August 25, 8.45 A.M.—Excursion to Loch Tay (*via* Callander and Pass of Leny).

Applications for rooms in hotels or private lodgings should be addressed to the local secretary, Mr. Peter Boa, 119 George Street, Edinburgh, before August 12, but earlier if possible. The usual tickets will be provided—the five-shilling lot being for luncheons, &c., on the Tuesday and Wednesday, and the half-guinea set for the excursion to Loch Tay. These are also supplied by Mr. Boa.

French Pharmaceutical News.

(From our Paris Correspondent.)

PROFESSORSHIPS IN CHEMISTRY AND PHYSICS.—The competition for chemistry and physics professorships, held at the Paris Faculty of Medicine, has just terminated by the following appointments: M. Audré remains in Paris for pharmacy; MM. Beyrac and Dervide go to Lyons for chemistry and pharmacy respectively; M. Moitessier is nominated to Montpellier for chemistry; for physics M. Sigalas takes Bordeaux, and M. Castex Lille.

A CHEMICAL EXPERT IN TROUBLE.—A former student of the Ecole Polytechnique, having left the army, set up in business at Paris as a "chemical expert." He invented a new substance destined, it appears, to render important service to industry. He fitted up a small factory at Clichy, where his conclusive experiments were made. Then he managed to obtain the confidence of a wealthy merchant, and obtained from him an advance of 300,000*f.* His next step was to disappear. He has been arrested at Melun with 130,000*f.* hidden in the lining of his coat.

CHECKING QUACKERY.—The Correctional Tribunal of Rouen gave judgment last Thursday against a "healer" of a peculiar type. The defendant, Peigner by name, was doctor, pharmacist, surgeon, bone-setter, and masseur in turns. His way of administering fumigations was to place the patient in a barrel, with the head only protruding. The client was accommodated with a seat in the barrel, and in this position received the heat of a charcoal stove lighted underneath. The tribunal pronounced a triple condemnation against Peigner. In the first place, eight days' imprisonment for wounding by imprudence; secondly, a fine of 500*f.* for illegal practice of pharmacy; and thirdly, a fine of 16*f.* for illegally practising as doctor and surgeon. The Rouen judges evidently regard the infringement of the pharmacy laws as far more serious than a trespass on the domain of doctor and surgeon.

THE PARIS EXHIBITION OF 1900.—The 1889 Exhibition is scarcely relegated to things of the past than the cry goes forth that Berlin proposes holding a big show during the

last year of the century. This the French seriously object to. They say, "1900 is our year; we have held expositions every eleven years since 1867, and mean to keep it up." There is no doubt that some English firms of manufacturing pharmacists, and kindred trades, spent a great deal of money over the 1889 Exhibition. Some few went well into four figures in the matter of expenditure, and the question must have since occurred to them, "Did it pay?" With soap, perfume, and such articles it may be all right. The manufacturers have to "fertilise" amongst the general public, but purely pharmaceutical articles are somewhat lost on the crowd, and when the heavy outlay is not topped by a good award, the results can scarcely be encouraging. It is a fact to be noted that in comparing catalogues of former Paris exhibitions, not 25 per cent. of foreign exhibitors return.

PROTECTION OF SMALL RETAILERS.—The Chamber of Deputies has under consideration, through a special committee, the rearrangement of the "patente," or trading-tax which all firms, wholesale or retail, have to pay. This has been brought about by the protestations of the small retailers, who are, if anything, more hampered in their trade by what is known as the "Grands Magasins," such as the Louvre and the Bon Marché, than are London shopkeepers by the stores. As an idea of the enormous business these big establishments transact, it may be mentioned that the Bon Marché pays at the present time 407,664*f.* (16,307*l.*) as trading-tax. It is proposed to increase this to 1,026,000*f.* (41,040*l.*). They do some harm to pharmacists in the matter of underselling certain specialities. They make sad havoc with prices in the matter of perfumery, soaps, toothbrushes, and the like, but such articles are beneath the dignity of the average French pharmacist, who likes to have a very professional aspect about his *officine*. A curious instance showing how cutting may sometimes defeat its own end was told the other day by a well-known English pharmacist of the Rue de la Paix to the representative of THE CHEMIST AND DRUGGIST. A lady wished to buy a bottle of a certain English perfume for which our *confrère* charges full price. "I am offered it for half the money at the Louvre," said the lady, "but I always come to you, Mr. Chemicus, because I know your article must be much better, as it is so much more expensive." The pharmacist said he tried to look as wise as a very old owl, and made answer, "I only sell the very best articles, madame," and the customer was satisfied. As already stated in the THE CHEMIST AND DRUGGIST, cutting by English pharmacists in Paris is decidedly not the rule, though one case of an Anglo-American may be cited who has a card in his shop-window offering from 10 per cent. to 40 per cent. discount on specialities.

Foreign and Colonial News.

PETROLEUM IN CEYLON.—It has been officially declared that the increased Customs duty on petroleum (50 per cent. *ad val.*) will come into force on January 1, 1893.

PERSONAL.—Mr. B. K. Bidby, of St. Vincent, chemist and druggist, has admitted his two brothers into partnership with himself, and the business will in future be carried on as B. K. Bidby & Co.

WHAT ARE THE HERBS?—The *Rio News* states that a telegram of June 1 from Taubaté announces the cure of a case of cancer and two cases of tuberculosis by the application of herbs gathered by a local botanist.

PILL-BOXES must pay 40 per cent. duty on import into the United States. It was claimed on behalf of druggists that the 30 per cent. for packing-boxes was enough, but the Customs people say that pill-boxes are not the kind of packing-boxes which go in at the lower rate.

MEDICINAL BUT POISONOUS.—About twenty children, with some women, went lately into the mountains, near Mitylene (Turkey), in search of a plant which is reputed by the natives to possess medicinal properties. The children amused themselves by sucking the roots of the plant, and shortly after all of them were taken ill. Five of them died.

SURGICAL TREATMENT OF EPILEPSY.—It is reported from Vienna that Professors von Moseg and Benedikt have successfully operated upon a boy of 15, who had two or three epileptic fits every day. Since the operation was performed, a few weeks ago, there has been no return of the sickness, and the boy is practically well. The success of the operation is attested by independent surgeons.

THE GERMAN EAST AFRICA COMPANY reports show progress in regard to the culture of economic products. Last year a crop of 50 cwt. of cotton wool was gathered in, and 150 acres were laid out with the plant. At Darema, coffee, cocoa, tea, indiarubber, cinnamon, coca, and some other plants of a similar nature, are growing, but they are not yet within sight of merchantable results.

REMEDY FOR SNAKE-BITE.—A paper by the late Brigade-Surgeon W. Dymock has appeared in the *Journal of the Bombay Natural History Society*, in which he gives an account of a specific for snake-bite. What he has used is *Pogostemon parviflorus*, which has been long known to natives in the western parts of India as a valuable remedy. Mr. Dymock obtained good evidence as to its value in cases of bites by the venomous *Echis carinata*.

UNITED STATES TRADE-MARKS.—The following marks were registered at Washington on June 21:—"Electrogen," for inorganic salts, by M. C. Traub, Basle, Switzerland; "Painsfoe," for remedies for neuralgia, &c., by G. A. Hill, New York; "Tri-phosa," for a liquid detergent, by the Keystone Chemical Co., Camden, N.J.; "Silvo," for a silver polish, by W. H. Lewis, Philadelphia; "Sanmetto," for certain remedies, by Od Chemical Company, New York.

FEWER PHYSICIANS IN GERMANY.—The lady-doctors' champion, Dr. H. Martin, has caused a little flatter in Berlin by his statement in regard to the falling-off of the number of physicians, or, rather, students of medicine, in Germany. He gives two reasons for this—first, the comparatively small income of physicians, 50 per cent. of those practising in Berlin having declared that their incomes do not exceed 3,000m. (150*l.*); second, the agitation for the admission of women to the study of medicine seems to have paled the popularity of the profession in the meantime.

GERMANY DOES NOT GET ALL HER COAL-TAR from England, although, to hear some of our patriotic chemists speak, it would seem so. We notice from the report of one company in the Fatherland (Balmke, by Gelsenkirchen) which is engaged in coal-distillation that in the course of the last year's work 120,446 tons of coal were treated, resulting in the production and sale of 83,441 tons of coke, 1,137 tons of ammonia sulphate, 1,817 tons of tar, and 22,875,531 litres of ammonia solution. The company used 1,034,609 kilos. of vitriol in the same period, and paid a dividend of 20 per cent. on preference and 15 per cent. on ordinary shares.

ENGLAND AT THE CHICAGO EXHIBITION.—The building which the American Executive of the World's Fair is to provide for the exhibits of the United Kingdom will be generally characteristic of the best type of English half-timber houses of the sixteenth century, of which there are so many good examples still extant. It is proposed to use terra-cotta somewhat largely in the lower storey, with red-brick facing and mullioned windows. It is intended to fit up all the principal rooms with wall panelling and elaborate ceilings, after the manner of some of the best English country houses. The internal fittings will be in complete harmony with the general design.

AMERICAN SUGAR OF MILK.—The *Oil, Paint, and Drug Reporter* is not satisfied with the results attending the manufacture of sugar of milk in the United States. The revised tariff stimulated the industry, but consumers persist in their attachment to the imported article. The milk-sugar turned out at the American mills seems now to meet with only one criticism, and that is in regard to the powder, which some claim is not as fine as the Swiss. Those who use the sugar in medicine do not want a floury powder, like the American, but a granular powder, like the Swiss, hence the preference. It is stated that the reason the American powder is not granular is because it is not produced from the crystal, but is obtained by a totally different method before crystallisation has taken place.

A PHILADELPHIA COLLEGE YELL.—The Philadelphia College of Pharmacy is an enterprising place in the matter of "yells." Each class has its own "yell," and when, through any mishap, a big crowd of old students is brought together, the effect is terrible. There was an affair of the kind recently at Indianapolis, when Professor Remington was entertained, and this is how the *Indiana Pharmacist* describes the reception:—"The fellows grouped themselves around the foot of the staircase, and when Remington came down he was greeted with a round of cheers followed by the class 'yell.' As each class had a yell of its own, and as no two of those present belonged to the same class, the effect was intensely electrical. The orchestra shut right up. Professor Remington's ears twisted in all directions to catch each separate articulation. His smile was ineffable." They dined after that.

CANADIAN NEW COMPANIES.—The Dr. Joseph D. Davis Remedies Company (Limited), Yarmouth, N.S. Capital stock, \$20,000. Objects: To manufacture and deal in drugs, medicines, chemicals, perfumery, toilet articles, and surgical and hygienic appliances.—Johnson & Johnson Company (Limited), Toronto. Capital, \$20,000. Objects: To manufacture and sell by wholesale drugs, chemicals, pharmaceuticals, fruit-juices, and surgical appliances.—It is proposed to incorporate "The Ontario Chemists Manufacturing Company," Hamilton, Ont., the objects being to manufacture and deal in pharmaceutical preparations and toilet articles, and to do a general wholesale drug business. Capital, \$100,000, in \$100 shares. The proposition is to put up a line of proprietary remedies, &c., to be sold only to and distributed by druggists. The promoters of the scheme are leading druggists.

POISONOUS PROPRIETARY MEDICINES IN CANADA.—At the last meeting of the Council of the Ontario College of Pharmacy a motion was submitted to the effect that all proprietary medicines which contained any of the poisons embraced in schedule A of the Pharmacy Act must be registered in the manner set forth in section 25 of that Act. The matter was thoroughly discussed, and the conclusion arrived at seemed to be that by enforcing such a provision the sale of patent and proprietary medicines would be confined to the legitimate drug-trade. The *Canadian Druggist* does not consider this unmixed good, for how is the druggist to know what is poison? Any action in this matter should be taken, says our contemporary, by the Government, who should insist upon the registration of the formulæ of all patent and proprietary medicines, and should declare which preparations must be registered and labelled in conformity with the Act.

CANADIAN PHARMACY DEGREES.—We have on more than one occasion recently mentioned the proposal between the Ontario College of Pharmacy and the Toronto University to grant a degree in pharmacy. It has now been settled that this degree will be Bachelor of Pharmacy (Phm B.). Candidates for the degree will be required to matriculate at the University or some other one in Canada, have a degree in arts, or otherwise show educational ability, but those who receive the diploma of the College of Pharmacy up to June, 1893, will be admitted to matriculation without further examination on payment of a fee of 5*l.* Persons resident in Ontario will be admitted to the degree examination on presenting their diploma from the Ontario College of Pharmacy, and those who are not resident in Ontario must have devoted at least four years (not being engaged in any other business) to the study of pharmacy, being apprenticed during that time to a regularly qualified pharmaceutical chemist. The *Canadian Druggist*, from which we abstract the foregoing, does not give particulars of the curriculum of study, but it will be seen that British pharmacists may enter for the degree.

IN THE SELECTION OF IODOFORM preference should be given to preparations consisting of light lemon-yellow scales of a soft and delicate texture and possessing a comparatively mild odour. The bright, shiny, sharp-edged crystals will be found not to comply with the standard of purity which is required to prevent the decomposition of the ethereal solution. So remarks the *Therapist*, supplementing the note in our issue of June 4, page 819.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE ordinary monthly meeting of the Council was held at the Society's premises, 17 Bloomsbury Square, on Wednesday last. The following members were present:—Mr. Carteighe (President), Mr. Cross (Vice-President), and Messrs. Allen, Atkins, Bottle, Greenish, Grose, Hampson, Harrison, Hills, Martin, Martindale, Richardson, Schacht, and Warren.

The SECRETARY read the minutes of the previous meeting, and they were adopted.

LETTERS OF THANKS.

Mr. HILLS then read a letter of thanks from Madame Bertha von Hofmann, acknowledging with grateful thanks the reference to her husband, the late Prof. von Hofmann at the last meeting.

The PRESIDENT followed with a letter from Mr. Wm. George Sandford, who wrote on behalf of his sisters and self, thanking the Council for the sympathy they had expressed in their resolution regarding their late uncle, Mr. Geo. Webb Sandford. There were also letters expressing thanks and gratification for the Council's messages of appreciation and goodwill from Messrs. Watt, Gostling, and Evans on the occasion of their retirement from the Council.

NORTH BRITISH BRANCH.

The PRESIDENT next reported that the Executive for Scotland had been duly elected [we published a full list of names in THE CHEMIST AND DRUGGIST of June 18] with Mr. J. L. Ewing as chairman and Mr. T. Maben as vice-chairman for the ensuing year.

NEW MEMBERS, &c.

Nine members were restored to their former position in the Society on payment of the fine and subscription. There were also elected two pharmaceutical chemists and one chemist and druggist in business previous to 1863 to membership; 11 associates in business, 4 associates not in business; and 9 students, amongst whom a lady's name appeared.

CORRESPONDING MEMBERS.

The PRESIDENT intimated that he had received letters from the gentlemen who had been appointed corresponding members of the Society generally expressing their appreciation of the honour conferred upon them, and a desire to do what they could for the interests of the Society and the progress of pharmacy.

FINANCE.

The Committee reported a balance on the General Fund account of 3,807*l.*; Benevolent Fund balance, 1,313*l.*, and donations, 35*l.* 10*s.* 6*d.* The receipts during the month for the General Fund account were: Penalties and costs, 116*l.*; subscriptions, 56*l.*; and examination fees, 1,464*l.* For the Benevolent Fund subscriptions had been received amounting to 91*l.* 6*s.*, and ground-rents had produced 115*l.* The report was adopted.

BENEVOLENT FUND.

The cases considered were six in number, and grants of 15*l.* and 10*l.* respectively were made—three cases being deferred and one not entertained.

The PRESIDENT, in moving the adoption of the report, said he was glad to note that they had been able to relieve those who had been their late friends, as was the case in both of the grants made.

Mr. BOTTLE seconded the motion, which was carried.

Mr. CROSS said they had been unable to grant a request for relief in a case of some hardship. The applicant was a widow, whose husband had not been on the register, and she had been put to some little expense in getting papers and certificates together to prove her claim. It would be wise, he thought, for local secretaries, before they took up cases of that kind, to be quite sure that the people were within the purview of the Act of Parliament.

LIBRARY AND MUSEUM.

The attendance at the Society's library during May was as follows: Day, 568; evening, 149. The circulation of books in London numbered 132, and in the provinces 103. The Committee recommended the purchase of books for both the London and Edinburgh libraries, and also that the librarian should attend the meeting of the Libraries Association, to be held shortly in Paris, and that his expenses should be allowed. The curator of the museum reported that the attendance for May in the daytime was 355, and in the evening 71.

On the motion of the PRESIDENT the report was received and adopted.

NEW REGISTRATION.

The SECRETARY here intimated that he had placed the name of Mr. Joseph Southwood, of Leeds, on the register, having previously made inquiries and found that he was entitled to registration.

AMENDMENT OF A BY-LAW.

The amended by-law providing that candidates for examination should give longer notice of their intention to present themselves, and of which we gave full particulars in our report of the last Council meeting in THE CHEMIST AND DRUGGIST of June 11 was, on the motion of the PRESIDENT, read a third time.

The PRESIDENT then moved, and the TREASURER seconded, the following resolution:—

That a special general meeting of the Society be held on Wednesday, July 20, 1892, at noon, for the purpose of amending section 10, clause 20, of the by-laws, and to consider, and if necessary approve, such by-law. And, further, that the amended by-law, as now read a third time, be submitted to the said meeting.

The resolution was passed.

REAPPOINTMENT OF PROFESSORS.

The following gentlemen were reappointed as professors and lecturers at the Society's school for the ensuing session:—Professor Attfield, professor of practical chemistry; Professor Dunstan, professor of chemistry; Professor Green, professor of botany; Mr. H. G. Greenish, lecturer in materia medica; Mr. Joseph Ince, lecturer in pharmacy and practical pharmacy; Mr. Dymond, assistant lecturer in chemistry.

WILLIAM ALLEN.

The PRESIDENT next intimated that a communication had been received by the Secretary from the Director and Curator of the Nottingham Museum and Art Gallery, applying for the loan of the portrait of William Allen, their first president. The British Medical Association were to meet at Nottingham, and a collection of pictures was to be shown of eminent men who had been connected with medicine. The request had been acceded to on condition that the portrait was insured to the extent of 300*l.*

EXAMINERS.

On the motion of the PRESIDENT, seconded by Mr. MARTIN, Mr. Shenstone, of Clifton College, and Mr. Bowen were elected to conduct the examination for the Council prizes.

This closed the public business, the Council going into Committee of General Purposes.

There is little scope for humour in the ups and downs of the drug market, and what little there is has been squeezed out by the "committee of trade interests," attached to the Indiana Pharmaceutical Association, in the following annual report:—

"Fluid extracts and pills are neglected, while attenuated triturations and tablet triturates are coming to the front. There is some stir in emulsion circles, but competition is so lively that a real good liver don't enter into it at all, getting better fare on other lines. There are some openings in porous plasters, but they close firm and holders part with them reluctantly. Perfumes are powerful weak and flighty, and while some invest in them, no reliance can be placed on their staying powers. Ipecac has an upward movement, but colocynth is lower, and holders are pinched and disposed to let go, if they can."

Legal Reports.

THE CARBOLIC SMOKE-BALL AND THE INFLUENZA— CLAIM OF 100% REWARD.

ON Monday, in the Queen's Bench Division of the High Court of Justice, Mr. Justice Hawkins delivered judgment in this case.

His Lordship said: This case was tried before me and a special jury on June 16. The facts were not disputed by the defendants. They are set forth accurately in the statement of claim. The advertisement issued by the defendants in the *Pall Mall Gazette*, on November 13, 1891, is as follows:—

One hundred pounds reward will be paid to any person who contracts the increasing epidemic, influenza, colds, or any diseases caused by taking cold, after having purchased and used the ball three times daily for two weeks, according to the printed directions supplied with each ball. One thousand pounds is deposited with the Alliance Bank, Regent Street, showing our sincerity in the matter. During the last epidemic of influenza eight thousand carbolic smoke-balls were used as preventives against this disease, and in no ascertained case was the disease contracted by those using carbolic smoke-balls. One carbolic smoke-ball will last a family several months, and it is the cheapest remedy in the world at the price, 10s., post free.

Now, on the faith of the advertisement the plaintiff bought one of the defendants' carbolic smoke-balls, and used it as directed, three times a day, from November 20, 1891, until January 17, 1892, when she was attacked by influenza. The first communication made by the plaintiff to the defendants was on January 20, when her husband addressed the following letter to the defendants. It is dated January 20:—

DEAR SIR,—Seeing your offer of a reward, dated July 23, in the *Pall Mall Gazette* of November 13 last, my wife purchased one of your smoke balls, and has used it three times daily since the beginning of December. She was, however, attacked by influenza. Dr. Robertson, of West Dulwich, attended, and will no doubt be able to certify in the matter. I think it right to give you notice of this, and shall be prepared to answer any inquiry, or furnish any evidence you may require.—I am, yours obediently, J. B. CARILL.

That letter was not answered at all by return of post, or for a day or so; but on January 20, by way of answer to that letter, a little circular, which I have in my hand, endorsed "In answer to your letter of January 20," was received. She had no previous intimation of any sort or kind of it. It is undated, and it runs thus:—

Re Reward of 100%.—The Carbolic Smoke Ball Co., seeing that claims for the above reward have been made by persons who have either not purchased the smoke-ball at all, or else have failed to use it as directed, consider it necessary that they should state the conditions on which alone such reward would be paid. They have such confidence in the efficacy of the carbolic smoke-ball, if used according to the printed directions supplied to each person, that they made the aforesaid offer in entire good faith, believing it impossible for the influenza to be taken during the daily inhalation of the smoke-ball as prescribed. In order to protect themselves from all fraudulent claims, the Carbolic Smoke Ball Co. require that the smoke-ball should be administered, free of charge, at their office, to those who have already purchased it. Intending claimants must attend three times daily for three weeks, and inhale the smoke-ball under the direction of the Smoke Ball Co. These visits will be specially recorded by the secretary in a book.—27 Prince's Street, Hanover Square, London, W.

That is the only answer she received to this letter. Now, I need hardly make this observation, which is patent on the face of the thing, that if this Mrs. Carill was entitled to have her 100% by reason of her having taken this carbolic smoke-ball in her own way according to the directions given—if she had done this before January 20, you cannot alter her position by a circular issued on January 23. That is pretty clear; though that was the only answer to the application made for the 100%. It was not suggested that the plaintiff had not throughout acted honestly and upon the faith of the advertisement. Seven letters passed between the parties, but they are immaterial now in the consideration of the matters I have to decide. The facts not being in dispute, I was requested to hear the legal objections discussed on further consideration, and to enter the

verdict and judgment I thought right. I have done so, and proceed now to deliver my judgment.

I may here state before I do so that there was some little question raised before me as to whether or not the statement of claim was in itself sufficient—that is to say, whether it properly set forth the promise and the breach of it in order to constitute it a good statement of claim. All I can say with regard to that is that if an amendment is required—that is to say, that if hereafter on any appeal, if there is an appeal against my judgment, the Court of Appeal should on objection raised think the pleading ought to be amended—then I shall allow the amendment, but in that case I shall disallow all the costs of the pleadings. That, however, is immaterial to the judgment I have formed.

Four questions require consideration in determining this case: 1. Was there a contract of any kind between the parties to this action? 2. Was such contract (if any) wholly or partly in writing so as to require a stamp? 3. Was the contract a wagering contract? 4. Was it a contract of insurance affected by statute 14 George III. chap. 48 section 2?

As regards the first question, I am of opinion that the offer or proposal in the advertisement, coupled with the performance by the plaintiff of the conditions, created a contract on the part of the defendants to pay the 100% upon the happening of the event mentioned in the proposal. It seems to me that the contract may be thus described: in consideration that the plaintiff would use the carbolic smoke-ball three times daily for two weeks according to printed directions supplied with the ball, the defendants would pay her 100% if, after having so used the ball, she contracted the epidemic known as influenza. The advertisement inserted in the *Pall Mall Gazette* in large type was undoubtedly so inserted in the hope that it would be read by all who read that journal; and the announcement that 1,000% had been deposited with the Alliance Bank could only have been inserted with the object of leading those who read to believe that the defendant was serious in his proposal and would fulfil his promise in the event mentioned. His own words, "showing our sincerity in the matter," state as much. It may be that of the many readers of the advertisement very few of the sensible ones would have entertained expectations that in the event of the smoke-ball failing to act as a preventive against the disease, the defendant had any real intention to fulfil his attractive and alluring promise. But it must be remembered that such advertisements do not appeal so much to the wise as to the credulous and the weak portions of the community. And if the vendor of an article (whether it be medicine or something else), with a view to increasing its sale or use, thinks fit publicly to promise to all who buy or use it that those who shall not find it as surely efficacious as it is represented by him to be, he will pay a substantial sum of money, he must not be surprised if occasionally he is held to his promise. I know that in the present case the promise is of 100% reward, but the substance of the offer is to pay that named sum as compensation for the failure of the article to produce the guaranteed effect after two weeks' daily use as directed. Such daily use was sufficient legal consideration to support the promise. If authority is needed to confirm this view, I think it is furnished by the case of *Williams v. Carwardine* (4 B. & Ad. 621, 1832). In that case the defendant, on April 25, 1831, published a handbill stating that whoever would give such information as should lead to a discovery of the murder of Walter Carwardine should, on conviction, receive a reward of 20%. In August, 1831, the plaintiff gave information which led to the conviction of one Williams. The Court (consisting of Lord Denman, Chief Justice Littledale, and Justices Parke and Patteson) held that the plaintiff was entitled to recover the 20%, upon the ground that the advertisement amounted to a general promise or contract to pay the offered reward to any person who performed the condition mentioned in it—namely, who gave the information.

This brings me to the second question—whether the advertisement, which is the only written or printed document affecting the contract, requires to be stamped as an agreement before it can be admitted in evidence. This depends on the language of the Stamp Act, 1891, which requires an agreement or any memorandum of an agreement under hand only, whether the same be only evidence of a contract or obligatory upon the parties, or its being a written instru-

ment, to be duly stamped. Whether a written or printed document falls within this requirement depends upon its character at the time it was committed to writing or print or issued. If at that time no concluded contract had been arrived at by the contracting parties, it certainly could not in any sense be treated as an agreement, nor could it be treated as a memorandum of agreement, for there could be no memorandum of an agreement which had no existence. No document requires an agreement-stamp unless it amounts in itself to an agreement or a memorandum of agreement. The mere fact that a document may assist in proving a contract does not make it chargeable with stamp-duty. It is only so chargeable when the document amounts to an agreement of itself, or to a memorandum of agreement already made. A mere proposal or offer until executed amounts to nothing. If accepted in writing, the offer and the acceptance together amount to an agreement; but if accepted by parol, such acceptance does not convert an offer into an agreement nor into a memorandum of agreement, unless, indeed, after the acceptance of the offer, something is said or done by the parties to indicate that in the future it is to be so considered. I think, for the reasons I have given, supported by authority, the advertisement does not require to be stamped.

The third question is whether the contract I have found to exist is a contract by way of gaming or wagering within the meaning of the 8 and 9 Vict., chap. 109, section 18, which renders such contracts null and void, and therefore not enforceable by action. I think it is not. It is not easy to define with precision what amounts to a wagering contract, nor the narrow line of demarcation which separates a wagering from an ordinary contract. But according to my view a wagering contract is one by which two persons professing to hold opposite views touching the issue of a future uncertain event mutually agree that, dependent on the determination of that event, one shall win from the other, and that other shall pay or hand over to him, a sum of money or other stake, neither of the contracting parties having any other interest in that contract than the sum or stake he will so lose, there being no other real consideration for the making of such contract by either of the parties. It is essential to a wagering contract that each party may under it either win or lose, whether he will win or lose being dependent on (and therefore remaining uncertain until) the issue of the event being known. If either of the parties may win, but cannot lose, to my mind it is not a wagering contract. It is also essential that there should be mutuality in the contract. For instance, if the evidence of the contract is such as would make the intentions of the parties material in the consideration of the question whether it is a wagering one or not, and those intentions are at variance, those of one party being such as if agreed in by the other would make the contract a wagering one, while those of the other would prevent it from becoming so, this want of mutuality would destroy the wagering element of the contract, and leave it enforceable by law as an ordinary one. No better illustration can, I think, be given of a purely wagering contract than a bet on a horse-race. A backs Tortoise to win the Derby, B lays 10 to 1 against him—that is to say, 1,000% to 100%. How the event will turn out is uncertain until the race is over. Until then A may lose 1,000%, or he may win 100%; B may lose 100%, or he may win 1,000%; but each must be a winner or a loser on the event. In the wager neither has any interest except in the money he may win or lose by it. True it is that one or both of the parties may have an interest in the property of the horse, but that interest is altogether apart from the bet, and each party is in agreement with the other as to the nature and intention of his engagement. One other matter ought to be mentioned—namely, that in construing a contract with a view to determining whether it is a wagering one or not the Court will receive evidence in order to arrive at the substance of it, and will not confine its attention to the mere words in which it is expressed, for a wager may be (and sometimes is) concealed under the guise of language which on the face of it, if words only were to be considered, might constitute a legally enforceable contract. Of course, if in any case it is suggested that a contract good on the face of it was a mere device to elude the operation of the statute, the question would be one for a jury to solve. Such was the case in *Brogden v. Marriott* (3 Bing., N.C., 83), in

which, under the guise of a contract for the sale by the defendant to the plaintiff of a horse, the price to depend on the event of a trial of its speed and staying-power, a mere bet was concealed of the defendant's horse to 200% that the horse within a month should trot eighteen miles within one hour. The defendant's horse having failed to accomplish the task set him, plaintiff claimed the horse at a nominal price of 1s. The nature of this contract was transparent to any person of ordinary intelligence, and the plaintiff in vain argued that it was a *bona-fide* conditional bargain. The Court held it to be nothing more or less than a mere wagering contract, prohibited by the then unrepealed statute of 9 Anne, c. 14. In the present case the essential element of a wagering contract is absent. The event upon which the defendants promised to pay depended upon the plaintiff contracting the influenza after using the ball, but on the happening of that event the plaintiff could alone derive benefit. On the other hand, if that event did not happen the defendants could gain nothing, for there was no promise on the part of the plaintiff to pay or do anything if the ball had the desired effect. When the contract first of all came into existence (that is, when the plaintiff had performed the consideration for the defendants' promise) in no event could the plaintiff lose anything, nor could the defendants win anything. At the trial it was not even suggested that any evidence could be offered to alter the character of the contract or the facts as deposed to by the plaintiff. I am clearly of opinion that if these facts established a contract (as I think they did) it was not of a wagering character.

As to the objection that the contract (if any) was one of insurance and invalid for non-compliance with the statute 14 Geo. III., which enacts that it shall not be lawful to make any policy or policies on the life or lives of any person or other event or events without inserting in such policy or policies a person's or persons' name or names interested therein, or for whose benefit or on whose account such policy is so made or underwritten, it seems to me that the simple answer to this objection is that the section relates only to a policy which is a written document and cannot apply to a contract like the present, which is created by a written proposal or offer accepted by the fulfilment by the plaintiff of the conditions attached to the offer. I do not think it necessary to discuss the question whether this contract amounts to one of insurance. My present opinion is that this contract does not amount to such a contract, and certain I am that neither of the parties so intended it. I have, however, said that it is unnecessary finally to determine that matter. In the pleadings I find there was a further defence, that the contract was contrary to public policy; but the learned counsel for the defendants was unable to point out to me any grounds for such a contention other than those which I have already discussed. It follows from what I have said that in my opinion the plaintiff is entitled to recover the 100%. I therefore direct a verdict for the plaintiff for 100%, and judgment accordingly, with costs.

I have made a further memorandum here which I do not intend to form part of the judgment so far as regards the question of law, that if I had felt myself compelled to order judgment to be entered for the defendants, I should, having regard to the advertisement itself, and the *bona fides* which is said to be almost guaranteed by the deposit of 1,000% into the bank, and by all the other circumstances which appeared in the course of the trial—I should have felt myself not only at liberty, but bound to have refused to permit them to have the costs of the action, and I certainly should have certified to deprive them of them. I mention that only in the event of this matter going to the Court of Appeal and the Court taking a different view to the one which I have taken in the matter.

Mr. Lochnis, on behalf of the defendants, asked for a stay of execution.

Mr. Justice Hawkins asked why, after protesting their *bona fides*, the defendants did not keep their bargain?

Mr. Lochnis said it was because there had been other claims against them.

Mr. Justice Hawkins said that did not justify the defendants here. If they had said they disputed the plaintiff buying the smoke-ball, taking it as prescribed, and having the influenza, and had proved that, they would have shown that there was an attempt to commit a theft. But the plaintiff had sworn to all the facts in the box, and

Mr. Lochnis's learned leadersaid, 'I have no questions to ask her, because I do not dispute the facts.' The case was, therefore, irresistibly proved by the plaintiff's statement, and by the defendants' own admissions, and yet the defendants would not pay the plaintiff the 100% on the ground that they found some other people who had cheated them.

Mr. Lochnis said the defendants had nothing to cross-examine on.

Mr. Justice Hawkins said that counsel were never at a loss for material for that purpose. It may have been said that the plaintiff overdid it—that she took more smoke than the defendants advertised. (Laughter.) He would, however, leave the defendants to the tender mercy of Mr. Murphy.

Mr. Lochnis: I shall not get anything out of Mr. Murphy. (Laughter.)

Mr. Murphy, Q.C.: My friend makes no appeal to me, and I have nothing to say.

After some further discussion on the question of the stay of execution,

Mr. Justice Hawkins said: I simply say I direct a verdict to be entered for the plaintiff for 100%, and I order judgment accordingly, with costs. I do that and nothing else.

On Tuesday, Mr. Cohen, Q.C., on behalf of the defendants, applied to the Master of the Rolls and Lords Justices Bowen and Kay, to stay proceedings on terms, pending an appeal from the judgment of Mr. Justice Hawkins, the defendants bringing into Court 100% on plaintiff's solicitors giving an undertaking to return it in case the appeal should succeed.

The Master of the Rolls: An appeal, you know, is no stay, unless under special reasons you get leave of the Court.

Lord Justice Bowen: I suppose you asked the learned Judge in the matter, and he refused?

Mr. Cohen said that was so; but the case involved several difficult points of law.

Lord Justice Kay: Is there any danger of your losing the 100% in case you pay it to the plaintiff?

Mr. Cohen said, Yes. Plaintiff was a married woman without a separate estate, and she brought an action on an advertisement offering 100% reward to be paid by the defendants to any person who might contract influenza after having used a carbolic ball a certain number of times. The case was tried before a special jury, and plaintiff having been called, it was submitted that there was no case.

The Master of the Rolls: It was proved that she caught cold and had influenza?

Mr. Cohen: Yes, two months afterwards. The jury were discharged, and a point of law was then argued before Mr. Justice Hawkins, who found there was a contract as set out in the statement of claim, and gave judgment for 100%. He submitted that, in view of the points of law involved, their Lordships would grant the application.

Mr. Murphy, Q.C. (appearing for the respondent) said there were no affidavits filed, and

Mr. Cohen said the matter was only decided on the previous day.

The Master of the Rolls said the Court could not help Mr. Cohen either in adjourning his application or in allowing him to renew it.

Mr. Cohen said he must venture to trouble the Court again, upon new facts.

The Court dismissed the application, with costs.

THE SANITARY FOOD COMPANY (LIMITED).

In the Chancery Division of the High Court of Justice, on Saturday, July 2, Mr. Justice Vaughan Williams (sitting as an additional judge of the Chancery Division) had before him a petition by the company, asking for a compulsory winding-up order. The petition set out the objects of the company, its incorporation, and that its capital was to be 50,000%, of which 12,000% was issued and fully paid up. The company was now indebted to various persons in considerable sums, and was being pressed by creditors, the Bank Federal, Switzerland, having recovered judgment and issued execution. It was necessary for creditors that the assets should be protected. The company was unable to pay its debts. Since the presentation of the petition, said counsel, the company had passed resolutions for voluntarily winding up, and so far as the company was concerned, he would take

a supervision order if his Lordship thought it right to make it.

Counsel for the Federal Bank of Switzerland opposed the supervision order.

Counsel for creditors also supported a compulsory order.

Mr. Justice Vaughan Williams made the compulsory order as asked.

LIBELLING THE CORN FEED CAKE CO. (LIMITED).

THE action brought against the *Star* by the Corn Feed Cake Co. (Limited), of Hull, which was briefly mentioned last week, was decided on July 1 in the Queen's Bench Division. The *Star* had published a statement that a Mr. Bryant had been visited by a traveller of the plaintiffs and had consented to act as the agent of the plaintiffs for the sale of samples of horse-spice and cake. He had signed a paper which appeared to have no writing upon it, but on reconsidering the matter had written to the plaintiffs revoking his consent to act as their agent. A few days afterwards an invoice was sent to him for goods amounting to some pounds, and, on his declining to accept the goods, the plaintiffs had sued him in the County Court at Hull. The article went on to state that a number of communications had been received by the *Star* making it plain that the agents of the plaintiffs were "playing the same trick upon a number of tradesmen, who in turn are being sued upon judgment summonses in the Hull County Court," and contained the following description of the methods of the plaintiffs:—"An agent travels about in various country towns . . . representing to tradesmen that the company has a large number of local customers whom they are desirous of supplying through a local agent. He persuades a tradesman to accept and warehouse some oilcake or cattle-spice, which is to be paid for as it is supplied to the customers of the firm. . . . The tradesman is induced to give an acceptance for the price, which he is told is only a security, being renewable at the end of six months should any remain unsold then. Having once got the acceptance it is promptly discounted, and when due if not met bankruptcy follows. . . . A remedy against the company, if it exists, is worthless, and the value of the stuff supplied is not 25s. a ton. . . . Over thirty tradesmen . . . are annually made bankrupt by this means, and many others swindled."

Many tradesmen were called as witnesses, and the trial lasted over two days. In the event the jury found for the defendants generally, but inasmuch as they had failed to justify the charge that the company made thirty tradesmen bankrupts annually, the plaintiffs were awarded a farthing damages for that part of the libel.

MR. GEORGE WEST SARGENT AND HIS LIBELLOUS LETTERS.

AT the Kent Assizes, on Tuesday, before Mr. Justice Wills, George West Sargent, pharmaceutical chemist, of 5 Church Street, Kensington, who at the last Kent Assizes pleaded guilty to writing and publishing a defamatory libel concerning Mr. Alexander Bottle, J.P., of Dover, then Vice-President of the Pharmaceutical Society, was brought up for judgment. On his conviction at the last Assizes, he was allowed to enter into his own recognisances to be of good behaviour and to come up for judgment when called upon; but almost immediately after his discharge he commenced writing letters to Dover magistrates almost similar in terms to those containing the original libels, consequently notice was served on him to come up for judgment. Mr. Forrest Fulton appeared for the Pharmaceutical Society, and Mr. Marshall Hall for the defendant.

The case having been called, Mr. Sargent came forward and took his place in the dock.

Mr. Forrest Fulton briefly stated the facts of the case. He said that Mr. Sargent was indicted at the last Assizes, before Mr. Justice Day, on a charge of publishing a defamatory libel of and concerning Mr. Alexander Bottle, of Dover, who is a pharmaceutical chemist, and at the time occupied the position of Vice-President of the Pharmaceutical Society of Great Britain. He was a magistrate of Dover, and had filled the office of mayor of that town. Mr. Sargent wrote several letters to the Town Clerk of Dover, which were read and proved on the last occasion, containing the libels, to two only of which it would be necessary for him to call

special attention. The defendant was himself a pharmaceutical chemist, and he appeared to have some illusion as to the Pharmaceutical Society having injured him in some way with regard to the regulations for the wholesale sale of drugs and poisons. One letter which he wrote to Mr. Wollaston Knocker, the Town Clerk of Dover, dated December 21, 1891, was as follows:—

75 Church Street, Kensington, W.,
December 21, 1891.

DEAR SIR,—I shall be glad to know if my letters have been under consideration with regard to Mr. A. Bottle, Vice-President and member of the Pharmaceutical Council by fraud, corrupt, illicit practices, and also at present filling the position of local secretary of the Pharmaceutical Society, and if any steps have been taken to restrain the said Mr. A. Bottle from administering the Pharmacy Act by fraud, corrupt, and illicit practices.

Yours truly,
G. W. SARGENT.

Town Clerk, Dover.

Subsequently he wrote another letter, dated January 21, 1892, in which he said:—

75 Church Street, Kensington, W.,
January 21, 1892.

Transit, Storage, &c., of Poisons and Inflammable Drugs.
Alexander Bottle, 37 Townwall Street, Dover.

DEAR SIR,—I am instructed to inquire the reason no criminal proceedings have been instituted against the above with regard to abstractions of poisons regulations from the various issues of the Calendar of the Society, which appear in the issue of 1890, page 45. The Corporation of Dover continues to be reported badly, and places the country in confusion and alarm.

Yours truly,
G. W. SARGENT.

Town Clerk, Dover.

There were other letters, with which it was not necessary to trouble the Court.

Mr. Justice Wills: I have read them all.

Mr. Forrest Fulton, continuing, said that under those circumstances the matter came before Mr. Justice Day, and, on the defendant's own plea of guilty, he was convicted, and entered into his own recognisances of 50*l.* to be of good behaviour, and to come up for judgment when called for; and on that occasion he expressed regret for what he had done, and his thankfulness for the lenient course which the prosecution then took. The object which the Pharmaceutical Society had in taking these proceedings was not vindictive, but to put a stop to the annoyance arising from the repetition of those defamatory libels. But in spite of the leniency of the Court, the defendant had only been a short time discharged when he again commenced writing and repeating the libels. He wrote to Mr. John Lade Bradley, J.P., who was the Dover magistrate who granted the original summons. In that letter he referred to the original grievance; and he also wrote another letter to Mr. Bradley, in which he repeated the former libel and suggested that the summons which had been taken out against him was irregular. He also wrote a letter to Sir Richard Dickeson, one of the Dover magistrates, asking what action had been taken to remove Mr. Bottle from the Bench, and asked him to be good enough to confer with Mr. Bradley to restrain Mr. Bottle from acting as a magistrate in the interest of the frustration of crime. He also wrote a letter in similar terms to Mr. Henry Peake, J.P., one of the Dover magistrates. It therefore became manifest that something should be done. When the first of the second series of letters was written, the solicitors of the Pharmaceutical Society at once communicated with Mr. Sargent, through the solicitors who represented him at the last trial, Messrs. Sheppard, and they promised to do all they could to stop the writing, but it being continued, it was found necessary to serve the defendant with notice to come up for judgment. He (Mr. Forrest Fulton) would briefly prove the receipt of the letters, and leave the matter in his Lordship's hands.

Mr. C. T. Langley was called, on behalf of the prosecution, to prove the service of the notice on the defendant.

Mr. J. L. Bradley, having been sworn, produced two letters which he had received from the defendant, the handwriting admitted.

Mr. Henry Peake, J.P., of Dover, was next sworn, and produced one letter which he had received from the defendant.

Sir Richard Dickeson, a magistrate of Dover, also produced a letter which he had received through the post from the defendant.

Mr. Marshall Hall said it was impossible to say anything

on behalf of the defendant except to throw himself on the mercy of the Court. It was impossible to read the letters which he had written without forming one conclusion, but the conclusion which he had formed was only a personal view of his own, which he was not called upon to express. He would suggest that the man had formed some hallucination upon some particular subjects which over-balanced the good judgment which he had been able to exercise in his own affairs, and which had for years enabled him to carry on a successful business; but it seemed that a large wholesale business, not strictly a chemist's, had been set up in opposition to him, and the result had been that he had formed opinions that in the matter of wholesale dealings in drugs and poisons small chemists were unfairly treated, and were subjected to unfair competition. This seemed to have induced him to write those letters. On behalf of the solicitors of the defendant he had to say that they had done all they could to restrain him, and he (Mr. Hall) had taken the opportunity of speaking to the defendant, and what he had to suggest to the Court was that the counsel for the prosecution should, with his Lordship's consent, agree to the recognisances being enlarged, so that on the defendant undertaking not to continue the annoyance, and to pay the costs of the day, he should be allowed to go, and be called up at a future Assize to receive judgment if he repeated the offence. That was all he could say in favour of the defendant, and he trusted the Court would allow him that indulgence.

A conversation arose as to the costs, and it was agreed that the amount should be agreed upon between the solicitors on either side.

The Judge then, addressing the defendant, reminded him that at the last Assizes he was convicted of a very serious libel, and he had communicated with the judge who heard the case, and knew his view upon it. The object of the prosecution in this particular case was not so much punishment as to put a stop to the annoyance for the future. The defendant appeared to have got an idea into his mind which appeared to be unreasonable to everybody else. People who got such ideas, although they could not get rid of them, could well understand that other people would not go with them, and, as the rest of society were much stronger than the individual, the latter had to submit. Whether the defendant was ready to give up the views which he entertained or not, he must in future be stopped from annoying other people. He would like to warn the defendant that if he persisted in the annoyance, and had to be sent to prison, it very probably would not be less than for four or six months. He also pointed out that even greater mischief might ensue. Not long ago he was at Broadmoor Criminal Lunatic Asylum, where he saw a person who had been doing just what the defendant had been doing. He warned the defendant not to continue his conduct or he might find himself in a similar position. He hoped the defendant in the future would altogether put away these ideas and discontinue the annoyance.

The Defendant: I will try to act on that direction, my Lord.

The Judge, after a few more kindly words of warning, told the defendant that he did not like to inflict a monetary payment as a punishment for a criminal offence; but it was only right that he should pay the costs of the prosecution. Was he willing to confirm the assurance given by his counsel to that effect?

The defendant said he was.

The Judge then ordered the defendant's recognisances to be enlarged, so that he might enter into a bond of 100*l.* to be of good behaviour and to come up at any future Assize if called upon.

The defendant entered into the bond, and was discharged.

SUING SEQUAH.

IN the City of London Court of Tuesday, before Mr. Commissioner Kerr and a jury, Mr. Arthur Wilson, of 6 Charlotte Street, Blackfriars Road, sought to recover the sum of 82*l.* 10*s.* (the action having been remitted from the High Court of Justice) from Sequah (Limited), of 44 Farringdon Street, E.C., for salary alleged to be due to him. Mr. E. F. Spence was counsel for the plaintiff, and Mr. Spokes for the defendants.

Mr. Spence said the plaintiff had had some experience in

foreign life, and he was engaged under an agreement by the defendants, at a salary of 2*l.* 10*s.* per week, to take one of their well known medicine-cars to any town in England or abroad wherever they selected. He was, of course, in the defendants' exclusive service, and he was, under the agreement, to do exactly as they directed, and to be prepared to go to any town in the world they chose to send him to.

Mr. Commissioner Kerr: A pretty wide range. (Laughter.)

Mr. Spence, continuing, said that under the agreement the plaintiff was to remain in the service of the defendants for three years, but he was to be liable to have the engagement terminated against him—first, if the manager was dissatisfied with the way in which he was doing his work, and, secondly, if the company were of opinion that he was not suitable for the "business." In either of those events happening, he was to have a week's notice in writing, and there was this additional burden imposed upon him: if he was discharged before the three years for which he was engaged expired, he was precluded from entering upon the sale of any other patent medicines for the remainder of the period. The defendants first sent the plaintiff to South America, but the South Americans did not see why they should have Sequah to sell patent medicines instead of a properly qualified practitioner. The authorities intervened, and plaintiff had to cease working for the sale of Sequah. The plaintiff was then sent to Spain, and he was for some time at Barcelona. But the Spaniards objected to a gentleman going about selling patent medicines with a drum and trumpet such as the plaintiff had to do, and once more the authorities prevented him going on, saying they would have no one but certified men. The defendants then gave the plaintiff notice to come back to London, saying that Mr. Scherer, who was at Barcelona, would give him his salary and pay his fare home. But he did not. The plaintiff returned to London, and there saw Mr. Danziger, one of the directors. There was then 2*l.* 10*s.* due to the plaintiff, but he compromised that claim with the defendants for 16*l.*, which they paid him. They then said he was not to go anywhere then, but that he was to keep himself in readiness to be sent off at any moment. He did so for thirty-three weeks, and now sued for the salary due to him at 2*l.* 10*s.* a week for that time.

Mr. Spokes said the defence was that when the plaintiff came back from Barcelona in August he had been discharged, and the 16*l.* which was paid him settled up with everything. The plaintiff and defendants were on good terms—the plaintiff had good cause to be, having been treated very well indeed. As he was going out of the defendants' office he asked that he might be communicated with in the event of an opportunity cropping up by which he could be of service to them. It was ridiculous beyond description to say that the plaintiff would allow thirty-three weeks to go by without asking for his salary if it were ever due to him. The engagement was terminated on August 13, after which the plaintiff did no work whatever for the defendants.

The plaintiff gave evidence in support of his claim, and in cross-examination said the reason he did not apply for his salary as it became due after August 13 was because he was not in immediate want of the money.

During the plaintiff's cross-examination the jury stopped the case and said they were "sick of it." Of course they found for the defendants.

Mr. Commissioner Kerr entirely agreed with the verdict, and entered judgment for the defendants, with costs.

LOSS IN TRANSIT.

At the Ramsgate County Court on Thursday last week before his Honour Judge Selfe, Edward Bailey, chemist, Ramsgate, sued J. A. Melen to recover the sum of 13*l.*, damages through the non-delivery of four cases of syphons, delivered by plaintiff to defendant for the purpose of transit to Messrs. Idris & Co., of Kentish Town, London, in or about the month of July, 1891. Evidence was given at considerable length in reference to the delivery of the cases for transit to the railway company. It was intimated in the course of the hearing that an action was pending against the railway company. Mr. Crispe, on behalf of the defendant, argued that his client's responsibility ended when he handed the goods over to the railway company and paid the carriage.

Mr. Johnson, on behalf of plaintiff, reviewed the case at

considerable length, citing several cases to show that defendant was in the first instance responsible.

Finally, his Honour held that there was no evidence to show that more than two cases were missing; therefore he gave judgment for plaintiff for 7*l.*, and allowed costs.

THE ADDITION OF SALICYLIC ACID TO WINE.

At the Great Marlow Petty Sessions, on June 23, before Messrs. R. Hay-Murray and E. Clark, Matthew John Clifton, of Marlow, grocer, was summoned under the Sale of Food and Drugs Act for having sold, to the prejudice of the purchaser, some raspberry-wine, adulterated with salicylic acid, and coloured with Brazil-wood. Mr. Wilkins conducted the prosecution and Mr. P. Rose-Innes, barrister, appeared for the defence.

Superintendent Sargent proved the purchase from Mr. Clifton's shop of a bottle of raspberry-wine, for which he paid 1*s.*, on May 16 last. He was served by an assistant. He divided the wine into three parts, leaving one part with the defendant's assistant. In cross-examination this witness admitted that he had since purchased from Mr. Clifton's shop another bottle of raspberry-wine for his own consumption.

Walter William Fisher, of Oxford, public analyst for Bucks, produced his certificate of analysis of the wine in question. He found it to contain about the usual quantity—20 per cent.—of proof spirit, with sugar, &c., and about 18 grains of salicylic acid. The wine was coloured with what he believed to be Brazil-wood. In his opinion salicylic acid was not a proper constituent of raspberry-wine. It is a drug made from carboic acid. Brazil-wood is not present in raspberries, and was not, in his opinion, necessary for the manufacture of raspberry-wine.

By Mr. Rose-Innes: I have never been a manufacturer of raspberry-wine. I do not remember having analysed a sample of raspberry-wine before this one. I am a Master of Arts, but have no medical degree. The test I used was white ribbon and gelatine. I used a variety of tests, and comparing the result with those previously obtained, I came to the conclusion that the colouring-matter used was Brazil-wood. I did not pursue my analysis to find cochineal. I know of no substance other than Brazil-wood that would produce the colour and effects I found. I am aware that cochineal is much used for cooking and colouring purposes, and that it is perfectly harmless. For discovering the salicylic acid I added perchloride of iron, which produced a violet colour, which would indicate the salicylic acid or carboic acid, but the last-mentioned was entirely out of the question. I believe that salicylic acid stops fermentation. I don't know that it is largely used in this country. I have found it in beer, but I don't get many samples of beer to analyse, but of 1,700 analyses I have made I only found it in two instances. I have examined samples of wine in which salicylic acid was not present.

Mr. Wilkins took an objection to the line of cross-examination taken.

Mr. Hay-Murray: We are called upon to decide not whether the salicylic acid is injurious or not, but whether it was in the wine or not.

Mr. Rose-Innes contended that there could be no offence when an article was necessary and was used for a commercial and not for any improper purpose.

In addressing the Bench for the defence Mr. Rose-Innes said there was nothing to show that the acid was used for a fraudulent purpose. It was much more costly than the wine itself, and was simply used to prevent deterioration of the article. He also took exception to the certificate. It was provided in the 18th section of the Act that the certificate should give the exact quantities of the ingredients found, which had not been done in this case. He should prove by the very highest scientific authority that the introduction of salicylic acid in proper medical proportion was not only not injurious but absolutely beneficial to the wine with which it was mixed. The first witness called for the defence was

Mr. Granville Sharpe, who described himself as an analytical and consulting chemist. He had analysed this wine and found it to contain a large quantity of raspberry-juice and a small quantity of salicylic acid, and nothing injurious to health. He detected some colouring-matter and found it to be cochineal, which is perfectly harmless, and frequently

used to intensify colour. He did not find any Brazil-wood. The salicylic acid was in the proportion of about 2 grains to a bottle. In cross-examination he said he tested for Brazil-wood but did not find any. He did not test the residue. He was not told what to search for in the wine.

Professor W. Lascelles-Scott said he was a consulting analyst, lecturer on chemistry and hygiene to the London Conservatoire, consulting analyst to the Royal Commissions (C.I.E.) for Victoria, the Mauritius, the India Museum, the West Riding Chamber of Agriculture, &c. He had held the appointment of public analyst for the counties of Derby, Glamorgan, North Staffordshire, and the Borough of Hanley, and had had great experience in the examination of food-products. He had analysed this wine. There was no trace of Brazil-wood in the wine whatever, and his tests would certainly have detected it had any been present. The colour was due to the raspberry-juice and a very small proportion of cochineal—a colouring-matter largely used in improving the appearance of various articles of food and drink, as it was perfectly innocuous. Salicylic acid was also present in a very small quantity—700 fluid grains (one-hundredth part of a gallon) of the wine only contained 165 of a grain of the acid, equal to $16\frac{1}{2}$ grains per imperial gallon, or about $2\frac{1}{4}$ grains per bottle. This was a proper proportion, and sufficed to prevent secondary fermentation in the wine and to keep it in a wholesome condition. All wines containing a good deal of sugar and but little alcohol were liable to this change—raspberry-wine especially—and needed some antiseptic to make them keep at all. Salicylic acid, being effective and not at all injurious to health, was one of the very best that could be used for the purpose. He had obtained the salicylic acid by exhausting the wine-extract with pure ether, and identified it by means of perchloride of iron and the microscope. The colouring-matters he recognised by a number of tests, including the spectroscope, and the specimen of silk he produced would have been coloured very differently were any Brazil-wood present in the wine. Had such a sample been officially submitted to him during his career as public analyst he should have undoubtedly certified it as being "Not adulterated." Cross-examined the witness said he had extracted the whole of the salicylic acid from the portion of the wine tested by exhausting it seven times with ether; of this the last two portions yielded no residue whatever. The salicylic acid was absolutely necessary to preserve the wine. He was instructed to search for the acid and for Brazil-wood, but the latter was absent, while of the acid there was not "18 grains" in a bottle of the wine, only about 2 grains. He had frequently analysed raspberry-wine; this was a well-made sample. He had not "made" raspberry-wine himself, but, as it happened, his wife had done so once.

Mr. Wilkins: And, pray, did she put salicylic acid in it?

Mr. Lascelles-Scott: No; but I did, to "keep" it. (Laughter.)

Dr. John L. W. Thudichum said: I am an M.D., M.R.C.S., and F.R.C.P., and Scientific Referee to the Board of Trade. I agree with Mr. Lascelles-Scott that the use of salicylic acid is necessary to prevent fermentation in wine, and that it is quite innocuous. Large quantities of the acid are used in food without injury from it. If a shillingsworth of the acid were put into a bottle of raspberry-wine no harm would follow to those who partook of it.

Dr. Bond said: I am lecturer to the College of Physicians. I have had long and extensive experience in the use of salicylic acid, and have been in the habit when away from home hunting in the country of taking 10 grains of the acid a day for a month without the slightest bad effect; the quantity mentioned as having been found in the wine could do no possible harm to anyone.

After hearing the advocates the Magistrates said they had come to the conclusion that no matter or ingredient was introduced into the wine to increase its bulk or to defraud or injure anyone, and they had therefore no hesitation in dismissing the case.

THE BROMO CAFFEINE TRADE-MARK.

OUR American correspondent referred briefly in his letter last week to the decision in the case of Keasbey & Mattison v. the Brooklyn Chemical Co.

The plaintiffs have for ten years manufactured and sold a

granular effervescing preparation for headaches, &c., which they called "Bromo-caffeine," a title which they claim to have originated, and which they registered as a trade-mark. The defendant firm used the same title, or a similar one, for a similar preparation, claiming that the title, being a combination of words in common use, is not a proper subject for a trade-mark.

Judge Beach considered that the defendant company failed to establish their contention, holding that "the words 'bromo-caffeine' are never commonly used, and have no significant meaning, neither does the word 'bromo' have any special significance. It signifies no particular fact, and is outside of all ordinary classifications. 'Bromo,' when applied to 'caffeine,' makes a perfectly valid trade-name for the preparation manufactured and used by the plaintiffs."

On behalf of the defendant company it was further contended that there is a chemical substance known as "bromo-caffeine," the same having been discovered in 1867 by Otto Schultzen, a German chemist. It is a bromo-substitution-product of caffeine.

Admitting this the Judge decided that the fact furnishes no support whatever for the defendants' contention that on account of this chemical having been previously discovered and the words "bromo-caffeine" having, therefore, previously appeared in public print, the plaintiffs have no right to the use of the words "bromo-caffeine" as a valid trade-mark under the laws of the United States.

Judge Beach was, therefore, of opinion that the title "Bromo-caffeine," as a name applied as a trade-mark, is valid, and says that "if there is aught within the province of a Court of Equity, it should be the protection in the legitimate enjoyment of the fruits of business enterprise, and the firm repression of any attempt at their appropriation by others after their being made valuable and remunerative by the business efforts and at the expense of the originators. The principles of law underlying cases of this character and governing the grant, or withholding of relief, have been often adjudicated, and are substantially unvaried in judicial expression."

Judgment for the plaintiffs with costs.

PHARMACY AND THE ELECTION.

MR. CHARLES TOWNSEND, the head of the firm of Ferris & Co., wholesale and dispensing chemists, of Union Street, Bristol, has been elected as the Gladstonian member for Bristol (North), winning the seat from Mr. Lewis Fry, who had held it in the last Parliament as a Liberal Unionist representative.

In 1886 Mr. Fry's majority over his Gladstonian opponent was 850; on Tuesday Mr. Townsend defeated Mr. Fry by a majority of 345 (4,409 to 4,064).

Mr. Townsend is just sixty years of age. He is a J.P. for Bristol, a member of the Bristol Town Council, President of the Bristol Chamber of Commerce, Chairman of the Bristol Liberal Federation ("Liberal 1,000"), and a member of council of the National Liberal Federation. Married, 1859, Ann Maria, daughter of the late Mr. Adam Holden, of Bristol.

This is an extract from a speech made by Mr. Thomas Sexton in the course of his candidature for West Belfast. Commenting on a speech which had been made by his old opponent, Sir James Haslett, Mr. Sexton said incidentally:—

Now, gentlemen, I have to tell you that I am more surprised at Sir James Haslett's speech, because there is no man in Belfast, whether Nationalist or Tory, who is under such heavy personal obligations to me as Sir James Haslett. (Applause.) You remember when the chemists and druggists throughout Ireland were threatened with prosecution. The Pharmaceutical Society of Dublin held that the chemists and druggists were not entitled to deal in drugs. Sir James Haslett wrote to me, telegraphed to me, sought me out on the lobby, implored me to take up the question, saying that his trade and the interest of the chemists and druggists of Ireland were in danger. He confessed it was useless to apply to any other member for Belfast. (Cheers and laughter.) I had many other affairs upon my hands, but I

gave infinite pains to the matter. I gave several interviews with the chemists and druggists, I put their amendments into parliamentary form, I conferred with the Attorney-General for Ireland on the subject, and after protracted labours we arrived at an agreement. The Attorney-General accepted the major part of my amendments, the Bill passed through the House, became the law of the land, and Sir James Haslett and other chemists and druggists in Ireland were saved from vexatious prosecution; and he is now the chivalrous knight who comes forward to cast discredit upon my work and endeavours to decry my motives. (Cries of "Shame.")

When Mr. Shiress Will, the Liberal candidate for the Montrose Burghs, spoke at Forfar last week, and the heckling process had begun, the first question put to him was by Mr. A. H. Simpson, chemist and druggist. It was a somewhat comprehensive question, and in reply to it Mr. Will said he was in favour of a rearrangement of the basis of taxation, so that every taxpayer should pay his fair share—particularly landowners. He was in sympathy with the movement for the early closing of shops in Scotland. He was in favour of an amendment of the Weights and Measures Act so that it should be provided that the cost of correcting and adjusting weights and measures would be borne by the persons using them. He was also in favour of a Royal Commission being appointed to inquire into the best means of dealing with habitual criminals, vagrants, beggars, and inebriates, with a view to their reclamation. He would support a measure to amend the Pharmacy Acts whereby makers of proprietary or patent medicines containing scheduled poisons should be compelled to comply with the present statutes and label their preparations with the word "poison," with the name and address of the maker and seller, the latter to be a duly registered chemist.

Mr. F. H. Prosser, of Spring Hill, Birmingham, informs us that he wrote to ask the Right Hon. Joseph Chamberlain what were his views on the Shop Hours Bill. Mr. Chamberlain replied as follows:—

Highbury, Moor Green, Birmingham,
June 29.

DEAR SIR,—The best answer I can make to your inquiry is to inform you that I promised some time ago to take the chair for the Early Closing Association at a great meeting to be held in Birmingham during the autumn.

I have always felt great sympathy for the shopkeepers and assistants—especially those in large towns—whose hours at the present time are exceptionally long and oppressive.

Mr. F. H. Prosser.

I am, yours truly,
J. CHAMBERLAIN.

Mr. J. A. Wood, of Worksop, who sent us last week a copy of a letter which had been sent to the candidates of the Bassetlaw division asking them if they would support a Bill having for its object that all medicines intended for internal administration shall be vended by duly qualified medical men and chemists only, has since informed us that both candidates for the division (Sir F. Milner and Mr. Yoxall) have promised their support to such a measure.

The *Zoopholist* tells an amusing story of one of the aspirants to parliamentary honours in a London constituency. He was asked by a member of the Victoria Street Society, "Are you in favour of vivisection?" The candidate replied with considerable alacrity, "Not until the animals are dead."

So much is said in favour of the American patent laws, as distinguished from the British, that it is worth noting that Edison fifteen years ago applied about the same time in England and the United States for patents for telephone-transmitters, but there has been so long delay on the other side that the English patents, applied for after the American, had been examined, had run their term of fourteen years, and expired before the American patents were issued.

LOOKING FORWARD.

IT was getting late. I threw THE CHEMIST AND DRUGGIST on the top of a pile of newspapers and election literature, and settled back in the armchair to finish my pipe and to meditate.

For some minutes I floated in a nebulous haze of politics, pharmacy, and Latakia, but soon found myself firmly fixed on a seat, in a large and crowded hall, waiting to hear Mr. Gladstone explain and expound his Home Rule scheme. The atmosphere was heated, in a double sense, and the expectation of everyone in the vast assembly was strained to the utmost tension.

At length, the G.O.M. appeared, and, after everybody had shouted and bawled himself hoarse, was called upon by the Chairman to unfold his designs.

"Now," thought I, "the riddle of the Sphinx will be read."

But, alas! before the speaker had got through half-a-dozen introductory sentences, he became a shadowy and receding figure, fading gradually out of sight; the place contracted, also the crowd, and finally I was left with eleven others in a dingy room, to inquire, with the aid of a coroner, into the circumstances of the death of Mary Jones, aged 18 months.

A newspaper the Coroner had been perusing bore date April 1, 1900. This fact did not strike me as at all surprising.

The principal witness, Martha Jones, mother of deceased, was giving her evidence. It was to the effect that the little girl had been suffering severely all the day from stomach-ache, and nothing seemed to do her good; that witness had called on her friend, Mrs. West, what lives round the corner two doors below the fried-fish shop, you know, sir, and Mrs. West had given her a bottle of chlorodyne, which she was sure would cure that or any other pain; that she gave deceased half a teaspoonful in a tablespoonful of warm water, and it seemed to relieve her at once, and she went to bed, and was fast asleep when witness herself retired. In the morning she was quite dead. Witness called in the neighbours, who fetched Dr. Smith (who must already have given evidence; at all events, I saw nothing of him all the time), but of course he could do nothing. Witness was going to repeat what the doctor had said, but was stopped by the Coroner. The following examination followed:—

"Are you in the habit of using chlorodyne?"

"No, sir."

"Were there any directions as to doses on the bottle?"

"Yes. I've seen them since, but I never looked at the time. I thought half a teaspoonful little enough of anything; and, besides, I gave it in a lot of water."

Here the Coroner laboured long and earnestly, but unsuccessfully, to show witness that on the last point she was the victim of a serious delusion.

"Did you notice the 'poison' label on the bottle?"
(Bottle produced in court duly labelled in every respect.)

"Oh, yes. I saw that!"

"Then surely, my good woman, that should have made you cautious! How on earth *could* you administer a dose without knowing exactly what you were doing?"

"Why, to tell you the truth, sir, I didn't think anything about it. You see, sir, its just here—you can't get anything from the chemist nowadays what *isn't* labelled poison. If you get twopenn'orth of cough-mixture its called 'poison,' and for all that it says as you can take a dessertspoonful of it; and I have got a lot of resates at home what belonged to my poor mother, what's been dead and gone these twelve years come the fifteenth of next month, and now whenever I get one of them made up, go where I will, there's 'poison' stuck on it, and some of 'em you take as much as two tablespoonfuls of, which is a thing that never used to be, sir, as my poor mother could tell you, if she was alive and here to do it; and not long since, and it's for that very same poor little thing what's now laid there before your eyes, I got some gripe-water from Mr. Veripore, the druggist, in a bottle my husband sometimes has whisky in—not that *he* drinks heavy; no, there's not a steadier man in these parts—no, not nowhere; I can say that, and we've been married these eleven years, and I've never seen him the worse."

Here the Coroner gently reminded witness that she was talking off the point.

"Well, I was saying I got two penn'orth, and it had 'poison' on it, and said you might give as much as a teaspoonful to a child that age, and it happened as how my husband was doing night-work, and had a bit of time to spare, so he came home at midnight and let himself in so as to get a nap, and he felt this bottle on the chimney-piece—it was dark you know—and that there was something in it, and he didn't know but what it was whisky, so he drank it off. You might have knocked me down with a feather when I saw the bottle was empty in the morning, because I knew where it had gone, but, law! he came home all right, and when I told him he said, 'I got it down before I found out it was not whisky. Drugs isn't what they used to be,' he said; 'they make their poison rare and weak nowadays'—them's his very words."

At this juncture, while witness paused for breath, a lengthy, gaunt, cadaverous individual, who might have come straight from "Romeo and Juliet," arose in court, and stated that he was the chemist alluded to. The gripe-water was prepared from an old recipe, and, among other things, contained one drop tr. opii per fluid drachm. He sold it at 2d. per oz. For fifty years it had been used extensively in that neighbourhood, and he had never heard of any ill effect being produced. Since 1890 he had put a "poison" label on. The Coroner thanked him for the information, but said that anything he had to say had best be deferred till the present witness had finished. He collapsed, creaking like an ancient gig umbrella.

Witness continued: "You see, sir, I thought if you might take two tablespoonfuls of poison, there *could* be no harm in giving half a teaspoonful, and I don't see who can blame me for that—not that I don't blame myself; I do that, and shall as long as I live—but when we see 'poison' stuck on everything we get so as we don't think anything about it."

No further questions were asked this witness, and Mrs. West, who lent the chlorodyne, was soon disposed of. The Coroner blamed her for not saying how it was to be used, and one or two of the jury eased their minds in the same direction.

The bottle bore the label of Mr. Veripore, and that melancholy individual appeared again. He said he remembered supplying Mrs. West with the chlorodyne. It was his own preparation, and contained $\frac{1}{2}$ grain of morphia to the fluid drachm. This was stronger than the official article, but not so strong, he believed, as it was made by some chemists. He should consider half a teaspoonful almost certain to prove fatal to a child eighteen months old. The label contained the words "Caution. This article must on no account be given to young children."

He produced his poisons-book, where the sale was found duly registered as section 17 demands. The Coroner said he had complied with all the requirements of the law, but a juror wanted to know why the space for the "introducer" was left blank. He was promptly sat upon, but, being a pugnacious fellow, he turned fiercely on the meek witness.

"Do you keep a qualified assistant, sir?"

"I do not. My business does not require it."

"Then who is in charge now?"

"My wife."

"According to the principal witness—now mark my words, sir—everything, practically speaking, that comes from your shop must be labelled 'poison'; and, since the Act requires these things to be sold by none but qualified persons, I should like to know whether a customer would be supplied by your wife during your absence?"

"Certainly not."

"Then what if a customer should call now?"

"That's a phenomenon very unlikely to occur, I can assure you," responded the unfortunate. He then retired with the dejected spiritless mien proper to his calling.

There was no other evidence of importance, and the Coroner addressed the jury. After a recapitulation of the case he said: "There is one fact that has been brought into strong relief during this inquiry, and that is the absurdity of the present way of administering the law relating to the sale of poisons. The time has come for plain speaking on this matter, and I do not intend my remarks to fail in directness, although they may fail to please certain parties in high places who are at present living in a fools' paradise. I can remember the passing of the Pharmacy Act of 1868, which has remained practically unaltered. For

twenty years that Act, in spirit, was intelligently obeyed—that is to say, scheduled poisons in dangerous or perceptible quantities were labelled as such. But about ten years ago a pedantic literalness took the place of commonsense discrimination. By adopting a rigid, cast-iron rendering of the very elastic word 'seller,' a judicial decision declared it illegal for the unqualified assistants of qualified chemists to sell these poisons in even the smallest quantities or the most innocuous combinations. That was one step. Then proprietary articles were brought under the Act, which, reasonably carried out, was quite right. The chemists rather rejoiced over it, as it appeared to be a blow at their trade rivals; but with trade affairs we have nothing to do. I am dealing with the effect of the new state of things on the public safety. Still, this is what actually happened. Partly because their leaders had embraced the pedantic, as opposed to the intelligent, interpretation of the Act, and partly through a feeling that if they were to have clean hands in their competition with the grocers and other untrained dealers, they must themselves obey the law to its very letter, the chemists did begin, and have continued, to label everything, drug, chemical, or preparation, that is or that contains a scheduled poison, no matter in how infinitesimal a quantity, as the law requires. And what has been the result? Has the number of suicides or of accidental poisonings decreased? Not at all. The latest statistics show the former to be practically unchanged, and the latter to have actually increased. And the reason is not far to seek. You have it in the evidence of the unfortunate mother. The stringent, unreasoning enforcement of the letter of the Act has defeated its own object. The word 'poison' has lost its deadly import. Familiarity has bred contempt. When preparations, proved time after time to be, practically speaking, harmless, are labelled in the same way as those containing the poisonous element in a high percentage, what wonder that the liberties taken safely with the one are attempted with the other, and deadly results follow? I say again, the net result of recent action in pharmacy has been to rob the word 'poison' of its significance. The red label is no longer a danger-signal. I can assure you the case we are investigating is not an isolated one. Something will have to be done, and without delay. Neither chemists nor the public are benefited by the present state of things."

The foreman asked whether it would not meet the case if chemists used two labels—"Poison," and "Dangerous Poison"?

The Coroner: "That might do, but it would needlessly complicate things. It would be far simpler only to use the 'poison' label for things that really require it. The chemists may be trusted to act with discretion. What do you think, sir?" turning to me.

I arose and began with all the grace and coolness of a practised orator:

"Sir, depend upon it legislation won't stop suicides or accidental poisonings, but I am inclined to think—nay, I feel sure, Mr. Speaker—that the time has come when we may report progress. By the abolition of the patent-medicine stamp all reasonable opposition on the part of Ulster will be disarmed, and then the way will be cleared for much-needed reforms. Beginning with Welsh Disestablishment and the suppression of the Pharmaceutical Society, we may"—

At this point I was interrupted by loud cries of "Order in the Strangers' Gallery!" "Turn the fellow out!" and the next moment found myself under the shadow and in the grip of Mr. Harry Furniss's portly usher. I was dragged to an open window.

"Throw him out!" yelled the irate M.P.'s.

I threw arms and legs round a pillar of the house, and clung for bare life. It was a gigantic bottle of St. Jacobs Oil, spiraled all over with red poison-labels. . . . The pillar gave way, tottered, and fell. A crash of broken glass, a strong smell of turpentine and sassafras, and—I awoke!

MALEM KABOBI.

THE RIGHTS OF WOMEN.—We hold the *Western Druggist* responsible for the statement that a Kentucky woman who concluded her medical studies this last spring brought home in one arm her diploma and in the other her week-old baby.

THE CHEMISTS' ASSOCIATION (LIMITED).

VERY prominent attention is directed this week in our advertisement section to the conversion of an old company into a new one, with the object of offering to chemists and druggists, principally, a co-operative interest in an established business in the druggists' sundries and patent-medicine lines.

The scheme corresponds with an idea which has been advocated by correspondents in our columns and elsewhere over and over again, and which has been tried, with varying success, in the drug and other trades. Some of us may recollect the "Wholesale and Export Drug Company (Limited)" of some thirty years ago—a company which grew out of the United Society's organisation, but which, after a gallant struggle lasting over several years, succumbed to competition and the conservatism of the trade. The failure of the enterprise discouraged its renewal for some time, and in more recent days we have had to record attempts on a smaller scale to float a patent medicine or some proprietary article by co-operative efforts. One undertaking, trading in aerated waters, has proved the practicability of the idea as applied to a branch of the chemists' business. The company referred to has achieved a very fair measure of success.

The Association now proposed starts with the very considerable advantage of an established connection. It takes over as the nucleus of its operations the business of Messrs. Thompson, Walters, Hole & Co. (Limited), of Curtain Road, Great Eastern Street. For the purchase-money the new Association is to become possessed of the extensive leasehold property in which the business is carried on, the stock, and the goodwill.

Mr. Martin Magor, pharmaceutical chemist, of Corporation Street, Birmingham, the chairman of the new company, with Mr. Howard, of the firm of Howard, Howes & Walters, the company's auditors, called at this office on Monday to put before us their scheme. It was pointed out to those gentlemen that the prospectus did not give particulars showing the value of the property to be sold. Mr. Howard stated in reply to this that he had all those particulars with him, and was willing to place them before us as fully as we might wish. He stated further that he had at first inserted such details in the prospectus, but that these had been withdrawn by the Board for trade reasons.

We did not accept the proposal to examine the figures offered to us. To check them with a view to certify to the trade the soundness of the investment would have been to saddle ourselves with a responsibility which it is not our business to assume. We record the fact that the request that we should do so was made to us in all seriousness, and that circumstance must be taken for what it is worth.

Mr. Magor then informed us of the negotiations which had resulted in his acceptance of the position of chairman of the Board, and stated that the other chemist directors (all men, like himself, of good commercial position and with trade experience) had been selected by himself. He said the stock had been taken under his own supervision, and valuing it at strictly cost prices they had found over 11,000*l.* worth of perfectly saleable goods. He had perfect confidence that the company was buying a satisfactory business at a fair price.

Mr. Howard said the goodwill had been estimated at three years' profits, and that out of the money to be thus paid the vendors had undertaken to pay all the costs incurred in floating the new Association. He assured us that the valuation of the property showed a certain fair percentage of dividend, and he pointed out what is obvious enough—that every new shareholding customer would tend to augment that profit.

These were the salient points of the conversation, and we have thought it the fairest way towards both vendors and probable purchasers to state briefly exactly what passed between us, so that the latter can have such materials for forming a judgment in regard to the investment invited as it is in our power to give them.

In Germany cinnamon-powder is said to be much adulterated with sugar.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Cooper, J., & Co. (John Joseph Cooper, trading as), Antley Chemical Works, Church, and Brownlow Terrace, Pleasington, near Blackburn, Manufacturing Chemist and Drysalter. Trustee—Harry L. Price, 79 Mosley Street, Manchester (Acct.), with a committee of inspection. Dated June 24, 1892; filed July 1. 1892. Unsecured liabilities, 1,667*l.* 2*s.* 11*d.*; estimated net assets, 833*l.* 7*s.* 7*d.* The following are scheduled as creditors:—

	£	s.	d.
Adley, Tolkien & Co., Blackburn	73	19	0
Aitken, T., & Co., Liverpool	13	12	1
Arden, T. C., Manchester	12	8	4
Blyth, W., & Co., Manchester	14	19	8
Bowers, Ed., & Co., London	59	17	10
Bridge, Baron & Son, Accrington	12	18	11
Brooke, C. J., Manchester	31	0	2
Bryce & Rumpf, Manchester	92	10	7
Casson & Co., Liverpool	12	8	9
Clay, Dod & Co., Liverpool	14	6	10
Dalton, J. & E., New Mills	23	8	1
Findlater & Kerr, Manchester	10	10	0
Grove Chemical Company, near Wigan	24	18	0
Haworth, J., & Co., Church	20	0	6
Lancashire and Yorkshire Railway Company	10	6	4
Leonhardt, A., Manchester	83	0	7
Levenstein, J., & Co. (Limited), Manchester	13	0	0
Makinson, E. & W. G., Preston	19	0	0
Manchester and Liverpool District Bank, Accrington	524	18	4
Metcalf, John, near Accrington	10	10	6
Millward & Co., Manchester	38	3	9
Riley, J., & Sons, Accrington	39	2	6
Saul, C. H., Manchester	33	13	10
Singer, George, Aix-la-Chapelle	48	12	0
Thompson, Bedford & Co. (Limited), Manchester	116	14	6
Turnbull, J. L., & Co., Liverpool	41	12	9
Varcoe, William, Hanley	32	19	6
Watson, Walker & Quickfull, Leeds	21	8	9
Wilkins, Charles, Manchester	19	9	10
Wilson, R., & Co., Paisley	15	12	5

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

SURFLEET—WRIGHT.—At St. George's Church, Doncaster, on Wednesday, June 22, by the Rev. T. E. Lindsay, M.A., F.C.S., Arthur George Surfleet, pharmaceutical chemist, Gainsboro', to Clara, second daughter of Mr. Richard Wright, St. George's Gate, Doncaster.

WILKINSON—ABBOTT.—On June 6, at St. Martin's Church, Horsley, John Henry Varley Wilkinson, chemist and druggist, of Wakefield, to Ada Catherine, eldest daughter of Mr. T. A. Abbott, The Nodes, Shortwood.

DEATHS.

CHAPMAN.—The death, at New York, is reported of Mr. John Chapman, of Messrs. G. A. & E. Meyer & Co., chemical-merchants. Deceased was born in Bristol in 1819, and went out to the States in 1848 to join the Meyer firm, to the head partner of which he was related by birth. He retained his connection with the firm until 1890, when he retired.

DAVIES.—On June 30, at 67 Rye Lane, S.E., Margaret, infant daughter of Llewelyn Davies, chemist. Aged 12 months.

GOULD.—On June 15, John Gould, London, pharmaceutical chemist. Aged 74.

KERR.—On June 14, William Kerr, Dunfermline, chemist and druggist. Aged 35.

DECEIT AND FRAUD.

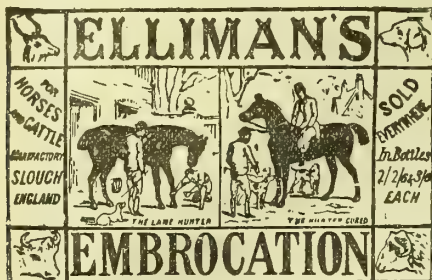
Registered "SANITAS" Trade Mark.

The "Sanitas" Company, Limited, having ascertained that a Chemist has been selling a disinfecting fluid in bottles, wrapped to imitate in colour and effect the 1/- bottles of their Fluid, respectfully request the trade to kindly furnish them, in confidence, with the names and addresses of all persons so offending, or passing off goods made by themselves and supplied when executing orders for "Sanitas" preparations, so that immediate proceedings may be taken against parties guilty of such contemptible dishonesty.

The "Sanitas" Company, Limited, would also like to be favoured with the name and address of any printer who offers to supply such wrappers to the trade.

THE "SANITAS" Co., LIM., Bethnal Green, E.

SHOW CARDS, 24×17 or 17×12,
Free to any address in the United Kingdom.



See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

YOU CAN'T READ THIS WITHOUT YOUR SPECTACLES!

Day's Oil of the Night
Is an Embrocative Balm for the People, and a source of profit to the Retailer.
1s. 1d. and 2s. 9d. NO CUTTING.

DAY & SONS, CREWE.



MUMFORD'S

(FARRINGDON ROAD, LONDON, E.C.)

THE BEST THAT CAN BE PRODUCED.

PURE CRUSHED LINSEED	{ 18/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.
PURE STARCH POWDER	{ 26/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.
PURE FULLER'S EARTH (Light Colour)	{ 16/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.
PURE FULLER'S EARTH	{ 14/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.

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To Railway Stations within the radius of 200 miles from London, and up to 2s. to Stations beyond, on 112 lbs. and upwards of above articles.

SCHWEPPE'S GOLD MEDAL TABLE WATERS

AS SUPPLIED TO THE QUEEN.

In Bottles and Patent Syphons.

51 BERNERS STREET, LONDON, W.

LONDON AND LANCASHIRE FIRE INSURANCE COMPANY.

Head Offices { 45 DALE STREET, LIVERPOOL.
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West-end Branch: 26 PALL MALL, S.W.

Annual Income ... £801,000.
Funds in Hand ... £1,026,000.

Premiums Moderate. Losses settled with promptitude and liberality.

Applications for Agencies specially invited from Chemists and Druggists in both Town and Country Districts.



Fletchers' Concentrated Liquors

ARE THE CHEAPEST BECAUSE THEY ARE THE BEST.

Editorial Comments.

ADVERTISEMENTS AS LEGAL DOCUMENTS.

THE novel and interesting questions raised in the action brought by a lady against the Carbolic Smoke Ball Company justify, we think, the space we are giving this week to the judgment delivered by Mr. Justice Hawkins on Monday last

in regard to this dispute. To advertisers of patent medicines, and, indeed, to all other advertisers, the judgment is of extreme importance by establishing in a formal manner the responsibility of the advertiser for the definite statements he may make in his announcements. Such statements can, in Mr. Justice Hawkins's view, serve as the bases of contracts enforceable by law.

There was no want of definiteness in the offer made by the Carbolic Smoke Ball Company in the advertisement which they authorised in the *Pall Mall Gazette* in November last. As distinctly as language would permit they offered to pay 100% to any person who, having purchased and used the ball three times daily for two weeks, should contract influenza, colds, or any diseases caused by taking cold. The proposal was wildly reckless, for not only did the proprietors of the smoke-ball thus substantially back their faith in the infallibility of their remedy, but they made no provision to protect themselves against unscrupulous applicants, nor did they place any time-limit on the guarantee they thus offered to the world. It is true that when Mrs. Carlill gave the first intimation of her claim against them, the company submitted a set of conditions which would have been very cautious ones, but which, not being alluded to in the remotest manner in the advertisement, could have no effect on the validity of the contract.

Mrs. Carlill swore that she read the advertisement, she bought the smoke-ball, she used it according to the directions, and she became a victim to the influenza. She had fulfilled all the conditions, and she claimed the hundred pounds. We have noted another similar action which was begun against the company, but which was abandoned by the plaintiff in view, probably, of the confidence of "counsel's opinion" that the claim was untenable. Mrs. Carlill and her advisers were made of different stuff. They were not disposed to withdraw their claim on the dictum of Mr. Asquith, who is not a judge yet. So the case came before Mr. Justice Hawkins. The defendants could not dispute the plaintiff's statements. As one of their counsel plaintively remarked on Monday, they had nothing to cross-examine upon. This, as the Judge observed, was a rare enough circumstance for a barrister to find himself in, but the only possible comment on it would be that it was so much the worse for the defence. Clearly there were only points of law to depend upon, and these were argued, with an ingenuity and ability worthy of a better cause, by a very clever advocate.

"We are not discussing the honourable obligation to pay," said Mr. Asquith, cynically enough, in response to a comment from the Bench. It may be customary, but it is hardly creditable, that a lawyer who is not in actual want of bread can be obtained for money to contend for a principle which he as good as acknowledges is not honourable. Such as they were, however, Mr. Asquith urged his points with the utmost force. This is not a contract, he said; there has been no acceptance. If it is a contract, it is not valid, for it would be an agreement, which should have been stamped. Moreover, it is of the nature of a wager, and, as such, is not enforceable at law; and, lastly, if it be not a wager, it is an insurance policy, and, in that case, it is invalid, inasmuch as the statute governing such documents requires that the name of the person who is insured in the case of death or other event must be inserted in the policy.

It would be doing Mr. Justice Hawkins no injustice to assert that he was evidently prejudiced against these arguments. But they looked very strong, and the Judge has had a heavy, but we think congenial, piece of home-work to do in making law and justice coincide in deciding this action. One by one he parries in his judgment the technical

attacks directed against the plaintiff's action, and the legal grounds on which he bases his decision are, to say the least, so powerfully reasoned as to at least suffice to give the other side pause before they venture to challenge it in a higher court.

FOOD-PRESERVATIVES.

LEGAL decisions in regard to the use of preservatives in food are not satisfactory, and this is doubtless due to the fact that neither the law nor the authorities are definite about them. For example, the Local Government Board have declined to advise that milk to which boric acid has been added is injurious, because they have "no facts within their knowledge" that it is so; but last week a Greenwich magistrate, on the evidence of an analyst, convicted, under the Sale of Food and Drugs Act, a milk-seller for selling such milk. This week we publish a report of a prosecution for the sale of raspberry-wine containing salicylic acid as a preservative, and in consequence of overwhelming evidence as to the innocuousness of the acid the prosecution failed. Regard these cases how we may, they are not satisfactory. It is a matter directly affecting public health, yet the Government Department having charge of such things remains inactive. If boric acid is injurious, the enormous consumption of borated milk must have influenced for the worse the health of many thousands of young children, yet medical men do not speak out to that effect. Salicylic acid is added to beer and sausages, butcher's meat is brushed with sulphurous compounds, butter and cream contain from 1 to 10 per cent. of boric acid, fish are sprinkled with the latter, hams are "cured" with it—in short, preservatives of one kind or another are so widely used that there is scarcely a provision-dealer in the kingdom who would not be perpetually paying penalties under the Sale of Food and Drugs Act if the Greenwich decision were rigidly applied.

So far as London is concerned, we do not view that decision with unmixed satisfaction. Milk is a universal food, and London depends for her supply upon the country districts for hundreds of miles around—even Holland contributing a share of the 115 million gallons which are annually required to satisfy the more than five millions who dwell within the metropolitan area. The consumption of milk in the United Kingdom is 1,417 million gallons annually, but 841 million gallons of this are used in cheese and butter making. We should think that a comparatively small proportion of the milk used *per se* as a food is not preserved in some way; for as soon as milk is exposed to the air it begins to become acid, and when the acidity reaches about 0.25 per cent. of lactic acid (which it does in summer weather within twenty-four hours) it coagulates. Long before this the milk ceases to have the characteristics of "fresh milk." In view, therefore, of the time absorbed in carrying milk from the dairy farms to the consumers in large towns, it is obvious that something in the nature of a preservative must be added. In practice that is so. Bicarbonate of soda is very commonly employed. Its action is not that of an antiseptic; it simply neutralises the lactic acid as it is formed, and thus prevents souring. On the other hand, boric acid, which is as extensively used, prevents the fermentation of the milk-sugar. According to Mr. A. W. Stokes, the quantity of acid required to preserve milk "sweet" for forty hours is 1 in 1,000, or, roughly, 7 grs. per pint. This factor has to be considered in any estimate of the value or otherwise of the addition; it means that each person in London takes at least 2 grs. of boric acid per day if all the milk contains the preservative. But a healthy "bottle-baby" is equal to from two to four

pints of milk per day—i.e., 15 to 30 grs. of boric acid, which one may fairly regard as medicinal quantities. The use of salicylic acid in this connection need not be considered. We have examined a large number of milk-preserved, and do not recall having found salicylic acid in any of them. The fact is that salicylic acid is not so effectual as boric acid—Sulman and Berry say it is useless for milk. Most of the preservatives are boric acid alone, but some contain borax also, which is an unwise and unnecessary addition.

That there are objections to the use of preservatives need not be argued; but what are the advantages? The souring of milk is a true fermentative change, the result of bacillary action; and the formation of lactic acid is accompanied by the production—at least, in the later stages—of Vaughan's tyrotoxin, a highly poisonous albumose. Bicarbonate of soda is useless in preventing this change—it simply hides it—while boric acid is a true retarder of the fermentation. In this light its addition becomes positively advantageous, since infant mortality in the summer months is largely due to diarrhoea, and medical men now recognise that some forms of diarrhoea are due to lactic acid derived from milk, while Dr. A. P. Luff attributes one form to the poisonous action of tyrotoxin formed in the tubes, &c., of feeding-bottles, which are not properly cleaned. From the health point of view, therefore, there is nothing to choose between the unsaleable sour milk, and the saleable alkalinised article. Both contain the substances which are objectionable, so that the whole question is reduced to one of supplying consumers with milk as nearly as possible in the natural condition. This is an economical necessity, hence the custom of using boric acid, between which and scalding (to which consumers object) there is practically no choice. We do not anticipate that the magisterial decision will minimise the use of boric acid—indeed, in view of what has been stated, it is doubtful if that is desirable—and to obviate any commercial or economic hardship it would be advantageous if the Medical Department of the Local Government Board would undertake the thorough investigation of the whole matter, with a view to fixing the limits within which preservatives may be added to milk and other food-stuffs. For what has been said regarding milk and boric acid applies equally to all foods to which preservatives are added. In most instances the additions are not in the nature of adulteration or fraud, but are made for the benefit of the consumer; and, taking this liberal view of it, control seems more desirable than absolute prohibition.

A MECHANICAL COUNCIL.

Does the existing Pharmaceutical Council represent the trade? It may be said that it is not called upon to do so. Well, then, is it fairly representative of the Society for which it acts? Again, it may be said that this is not essential. Strictly speaking, it is not so much a Parliament as a body appointed to execute certain more or less formal functions. This is, to a large extent, the view the members of the Council themselves seem to take of the purpose of their corporate existence. We are by no means disposed to dispute the theoretical accuracy of this assumption, but we may point out that in practice it makes the Council a very uninteresting body. Nothing much drearier than the proceedings on Wednesday last, which we report this week, can well be conceived, though we are willing to accept with all loyalty the creed of the good pharmacist, that the performances were necessary and useful, and were just the limit of what could be necessary and useful.

It may be that we are somewhat difficult to satisfy. Possibly we have in times past commented on the volubility

displayed by some of the members, and it may be that we have not always agreed with the spoken words which have flowed from the Council chamber. We recognise that our punishment may be a just one, but that circumstance does not redeem the reports which we have to publish month by month from the dead level of their dullness. Talking is not the paramount purpose of life, but it happens to be the method by which it has been ordained that the human family shall exchange ideas, and unless it is for the benefit of their diversified ideas, we do not know why twenty-one gentlemen should be collected once a month from all parts of the country for the government of pharmacy. It would not be difficult to select one from amongst them who would put the whole thing through smartly enough, or for that matter Mr. Edison might be asked to send over a machine which would elect professors, raise salaries, and alter by-laws at stated periods by some combination of clockwork and electricity.

We may be told that all the discussion takes place and all the wisdom is displayed in the committees held before and after the Council. That is just what we complain of. We want to partake of that wisdom. Whether it be the Pharmaceutical Council or some other body, the trade wants something in the form of a Parliament, where the topics which interest or concern it are discussed. We should scarcely care to say when the last discussion on a topic of general interest took place publicly in the Council. But we need not go further back than the present time to discover a suitable subject for its wisdom to work upon. The recent chlorodyne case has called for some action on the part of the Pharmaceutical Council. That has been recognised by the members themselves, and we are told that they are preparing to take action. But why have they not had the courage to declare their policy openly and straightforwardly? There is a great deal to be said on both sides of the poisonous proprietary medicine question, and men who occupy a responsible and representative position ought to be prepared to express themselves clearly so as to give reasons for whatever action they may resolve to take. It is all very well to be cautious in the anticipation of a contest. But caution easily degenerates into cowardice, and on a subject like this, which demands prompt and definite treatment, the reticence of those on whom action depends is unfair to the parties to be attacked, and irritating to those who, it is supposed, will benefit by the process.

COMMENTARY.

"EXTRA CREAM."—One can scarcely repress a smile in noticing that Mr. C. L. Field has applied for a patent (No. 21,438) for an improvement in the manufacture of superfatted soaps which consists in adding to soap, made by the cold process, milk, cream, or butter in such quantities that any alkali in excess is saturated and an excess of cream is left.

MEXICAN BELLADONNA.—*Atropa Belladonna* is not indigenous to Mexico, but in 1883 Senor Andrés Almaráz began to cultivate it, as well as other members of the natural order *Solanaceæ*, and he has been quite successful in his endeavour. The last issue of *La Farmacia* which reached us contains a note of an analysis of belladonna-leaves grown in the country, showing that the percentage of atropine was 0.24, equal to 0.645 per cent. in the dried drug. This compares exceedingly well with European-grown belladonna. The note is signed by Juan Hernández, and is dated July, 1888. The reason for the delay in publication does not appear.

ESSENCE OF COFFEE.—In September of last year the Glasgow sanitary inspector had some essences of coffee examined, the result being that the caffeine content came out "very low," and in one case "absurdly low." The percentages were 0.22, 0.18, and 0.15. In this connection it is of interest to record that a French chemist has recently analysed essences made by himself and bought from shops. The former yielded 0.106 and 0.105 per cent. of caffeine, and the latter 0.04 to 0.096 per cent.—that is, less than a tenth of the amount of caffeine contained in the coffee. The inference is that the caffeine is not extracted in the course of manufacture, and the author considers that no rule can be laid down as to what should be considered a normal coffee extract.

POTASSIUM BISULPHATE AS A TARTAR SUBSTITUTE.—Mr. P. Carles communicates a note to the *Journal de Pharmacie et de Chimie* on this subject. It is somewhat belated, considering that ten years at least have elapsed since attention was called to the fact that the bisulphate was being used in this country in place of cream of tartar. The position is still the same. Mr. Carles alludes to the superior acidifying power of the powdered bisulphate as compared with cream of tartar, 100 of the former being equal to 138.2 of the latter. Incidentally he describes an ingenious way of gravimetrically judging the tartar power of the bisulphate. Mix 10 grammes of the sample with 30 c.c. of water. Separately dissolve 20 grammes of neutral tartrate of soda and 2 grammes of tartaric acid in 55 c.c. of water, mix the solutions, and set aside. Most of the potash is precipitated in the course of a quarter of an hour, but it is 20 hours before it is wholly precipitated. Then it may be collected on a filter, washed with a few c.c. of water, and, lastly, with alcohol, and dried. From 12.8 to 13 grammes is generally the weight of the bitartrate obtained, although theory requires 13.8.

PARIS SOCIETY OF PHARMACY.

The usual monthly meeting of this Society took place on Wednesday, July 6. The attendance was smaller than usual. At 2.20 P.M. the President, M. Portes, took the chair, and, after the preliminaries, produced a large black-bordered letter, announcing the

DEATH OF M. VINCENT LABICHE, OF LOUVIERS,

a corresponding member of the Society, at the age of 71. M. Portes referred to him as a worker of great merit, who, without losing sight of the commercial side of his profession, had rendered great service by his scientific researches. Between the years 1844 and 1892 M. Labiche had published thirty-eight works on subjects connected with pharmacy. Amongst the most important may be mentioned his first publication, on "The Extraction of Iodine from Iodine Baths which have been used by Sick People." He took a place in the front rank amongst distinguished French pharmacists of the present century.

An application was read from M. Guillot, an army pharmacist, for admission to the Society as titular member, but it was pointed out that at present there are no vacancies.

M. Planchon then announced that the meeting of the French Association for the Advancement of Sciences would be held at Pau in October next. He suggested that some members of the Society of Pharmacy might like to be present.

A paper was presented by M. Barillé, on behalf of M. Guillot, concerning a new process discovered by the latter for the rapid

ESTIMATION OF CAFFEINE,

regarding which he quoted numerous facts and figures. MM. Portes and Bürker remarked that M. Guillot's conclusions did not agree with the results obtained by

other processes, and some little discussion took place between the three gentlemen. M. Bürker followed with a paper on

THE ANALYSIS OF A BRANDY PREPARED FROM RAISIN-SKINS.

His remarks gave rise to some debate and several questions. Amongst his interlocutors were MM. Prunier and Leger. The latter asked, evidently to the amusement of the other members, "what the taste of the liquid was like?" "Agreeable enough," was the vague reply of M. Bürker. He added that he had often had to analyse samples of brandy made from raisin-skins and had often found it somewhat impure.

A CHAT ABOUT MEDICINAL PLANTS.

M. Planchon, who ever devotes his spare time to the interests of pharmacy, had profited by the recent sunny weather to make an excursion among the market gardeners and growers in the Seine and Oise Department, near Paris, regarding medicinal plants. He had chatted with all sorts and conditions of men occupied in the industry, from the most humble peasants to the largest growers. To give some idea of the importance of the industry, M. Planchon mentioned that some 150 000f. (6,000*l.*) worth of medicinal plants were grown annually in this district, and he was told by a grower of much intelligence and courtesy that sometimes 2,500f. (100*l.*) worth of plants could be produced on a single acre. "Petite absinthe" and "grande absinthe" are raised for the distillers, and peppermint is a very important crop. He spoke likewise of the cultivation of belladonna and borage, giving interesting notes on the subject supplied by the growers themselves. He also touched on the wild medicinal plants of the Department.

A CLAIM FOR PRIORITY.

M. Bürker then read a letter, received from a pharmacist who some time ago introduced a new kind of blister, but had not personally pushed its adoption. This, however, had been done by others, and the blister has been extensively adopted. The inventor now begged that it might be placed on record that he was the first inventor. The Society evidently appreciated the modesty of his request, and the secretary was instructed to acknowledge the receipt of the communication.

THE SOOT OF WOOD-FIRES.

A communication on this subject, by M. Béhal, was the last bit of business. In this the author gave details of the composition of the soot, and the amounts of creosote and phenols in it. This gave rise to some remarks from M. Patien, and a few minutes after the Society adjourned.

REVIEWS

AND

LITERARY NOTES.

Elements of Materia Medica and Therapeutics. By C. E. Armand Semple, B.A., M.B., &c. London, 1892: Longmans, Green & Co. Crown 8vo. Pp. xxxii. + 480, with 440 illustrations. 10s. 6d.

This book is apparently intended for medical students, it being adapted to their requirements, but not to those of pharmaceutical students. The materia medica is arranged under the two great classes, inorganic and organic, according to the method familiarised by Garrod. The number and variety of the illustrations at once challenge attention, but we are greatly disappointed with them, as most of them are mere padding, and cannot possibly be of any assistance to the student. In the organic part most of the cuts represent a flowering branch, but they are generally too small to be of distinctive value. The illustration of cinchona-bark peeling in the forests of Carabaya, and the description of how cinchona is harvested in South America, appear ridiculous in view of the fact that the world's supply of this drug comes

chiefly from Caylon and Java. There is, however, throughout the whole book evident lack of commercial knowledge. While this imperfection may not minimise the utility of the volume for medical purposes, it puts it wholly out of the court as a pharmaceutical text-book. Nor can we speak very favourably of the pharmacopoeial and therapeutical matter; the former is somewhat slovenly done, and the latter is too clearly written for examination purposes.

A Short Text-book of Inorganic Chemistry. By Dr. Hermann Kolbe [English translation]. Third edition. Revised by H. Lloyd Snape, D.Sc., &c. London, 1892: Longmans, Green & Co. Crown 8vo. Pp. xx. + 616. 8s. 6d.

THIS translation of Kolbe's Chemistry was originally written by Professor T. S. Humpidge, of the University College at Aberystwith, and was published in 1884; a second edition was called for in 1888, and now a third has been prepared for the press by Professor Snape. While essentially a text-book for students of inorganic chemistry, "its range being rather more than that required for the Intermediate Science and Preliminary Scientific (M.B.) Examinations of the London University," the book is remarkably free from that slavish adherence to special curricula which, unfortunately, is the characteristic of too many chemistry books. There is little that is strikingly original in the method of exposition—in fact, it strikes us as being akin to that made so familiar to pharmaceutical students in the older editions of "Fownes." The more important fundamental laws and principles of the science are introduced as appendical chapters to those on the elements. For example, "combustion" naturally follows "oxygen" and "hydrogen," and with it about a dozen other chapters on the fundamentals before other elements are approached. There is nothing very novel about this, but the new "appendix" is a feature for which Professor Snape is entitled to warm commendation. This extends to some twenty pages of closely-printed notes on recent advances and discoveries, which are printed in this form to save expense of altering the text. It will be noted that these notes represent additional knowledge, and that the text has been altered wherever new experience has pointed to error. From the book-making point of view the method is excellent, and the same remark deserves to be said of the matter. In fact, the book as a whole is one that has been carefully done, and contains much fuller information regarding the common inorganic compounds, and deals with a larger number of them, than is generally the case with text-books of this size. The illustrations are good, and manufacturing processes are generally described with sufficient lucidity.

BANKRUPTCY REPORTS.

Re GEORGE GOODLIFFE, Rendezvous Street and Dover Road, Folkestone, Pharmaceutical Chemist and Optician.

THE examination of the above bankrupt was held at the Canterbury Bankruptcy Court, on July 1, before the Registrar, Mr. Walter Furley—the Official Receiver, Mr. Worstold Mowll, also being present—and debtor, in answer to questions, said he could not account for there being 120 small debts of 10/- and under. He had lived beyond his means at the commencement of his business career, but during the past two or three years he had curtailed his expenses. His assets were not equal to 10/- in the pound. During the last three years he had not balanced his accounts in order to ascertain his financial position.

Eventually the Registrar adjourned the further hearing of the case until July 22.

Re EDWIN BURGESS, late of 117 High Holborn, Patent-medicine Vendor.

THIS case came before Mr. Registrar Giffard, at the London Bankruptcy Court on Wednesday, it being in the list for the public examination. The receiving order was made on May 31, upon a creditor's petition.

Upon the case being called, Mr. Egerton S. Grey, Assistant Receiver, stated that he was instructed that the debtor was in an imbecile condition, and was totally unable to attend

the Court. In fact, he had not surrendered to the department, nor had he filed any statement of his affairs. The Official Receiver was of opinion that the debtor could not by any possibility recover sufficiently to comply with the requirements of the Court, and under those circumstances he suggested that the examination should be adjourned *sine die*.

No other parties appearing, the learned Registrar made an order in those terms.

Re THE LONDON AND SUBURBAN CO-OPERATIVE STORES (LIMITED).

A GENERAL meeting of the creditors of this company was held on Wednesday last, in London, to receive a report from the Official Receiver and Liquidator upon the present position of the company's affairs, and to pass such resolution thereon as might seem desirable. The company was formed in July, 1890, with a nominal capital of 100,000/-, and came to grief the following March, the accounts showing assets 12,354/- 15s. 3d., to meet unsecured debts of 12,341/- 12s., but a total deficiency of 50,481/- 16s. 9d. to the contributors. Mr. Warley, Assistant-Receiver, presided, and stated that dividends amounting to 12s. 6d. in the pound had, so far, been paid to creditors whose proofs amounted to 12,135/-. The Official Receiver now had a sum of 3,025/- in hand, but 1,600/- of that was claimed by Mr. Oppert, the promoter of the company, in respect of a charge given him over the unpaid calls. Then an allowance of 300/- or 350/- had to be made for law costs incurred to date, and the balance would produce another 1s. 6d. in the pound to the creditors, making the total dividend 14s. in the pound. The Official Receiver had instituted an action against Mr. Oppert and another promoter (Mr. Sheridan), to recover 40,000/- in respect of the shares and cash handed to those gentlemen on the promotion, and although the action was commenced in July last, it had only recently been set down for hearing. Mr. Oppert contested the claim, and had now offered by way of compromise to relinquish his right to the 1,600/- held by the Official Receiver, and to pay the costs of the action to the extent of 250/-. Having regard to the fact that the legal proceedings would be of a costly nature, and would probably have to be defrayed out of the creditors' money, the Official Receiver took the opportunity of consulting them as to the course to be adopted. The meeting, after a lengthy discussion, elected five of the principal creditors to sit as a committee, and confer with the Official Receiver as to the future steps to be taken. The Chairman stated that, in the event of the compromise being effected, the Official Receiver would have sufficient funds in hand to pay to the creditors a further dividend, bringing the total sum up to 16s. or 17s. in the pound.

Re A. W. MARSHALL, Manchester, Chemist and Druggist.

IN the Manchester Bankruptcy Court on Wednesday, Arthur Willis Marshall, chemist and druggist, 160 Upper Brook Street, Manchester, applied for his discharge in bankruptcy.

Mr. Registrar Kay read the report of the Official Receiver (Mr. Dibb), in which it was stated that the receiving order was made on a creditor's petition on July 5, 1891. On December 15, 1891, the bankrupt submitted a statement of his affairs, which showed liabilities expected to rank against the estate for dividend amounting to 1,643/- 12s., but it now appeared that the liabilities only amounted to 1,594/- 12s. 7d., or, omitting a claim by Mrs. Elizabeth Smith, to 319/- 1s. 7d. The assets realised 311/- 2s. 6d., but the bankrupt had handed to the Official Receiver 135/- which he had saved from his earnings subsequent to his bankruptcy, thus making a total realisation of 446/- 2s. 6d. A first dividend of 3s. 0½d. in the pound, had been paid to all the creditors, and a farther dividend of 7s. 3½d. in the pound had been paid to the creditors other than the executors of the late Mrs. Smith. The bankrupt had committed offences under the Bankruptcy Act, inasmuch as he had omitted to keep proper books of account, he had continued to trade after knowing himself to be insolvent, he had contracted the whole of his debts without having at the time of contracting them any reasonable or probable ground of expectation of being able to pay them, and he had brought on

his bankruptcy by rash and hazardous speculation. The bankrupt stated that he commenced business in July, 1880, as a chemist and druggist, in Chester, with 600*l.* lent to him by his father and a friend; that in January, 1881, his shop was destroyed by fire, when he lost about 400*l.*, the stock, &c., having been insufficiently insured. In August, 1881, he purchased a chemist and druggist's shop in Upper Brook Street, Manchester, for 600*l.*, of which 500*l.* represented the stock and fixtures, and 100*l.* the goodwill. His father-in-law lent him 1,000*l.* to pay for the business and to repay the 400*l.* he then owed to his father. The business proved unprofitable, and on January 28, 1884, he executed a deed of assignment for the benefit of his creditors generally, and in the summer of that year went to New York, where he remained for five and a half years, working as a chemist's assistant. He stated that he left the country because he did not like to face his creditors, but that he took nothing with him which ought to have been given up to them, his mother-in-law providing him with the necessary funds. The deficiency shown by his statement of affairs, after deducting the balance due to his late mother-in-law's estate, was more than covered by the difference between the cost price of his stock and fixtures and the amount realised on the sale thereof. The bankrupt's mother-in-law by her will directed that no account should be taken of any advances made to or for any of her children or their husbands, and, consequently the proof of debt tendered by the late Mrs. Smith, and upon which the first dividend of 3*s.* 0*d.* was duly paid, had been expunged by the Court. The bankrupt had not given up any books of account. Some books were found at his late place of business, but these were never balanced, and they did not throw much light on his transactions. The bankrupt was unable to say what his income or profits amounted to while he was in business, or to give any more accurate information as to his household and personal expenditure than that it amounted to about 3*l.* a week. Amongst the bankrupt's books and papers were found two turf guides and betting books and a number of betting cards bearing the name "C. Smith." The fact that the bankrupt remained in America for five and a half years after the date of the receiving order, that he made no communication to the Official Receiver, though he knew from his wife in 1884 of the institution of the bankruptcy proceedings against him, and that a warrant had been issued for his arrest, and that he concealed his whereabouts for nearly two years after his return to England in January, 1890, had rendered a satisfactory investigation of his affairs quite impossible. The betting books appeared to the Official Receiver to indicate gambling to a much larger extent than the bankrupt was now willing to confess to, and he could not help feeling that a considerable proportion of the deficiency shown by the statement of affairs was attributable to this cause, and that the onus of proving the contrary should rest with the bankrupt.

Judge Heywood inquired whether the 135*l.* the bankrupt had paid out of his savings had been paid voluntarily.

Mr. Overend Evans, who appeared for the bankrupt, said he was instructed that it was.

The Official Receiver said that was hardly so. He claimed the money as soon as he heard that the bankrupt had money in his possession.

Mr. Evans said that in that case he had been misinformed. He was proceeding to answer some of the statements in the Official Receiver's report, when

The Judge said he thought the only point to which attention need be directed was the defiance of the bankruptcy law. One had strong suspicions about the betting, but the evidence was not sufficient, and he thought it was hardly worth while going into that.

The Official Receiver showed a bundle of betting tickets, books, &c., but said that he did not wish to carry the matter any further.

Mr. Evans, proceeding, said he was instructed that in June, 1884, when Marshall found that he was not able to carry on the business in Upper Brook Street any longer, he consulted Messrs. Woolley, who, with the exception of Mrs. Smith, were the largest creditors. He owed them at the time about 192*l.* Messrs. Woolley considered the matter with him, and he executed a deed of assignment. It was after that and before the bankruptcy proceedings were

taken that he left for New York. He took none of his assets with him. In New York he worked as assistant to a chemist, and he had a certificate from his employer to show that he behaved himself well and worked hard. At first he could not come over because he had not money to pay his passage back, and afterwards he continued to stay there. When he came to this country, although he did not communicate with the Official Receiver, he made no attempt to conceal his whereabouts, as he went to live in Lancaster, where he was well known. He handed over the whole of his savings to the Official Receiver. Another important fact to be borne in mind was that the 1,000*l.* to which reference was made in the report was really a gift, and the fact that it did not rank against the estate really altered the complexion of many of the suggestions made by the Official Receiver. As to the rash and hazardous speculation, even the figures of the Official Receiver showed that the amount lost in betting must have been insignificant.

The Judge said if it had not been for the bankrupt going away to America, and failing to communicate with the Official Receiver after his return to England, he would have been disposed, considering the time that had elapsed, to grant the discharge at once. He had looked into the various matters, and was not disposed to take a serious view of the offences. He did not see any evidence of dishonesty against the bankrupt. It was true that he had acted foolishly and wrongly in going to America and in remaining away so long, but there was not the smallest reason to suppose that he had made away with any of his assets—in fact, looking at the amount of his assets, it did not appear that he could have concealed any of them. Under the circumstances he granted the discharge, but would suspend the order for two months.

Re JOSHUA JAMES THOMAS, 15 High Street Rhydney, Mon., Chemist and Druggist.

THE summary of the debtor's state of affairs shows gross liabilities amounting to 455*l.* 19*s.* 4*d.*, of which is expected to rank 429*l.* 19*s.* 4*d.* The assets consist of stock-in-trade, 50*l.*; trade fittings, 40*l.*; furniture, 15*l.*, making a total of 105*l.* There is a preferential claim of 26*l.* to be deducted, leaving a deficiency of 350*l.* 19*s.* 4*d.* The debtor states that the cause of his failure is "depression in trade, owing to the stoppage of the Rhydney Iron Works since the beginning of last year, illness during five months of the winter before last, and want of capital." The Official Receiver remarks that the receiving order was made on the debtor's own petition. He started business two-and-a-half years ago with a capital of 30*l.* The only account-book he kept was a ledger. Debtor first became aware of his position six months ago, and has contracted debts with most of his creditors since then, hoping that his business would improve. On June 15, 1891, there was an excess of liabilities over assets of 350*l.* The creditors are:—

	£	s.	d.
Barnett & Sons, Cardiff	25	0	0
Barron, Harveys & Co., London	10	8	10
Franklin Dixon, Highbury, N.	10	0	0
Great Tower Street Tea Company, London ..	30	4	0
Havard, E., Brynmawr	205	0	0
Heath Bros., London	10	7	0
National Bank of Wales, Tredegar	37	0	0
National Mercantile Banking Company, Bristol ..	30	0	0
Sutton & Co., London	10	6	0

Preferential.

Simons, D., Rhydney	26	0	0
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ANTIDIPHThERIN.—This is the name given to a new preparation discovered by a young Berlin chemist, and it is claimed that it is a remedy for diphtheria. Dr. Strasman, a medical expert, who has examined the remedy, states that it contains potassium chlorate and a trace of ferric chloride.

BEATS STAMPS.—The latest craze is collecting matchboxes. In Penang, Europeans and Eurasians, Chinese and natives, men and women, boys and girls, are so much interested in making collections, that the price demanded at present for a box of matches with a rare label on it is between five and ten cents.

Trade Notes.

THE business of the late Mr. W. Parish, at High Street, Cleator Moor, has been taken by Mr. F. B. Bennett, chemist and druggist, 4 Market Place, Whitehaven, and will be carried on in conjunction with that business.

THE directors of Boots (Limited), chemists, druggists, &c., Nottingham, have paid a quarterly interim dividend at the rate of 6 per cent. per annum on the preference shares, and on the ordinary shares at the rate of 10 per cent. per annum, free of income-tax.

NAPOLEON PRICE & CO. have a record as soap-makers and perfumers dating from 1770. But they are evidently resolved that their reputation shall be "up to date" as well as old established. They have asked our attention to a number of their specialties, which show how competent they are to hold their own in a trade which is one of the most keenly contested ones in the country at the present time. Many of their toilet-soaps are well worth the attention of chemists. The latest is their "Velven soap," a name which very happily indicates without describing the properties of this pure and soothing soap. Their "Edelweiss" soap is a delicately-perfumed article of a similar character. They have recently improved the manufacture of their Old Brown Windsor soap by specially desiccating and milling it, though they make it from the same recipe as they used when they made it for King William IV. They make besides a specially softening "Baby" soap, transparent soap in tablets at a tempting price, a carbolic, a coal-tar, and a eucalyptus and pine soap. Their "Edelweiss" perfumery series is likely to acquire a special reputation, as it is an attractive name and is attached to articles of excellent quality. Besides the soap there are "Edelweiss" perfume, toilet-powder, cream, and sachets. Besides their factory at Pentonville, the firm have offices and sample-rooms at 164 Aldersgate Street, and a West-end depôt at 27 Old Bond Street, where they trade as the Royal Perfumery Company.

Personalities.

MR. MICHAEL CARTEIGHE has been elected one of the twenty-two vice-presidents of the Society of Arts.

MR. R. PROCTOR, chemist and druggist, of High Street, Glossop, has been appointed Chairman of the Board of Guardians.

MR. ROBERT GREEN, chemist, Hare Street, Woolwich, was the nominator of Mr. Ben Jones, the Liberal and Labour candidate for the borough of Woolwich this week.

MR. JOHN FIELD, chemist and druggist, who went from Brighton to Calgary, Alberta, N.W.T., about five years ago, and opened a drug-store there, has done so well with the Canadians that he is able to retire from business.

THE business carried on at 7 High Street, Yeovil, by Mr. F. Warren Smith, chemist and druggist, has been taken over by Messrs. Mages & Son, and is now transferred to the Medical Hall, Yeovil, where the combined businesses are carried on.

DR. CHARLES E. SAUNDERS, the third son of Mr. William Saunders, Director of the Experimental Farm at Ottawa (a pharmacist who is well known in England), has received the appointment of Professor of Chemistry and Mineralogy in the Central University of Richmond, Ky.

MR. CHARLES WOOD, chemist, Harleston, Suffolk, has in his possession a nest of white blackbirds (two cocks and one hen bird), which he purchased from a labourer for 5s. The trio have now been out of the nest a fortnight, and are healthy and lively. They are perfectly white, with pink eyes and yellow beaks.

MR. FREDERICK STEARNS, of Detroit, is one of the most indefatigable travellers in the world. He has been sojourning for the past four months at Honolulu, Sandwich Islands, and left there in June for Japan, where he intends to remain

until the autumn. Thence he proposes to visit India and Egypt, returning to Detroit, *via* England, next year about this time. Mr. Stearns travels for pleasure, and writes brilliantly of his impressions abroad to American journals.

NEW COMPANIES.

SURREY FULLER'S EARTH COMPANY (LIMITED).—Capital, 6,000l., in 1l. shares. Object: To carry on business as manufacturers of and dealers in fuller's earth. The first subscribers (who take one share each) are:—A. C. Dyson, King's Villa, Huddersfield; Florence Dyson, same address; Mary E. Dyson, same address; T. Holdsworth, Somerset Road, Huddersfield; Amelia Morley, Nutfield, Surrey; B. E. Ratliffe, Nutfield, Surrey; and Edith J. Ratliffe, Nutfield, Surrey. There shall not be more than three directors, the first being H. Dyson, managing director, his salary as such being 300l. per annum. Qualification, 1,000l. Remuneration of ordinary directors, 50l. each per annum. Registered office, Aspley Place, Huddersfield.

CHEMISTS' ASSOCIATION (LIMITED).—Capital, 50,000l., in 1l. shares. Objects: To carry on the business of wholesale chemists and druggists, druggists' sundriesmen, and patent-medicine manufacturers and vendors, &c., and to acquire the goodwill of the business now carried on at Curtain Road, Great Eastern Street, London, under the style of Thompson, Walters, Hole & Co. (Limited). The first subscribers (who take one share each) are:—Martin Magor, 8 and 126 Corporation Street, Birmingham, pharmaceutical chemist; W. Corbett, Bromsgrove, chemist; R. Walton, Maidenhead, pharmaceutical chemist; William Hole, Curtain Road, E.C., sundriesman; Theodore Fawcett, 36 Cambridge Road, Lee, Kent, chemist; Leonard Walters, Curtain Road, E.C., sundriesman; and Richard Paull, Grove Hill Road, Handsworth, Birmingham, traveller. There shall not be more than seven nor less than four directors, and the first are M. Magor, W. Corbett, R. Walton, G. G. B. Woolley, L. Walters, and W. Hole. Qualification, 25l.; remuneration, 400l. per annum, divisible.

CROSSE & BLACKWELL (LIMITED).—With a capital of 568,700l., divided into 2,000 5l. per cent. cumulative preference shares of 100l. each, 3,607 ordinary "A" shares of 100l. each, and 80 "B" shares of 100l. each, to carry out the purchase from Messrs. T. F. Blackwell and E. M. Crosse of the businesses and assets belonging to the vendors as a going concern, as from January 1, 1892, at the price of 568,000l.; and to carry on the business of preserved provision manufacturers and other allied businesses carried on at London and elsewhere by Messrs. T. F. Blackwell and E. M. Crosse under the style or firm of "Crosse & Blackwell." The first subscribers (who take one share each) are:—T. F. Blackwell, 21 Soho Square; E. M. Crosse, 21 Soho Square; S. J. Blackwell, Brookshill, Harrow Weald; F. S. Blackwell, Brookshill, Harrow Weald; G. P. Jones, 36 Heathfield Gardens, Turnham Green; S. Beaumish, 61 Dartmouth Park Road, N.W.; F. B. Bell, 18 Soho Square. The number of directors, including the managing directors, is not to be less than three nor more than eight; the first being Messrs. T. F. Blackwell, E. M. Crosse, S. J. Blackwell, and F. B. Bell. Mr. T. F. Blackwell is chairman and managing director, with a remuneration of 4,000l. per annum; Mr. E. M. Crosse, vice-chairman and managing director, with a remuneration of 3,000l. per annum; and Mr. F. B. Bell, managing director, with a remuneration of 1,000l. per annum. Each of the said Messrs. T. F. Blackwell, E. M. Crosse, and S. J. Blackwell may nominate one of his sons to be a managing director, at 1,000l. per annum, provided that before nomination the said son shall have allotted to him not less than 100 fully-paid shares, and also provided that the said salary shall be deducted from the salary of the father. Messrs. T. F. Blackwell and E. M. Crosse, after resigning the office of managing director, and while still holding 500 ordinary shares, may appoint themselves, or any competent person, to the office of director, at a salary of 500l. per annum; qualification of ordinary director, 1,000l.; remuneration, 105l. each per annum. Registered office, 24 Soho Square, W.C.

Practical Notes and Formula.

MENTHOL GELATINE

is a preparation made by dissolving 5 parts of gelatine in 65 parts of water, and adding to the warm mixture a solution of 3 parts of menthol in 25 parts by weight of glycerine.

CHILBLAIN TABLET.

	Parts
Benzoated lard	6
Yellow wax	3
Resin, white	1
Camphor	1
Oil of cajuput	1

Melt the resin and wax, add the lard; then, when somewhat cooled, add the camphor in powder, and last the cajuput oil.—*Pharm. Record.*

HORSE BLISTER.

The following is extra strong, and gives great satisfaction:—

Yellow wax	3 oz.
Lard	4 "
Corrosive sublimate	4 drachms
Cantharides	2 oz.
Oil of turpentine	4 drachms
Barbadoes tar	4 "

Melt the wax and lard, and stir in the other ingredients, first reducing the corr. sublimate to impalpable powder.

—*Phar. Record.*

SULPHUR-PHOSPHORUS PASTE.

MR. HANS HEINE, of Beyroul, communicates the following formula for this vermin-killing paste to the *Pharmaceutische Zeitung*:—

	Parts
Phosphorus	22
Sublimed sulphur	5
Water, enough to cover	

Pour upon these as much bisulphide of carbon as will dissolve the sulphur and phosphorus, then add:—

	Parts
Powdered mustard	8
Water	300
Powdered sugar	240
Wheat meal	360

Mix.

CHLORODYNE.

Ext. belladonnæ fld.	2 drachms
Morphiæ sulph.	1 "
Ol. menthæ pip.	40 drops
Tinct. zingiberis	5 oz.
Ext. glycyrrh. fld.	1 "
Ext. cannab. ind. fld.	1 "
S.V.R.	1 "
Chloroform	2 "
Glycerini ad	20 fld. oz.

Warm about 4 oz. of the glycerine and dissolve the morphia in it, and add the extracts of belladonna and liquorice. Mix the chloroform, tincture of ginger, Indian hemp, oil of peppermint, and S.V.R. all in order named. Mix the two solutions, and then make up to 20 fluid ounces with glycerine.

—*Phar. Record.*

SPIRIT OF NITROUS ETHER AND ASTRINGENT DRUGS.

It is well known that spirit of nitrous ether, when mixed with infusion of bearberry (*uva ursi*) forms an explosive mixture. With a view of determining to what extent this decomposition could be attributed to the action of tannic acid, Mr. L. C. Fink has made about forty experiments and reports the results to the *Bulletin of Pharmacy*. Combinations of spirit of nitre with fluid extracts of *uva ursi*, *buchu*, *matico*, and *cranesbill* (all of which contain a considerable proportion of tannin), fluid extract of gentian (which contains gentio-tannic acid, a substance allied to tannin), solution of tannic acid, and solution of gallic acid, all eliminated a volume of gas, heavily charged with some nitrous compound, in sufficient volume to blow out the corks or burst the bottles. Combinations of spirit of nitre with fluid

extracts of cubeb and calumba (which are comparatively free from tannin), solutions of quinine and morphine, and glycerine, failed to develop any signs of similar decomposition. A second corresponding series of samples carefully neutralised, and a third series acidulated, indicated that the reaction of the mixture had no bearing on the result. It seems safe to say, therefore, that spirit of nitre should not be dispensed in combination with drugs containing tannin.

COUGH-DROPS.

Boneset (herb)	1 oz.
Horehound (herb)	1 "
Irish moss	1 1/2 "
Powdered extract of liquorice	1 1/2 "
" charcoal, a sufficiency to colour	
Oil of anise	1/2 "
" wintergreen	1/2 "
Sugar	20 lbs.

Steep the boneset, horehound, and Irish moss in about 4 pints of water, and strain; then add the charcoal. To the decoction of herbs add sufficient water to make the necessary amount required to cook 20 lbs. of sugar (Most confectioners use 7 or 8 pints of water.) Put in the sugar and a heaped teaspoonful of cream of tartar. Cook it up to 330°. Then pour on a slab, work in the extract of liquorice, and lastly the oils. Then cut up.

QUININE HAIR-POMADE.

Sulphate of quinine	gr. xv.
Citric acid	gr. xxiv.
Eau de Cologne	5j.

Dissolve and add:—

Simple ointment	3xij.
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Mix and add the following solution:—

Tannic acid	3ss.
Orange-flower water	5iss.
Otto of rose	gtt. v.
Oil of neroli	gtt. v.
Essential oil of almonds	gtt. ij.

—*Est. Zeit. f. Phar.*

BEARD-COLOURING.

Der Seifenfabrikant recommends this to be made by melting 20 parts of soft soap on a water-bath, and adding to it 1 part of gum arabic dissolved in 2 parts of water. The colouring for brown is fine mahogany-brown with a little drop-black, and the latter alone for black. The colouring must be finely comminuted, and well mixed with the basis. The preparation may be perfumed with a sufficiency of the following mixture after it cools:—

	Parts
French geranium oil	20
Oil of bergamot	10
Oil of cloves	15
Cedar-wood oil	2

Form the colouring into sticks about 3 in. long, and 3/4 in. in diameter.

DISPENSING LIQUIDS IN CAPSULES.

THE use of empty gelatin capsules is far commoner in the States than in England, and it comes to be a question with dispensers how they be filled in the most expeditious way. Mr. C. Carroll Meyer, at a recent meeting of the Philadelphia Pharmaceutical Association, described an ingenious method of his own for filling and then sealing them. His appliance consists of a shallow wooden frame or box containing different sizes of three different series of holes, of one dozen each, for the insertion of the empty capsules. These are to be first measured as to capacity, and then filled by means of a pipette, if drops are indicated, or by a minim-glass if minims are ordered. After filling the capsules they are sealed by moistening the inside of the caps with warm water by means of a camel's-hair pencil, and placing them on the capsules, giving them a rotary twist. Care must be used in filling not to get any of the liquid on the outer side of the capsule. If so, the capsule must be thrown away and a new one used. A capsule slightly larger in volume than required should always be employed. As far as possible a minim measure should be used. Mr. Geo. Graham stated that he preferred mucilage of tragacanth to warm water for sealing capsules, as the results were more prompt and the sealing more perfect.

AMERICAN IDEAS IN WINDOW-DRESSING.

A WINDOW-DRESSING ENTHUSIAST, writing to the *Pharmaceutical Era*, says that if you happen to be one who has not faith in window-dressing, just give your windows a thorough cleaning out for once, put in some half-dozen articles on which you feel you can give as good value as anyone, and see if you don't within a week sell more of the displayed articles than you ever did out of the store any one month before.

Put the prices on in good prominent figures; it does not follow that because you put the price on it must be a cut price. Many think this, but there is no greater mistake. Make the price reasonable; no one but yourself knows how much you are making on the article, and the public see from your price-ticket that you are not ashamed of what you ask for the goods.

If you have made an extra good purchase and want to run the goods off rapidly the show-window and price-tickets will do the business. On many sundries a close lot of some article can be handled rapidly, and so long as the article has not a standard fixed price, the trade in general would not suffer from selling out at a bargain; place on cut price if you please to call it such.

Mr. Claus W. Bogel, of New Orleans, writing to the same journal, says:—"I arranged a camera and bottle of castor-oil in our window some weeks ago, with a sign bearing the requisite inscription [the easiest way of taking it], but I failed to impress the passers-by with my idea. They would stop, gaze, scratch their heads, and the more curious, or, perhaps, I should say, more ambitious, ones, after thinking awhile, would enter the store and inquire:—'What in the world do you mean by putting such a thing in your window?'"

"Previously I had very artistically (as I thought) upset a small keg of Epsom salts and a keg of sulphur in the window, having a bright red Canton flannel bottom, making a beautiful combination of colours—the sulphate of magnesia crystals, and the bright yellow-powdered sulphur, looking very bright against the flaring red flannel. But when several friends came in at different times to impart to me the information that 'two barrels of something had fallen over in the window, and that they came in to tell me about it, so that I might pick the stuff up before it got spoiled,' I concluded to stick, for awhile, anyhow, or until the public would become more appreciative, to the traditional sponge, soap, toothbrush, &c., display.

"One display with which I succeeded very nicely in 'catching the eyes' of the people, was this:—I draped the window entirely in black cloth, and made a shelf in the centre, also draped with black. On this shelf I placed balls of gum opium, bottles of laudanum, paregoric, morphine, &c., and after all the poisons I placed a large skull, which stood hideously grinning. A sign bore the inscription:—'Opium and what we make from it.' Throughout the window were dispersed old graduates, funnels, mortars and pestles, percolators, spatulas, &c. It was amusing to watch the expression on some of the faces of the onlookers, especially the negroes. Many of them would say, 'Yas, dat's jess so; dey sho kin make skelikins out'en you wif dat stuff.'

"I intend soon to display in our window our method of making simple syrup by percolation. The field for window-display is a large one."

In Prince Edward Island there is a chemist who, on Oddfellows' natal day, made an attractive window. The three links of the Order were well arranged in bottles of furniture-polish, while the initials F. L. T. were composed of tins of Aspinall's enamel of delicate shade.

The *New England Druggist* tells of some curious window-attractions. In the window of Alden's drug store, Bangor, Me., is a representation of a section of the Banger and Aroostook railroad. Senna-leaves form the banks on each side of the track, the sleepers and telegraph-poles are stick liquorice, the rails are insulated wires and on one side a deer gazes wonderingly at an approaching train. Pine-trees and a pile of card-wood add to the realistic effect of the picture. In Fowler's drug store, in the same town, a dog made from sponges with blankets of chamomise-skin, is ridden by a boy made of the same articles. A gentleman in Rhode Island,

who is building himself a new house, is letting everybody in the town know it by showing a model of the house in a druggist's window. Three young crocodiles, sent from Jacksonville, Fla., are on exhibition in the window of Morgan's drug store, Milford, Mass. In the window of Coe's drug store, Birmingham, Ct., is displayed the record of all the business done in the way of filling prescriptions by this house since it was established, in 1845, by S. P. and J. B. Tomlinson. This display consists of nothing more than the books in which the prescriptions are copied or pasted. There is a whole window full and the numbers run from 1 to 127,312. The first prescription recorded was written March 31, 1845, by Dr. Ambrose Beardsley. William C. Bristol was the next man to own the store, and his copy of prescription was dated April 6, 1850. Dr. A. Beardsley next owned the store, and then G. H. Corlies came into possession. He began pasting the prescriptions in the books just as the physicians had written them. George H. Peck was the next owner, and then Peck & Coe; and finally Mr. Coe purchased Mr. Peck's interest, and now owns the business. These books, some old and musty, some new, attract much attention. Sometimes references have to be made as far back as No. 2,000. There is an old key in the window that once fitted the lock on the front door, but the lock has been changed. There is also a picture of Dr. Ambrose Beardsley. The display causes many curious observers to stop and examine the books.

HUNYADI JANOS WATER.

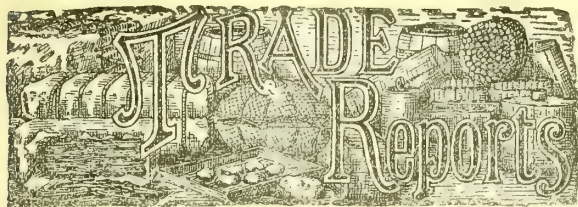
At a recent meeting of the Scotch section of the Society of Chemical Industry, Mr. J. W. Biggart read a paper on the composition of Hunyadi Janos water. The point of the paper, so far as the author and the meeting were concerned, was the assertion by the author that the water contains magnesium chloride. He proved this by treating the dried saline residue with absolute alcohol, which dissolved the chlorides present, but left the sulphates as an insoluble residue. The alcoholic extract was next evaporated to dryness (also in the air) and the residual mass taken up as before. The acids and bases present in this solution were then estimated, and they were found to be practically pure magnesian chloride. The bases found were soda, magnesia, lime, and a trace of iron; the acidulous radicles silica, sulphuric acid, chlorine, and a trace of phosphoric acid. The meeting was not convinced that Mr. Biggart proved his case as regards magnesium chloride, it being pointed out that chemical changes might take place on the addition of absolute alcohol. Apart from that, however, there is a notable difference between Mr. Biggart's results and those hitherto recorded. We contrast them with Liebig's, the following being the quantities from 16 oz. of water:—

	Liebig	Biggart
Magnesium sulphate ..	122.8	121.98
Sodium sulphate ..	122.1	190.00
Potassium sulphate ..	0.65	—
Calcium sulphate ..	—	3.11
Sodium chloride ..	9.98	—
Sodium bicarbonate ..	6.11	—
Calcium carbonate ..	7.16	—
Iron and alumina oxide ..	0.03	trace
Silica ..	0.008	0.92
Carbonic acid free and combined	4.40	—

It will be seen that while Mr. Biggart's analysis agrees with Liebig's in regard to magnesium sulphate, he has found 50 per cent. more sodium sulphate, which is rather an important observation. The absence of potassium and carbonic acid is also notable. Analyses hitherto published have given these as constituents, but Mr. Biggart states that he examined for potash and could not find it.

Mr. E. C. C. Stanford, who occupied the chair at the meeting, said that he had used Hunyadi Janos water in his own house for many years, but had always prepared it himself, and never could find any difference from the natural water.

TO CLARIFY WHISKY OR SPIRIT.—Add 8 oz. of new milk to each gallon, shake, and filter.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., July 6.

The London Markets.

Zanzibar Cloves.

In the February report to the Foreign Office which is just to hand, the export list shows that of 3,721 packages of cloves sent out in that month, 3,682 came to Europe, 2,650 went to America, 2,331 to Aden, Bombay and Muscat, and 58 to African ports.

The Cinchona Syndicate.

Baron von Rosenberg has communicated his views on the cinchona syndicate to the *Madras Times*. Judging from what he read of the proposal in *THE CHEMIST AND DRUGGIST*, the Baron is of the opinion that "the plan seems very fair. It is based on an increase of gain (shall I say a reduction of loss?) to the planter, by united action, combined with a regulating and holding policy of the consignees. One great danger to a successful combination is the fact that every planter in turn may say, 'Oh, I won't join the Association. I'll let the other Johnnies join and force up the prices, and then I'll sell my bark at the higher unit, without having to give the traders any share!' But he should remember that if other planters think as he thinks, no combination can be arrived at. It is therefore to his interest as well as his duty to his confrères to join. It is also quite possible to bring considerable pressure upon such intending deserters of the good cause through the Planters' Associations which exist in most districts. The success or otherwise of the scheme naturally depends, in the first place, on the verdict of the Java planters. If they accept it, no Southern India or Ceylon planter should hesitate to join."

ACID (CITRIC).—Present price, 1s. 5d. to 1s. 5½d. The following are the statistics for the first six months of the year, compared with the figures for the corresponding periods of the three years previous:—Imports of lemon-juice into London: 1889, 2,992 pipes; 1890, 2,679 pipes; 1891, 1,397 pipes; 1892, 1,375 pipes. Exports of citric acid from London: 1889, 2,893 cwts.; 1890, 3,219 cwts.; 1891, 2,597 cwts.; 1892, 4,070 cwts.

ACID (PYROGALLIC) in 1-oz. bottles 14s. per lb. (Scherer's).

COCAINE is reported lower—that is, the finest price in London is 18s. 6d. per oz. in 25-oz. tins, or 8½d. per gramme in 1-gramme tubes. It is reported that several parcels of crude cocaine have arrived at Hamburg, and are held at firm rates.

CODEINE has fallen a little—11s. 6d. being the best quotation.

GENTIAN-ROOT.—There is a stronger demand for this bitter on the Continent, and the supplies are short. As far as we can learn our own market is not yet affected.

HYDROQUINONE (PURE) is offered at 9s. 6d. per lb., with easier and dearer rates according to the nature of the package.

IODINE.—On the principle apparently that "the wish is father to the thought," a New York paper gave publicity on Friday last to a report that the Chilean Chamber of Deputies has passed a Bill imposing duties on nitrate of soda and iodine. This statement was quickly contradicted by the manager of the Bank of Tarapacá and London (Limited), who cabled specially to Chili and was informed that no change has been made. The rumour had no time to affect the iodine market (if that had been possible). The price of crude iodine remains at 12s. 9d., and a shilling more for the resublimed.

MAGNESIA.—The makers of "Pattinson's" brand at present quote the following prices for 1-cwt. cases:—*Mag. carb. levis*, 40s.; *pond.*, 8d. per lb.; *Mag. calc. levis*, 1s. 10d. (1-lb. bottles); *pond.*, 2s. *Fluid magnesia*, 15s. per cwt. in carboys.

MERCURIALS.—Although quicksilver has been steadily rising for some weeks, the salts and preparations of the metal are offered at the old rates—viz., corrosive sublimate, 2s. 6d.; calomel, 2s. 9½d.; hydrarg. c. cretâ, 1s.; red and yellow oxides, 3s.; strong ointment, 1s. 9d.; vermilion, 2s. 6d. Small parcels of the metal are quoted at 2s. 5d. per lb.

OILS (ESSENTIAL).—It is possible to buy a number of oils at easier rates just now, owing to the prospective new crop arrivals. Anise, bergamot, caraway, dill, fennel, juniper, melissa, savin, sage, and the peel oils are all offered at easier rates; but these are not, it will be understood, new oils, although some of them are all the better for age.

OPIUM.—"Last year at this period," writes a Smyrna correspondent on June 30, "our crop of opium was estimated at 8,000 baskets, but eventually the outturn did not exceed 7,200, and the prices then ruling were from 7s. 6d. to 7s. 9d. per lb. f.o.b. for manufacturing talequale. These rates, with slight variations, were well maintained up to the middle of January of the present year, after which a decline set in, and the demand, which hitherto had been rather limited, became much more active, and large purchases were effected not only for the American but also for other consuming markets. Prices notwithstanding continued to recede as the prospects for the growing crop were very favourable, and manufacturing opium was gradually run down to the equivalent of 6s. 3d. to 6s. 4d. for current talequale, 6s. 7d. to 6s. 9d. for Yerli ditto, and 6s. 6d. for old selected, at which rates our market has remained stationary for the last three months; but should the crop turn out 8,000 to 9,000 baskets, as is now expected, we will in all probability see a further decline of about 3d. per lb. when the campaign opens for the new drug. In the lower districts the yield will be one-third less than the last, but in the northern, where the harvesting has now commenced, the outturn according to present appearances will considerably exceed last year's production. The old stock remaining on hand, including the interior and the Constantinople market, is estimated at 1,300 baskets, against 1,400 on June 30 last, and the arrivals at Smyrna to date of the new drug amount to 161, against 333 at the same time last year."

ORRIS-ROOT.—The holders of old stock at Leghorn, in their anxiety to realise, have been dropping prices considerably, so that 110s. 6d. per cwt. is now asked for the best Florentine.

PILOCARPINE and its salts are quoted at higher rates. The nitrate, for example, is 24s. per oz. in gramme tubes. This is, of course, due to the scarcity of jaborandi-leaves.

SALICIN now sells at 5s. 6d. per lb. in bulk quantities.

SHELLAC.—In consumptive business there has been more inquiry this week, and some transactions with continental buyers have been recorded at former rates. The auctions on Tuesday were exceedingly dull in tone, and the business done was unimportant in amount and interest.

TEA.—China market: As was to be expected, new Monings and scented Capers have not met with an enthusiastic reception. A few parcels of new season's Moning sold the first day, and in sale two lots sold at 6½d. and 7½d., while

1s. 10d. was refused privately for a fine tea. On the Thursday, however, a quotation of 5d. per lb. was made in public sale, and a good deal changed hands at 5½d. per lb. Capers have received even a more chilling welcome, and a public sale quotation of 4½d. per lb. quite beats the record for new tea, though compared with old tea it was still ¾d. too much. Assams and Ceylons alike are very quiet, the Assam terminal quotation for the later months having dropped to 6½d., the lowest ever seen. The elections have, of course, interfered very much with business this week.

TURPENTINE.—The low prices which are at present ruling for spirits of turpentine are solely due to over-production. There has been a large influx of capital and labour into the industry in the States, and the consequence is that the market has been glutted with the spirits, and prices have touched a lower figure than we have seen for a decade. The latest advices from the States are to the effect that an attempt is being made to limit the production of the spirits, and for this purpose a circular has been addressed to the producers of Georgia, South Carolina, Florida, and Alabama, asking them to agree to suspend operations at once to the extent of 20 per cent. The price for American spirits in London is 22s. 3d.

Thursday's Market News.

42 CANNON STREET, E.C., July 7.

ACONITE.—Twenty bags of *Japanese* root, good sound quality, were bought in at 23s.

AJOWAN-SEEDS.—These are known in the Lane as thyme-seeds. Twenty-nine bags of a nice lot were bought in at 14s.

ALBUMEN.—Forty cases pale amber, partly dark, were exposed, but did not sell.

ALOES.—Very little of 257 cases exposed met with favour. Two hundred boxes of extremely ordinary *Curaçao* were taken out, nor was a bid asked for 15 cases of East Indian, while of 42 *Cape* only 16 were sold. Of these, eight were dull brown, part spongy and soft, and a part overheated, 17s. to 20s.; good bright and hard, 23s. to 25s.

AMBERGRIS.—Three lots, amounting to 21¼ oz., were exposed, and the only offer was for the worst at 29s. The broker wanted 30s., and it was bought in at that, the rest figuring at 5½ and 6½.

ANISEED.—A parcel of 30 bags *Russian* was bought in at 20s.

ANNATTO-SEED.—Eight packages were offered, mostly bright, but failed to find a purchaser at 2d.

ASPHALTUM.—A hundred cases of *Syrian* bought in at 24s. and 27s. 6d., there being no bidders.

BALSAM (PERUVIAN).—Four 28-lb. tins of a somewhat thin balsam, but of good odour and with a trifling sediment, were bought in at 4s. 9d.

BUCHU.—Of 9 bales nice bright and crisp short leaf two sold at 3½d. and 3¾d. Seven equally good bought in at 4½d.

BUSH-LEAVES, otherwise known as *Cape* tea (a brown leaf like long unserrated buchu), was exposed on Wednesday, but afterwards taken out.

CALABAR BEANS.—Five bags, part of a parcel of which some has previously sold and some is reserved, offered and refused. The price is 4d., but anything between that and 3d. would buy the lot.

CALUMBA.—Eighty-seven packages of small and inferior bought in at 45s., and 10 good small to bold, of bright colour, was priced at 65s., but did not sell.

CAMPOR.—The only offer consisted of five cases of *Japanese* refined in cakes about 9 inches square and ¾ inch thick, somewhat dry. One case was reported to be sold privately—the price did not transpire—the remainder being bought in.

CANELLA ALBA.—For 2 bales of broken irregular quill a bid of 27s. was made, but 30s. was wanted.

CANTHARIDES.—Four cases of ordinary Chinese did not meet with demand.

CARDAMOMS.—The offerings consisted of 96 cases, of which three-fourths sold at the following rates:—*Ceylon*: Fair dull Mysore, 1s. 3d. to 1s. 6d.; slightly paler and heavier, 1s. 7d. to 1s. 9d.; extra bold pale, 2s. to 2s. 3d. *Malabar* kinds met with fair competition, and sold at 1s. 7d. to 1s. 10d. for small brown to fair pale. *Mangalore*: 14 cases were bought in at 2s. 4d. to 2s. 6d. *Malabar*: Part of 11 cases sold at 1s. 4d. to 1s. 5d. for medium pale. *Seeds*: A small supply of fair quality, was all sold at 1s. 5d. for pale sort, and 1s. 8d. for good brown.

CASCARA SAGRADA.—Good thin bark, unquilled, 50 bales bought in at 26s., a bid of 24s. being refused.

CASCARILLA.—Fifteen bales offered and sold. Small and chippy, 18s.; good bright and bold, 20s. 6d. and 21s.

CASSIA FISTULA.—One case was offered of bold part-broken fruit, and bought in at 15s.

CHAMOMILE-FLOWERS.—Twenty-nine bales all bought in, 17 at 40s., and the remainder at 42s.

CINCHONA.—Five bales of fine mossy broken quill, *Crown* bark, sold at 3½d.; 7 bales *Carthagena*, thick flat, sold at 3d. to 4½d.; bold flat yellow, partly damaged, sold at 1s. and 1s. 1d.; two cases of red bark, fair dusty to bold quill, sold at 1½d. to 2½d. 50 serons of *Calisaya*, fine bright flat, first-class damaged, sold at 9d.

CIVET.—There was a small supply of fair stuff, but no business at the price—6s. 9d.

DEXTRIN.—144 bags pale brown powder and dark granular ditto were bought in—for the better sort at 16s., and the seconds at 10s.

DRAGON'S BLOOD.—There was nothing of much importance offered, and the 16 cases of broken medium bright were bought in.

COCA-LEAVES.—Of 50 bales good new leaves, mostly bright, 30 bought in at 1s. 6d., and the remainder at 2s. A bale of dark leaves also bought in at 7d.

COCCULUS INDICUS.—There was an ample supply of over 200 cases, which were all bought in except 30, which sold at from 8s. to 9s.

COLOCYNTH.—There was a large supply but little demand, and 1 case of broken *Turkey* sold at 1s.

CUBEBS.—Eighteen cases were offered at auction, and bought in at 18l. 10s.

CUMIN-SEED met with no demand, 78 cases being either taken out or bought in.

CUTTLE-FISH.—Of 30 cases fine white small, partly broken, only 10 sold at 2½d.

DILL-SEED.—Forty bags good clean, full-flavoured, bought in at 13s.

GALANGAL.—Forty bales were offered without reserve. It was very feeble, and did not get the length of the sale-room.

GALLS.—*Turkey*: There was a large supply, but only one lot of three bags fair green sold at 61s.

GAMBOGE.—The supply consisted of 29 cases, of which only about an eighth was gamboge of the first quality. Good bright pipe, unblocked, sold at 14l. 2s. 6d. to 14l. 5s.; fair seconds, 13l. 2s. 6d. to 13l. 10s.; dull and blocky thirds, 11l. 10s. to 12l. 2s. 6d.; low pickings, 10l. 2s. 6d.

GELATINE.—Thirty-two bales of medium amber, thin, were offered, but bought in, there being no bid.

GUARANA.—One case good clean was bought in at 4s.

GUM ACCROIDES.—Nine bags of dark and heavy lump taken out.

GUM ARABIC.—Business was done at the following rates: Good clean and white *Aden*, in tears, 92s. 6d. to 93s.; a small supply of broken *Cape* tear, free from dust, 57s. 6d. There was a fair supply of *Cape*, *East Indian*, and *Australian* gum; but offers met with no response, and it was bought in.

GUM ASAFETIDA.—Three cases of fine soft with pinkish streaks sold at 60s. subject.

GUM BENZOIN.—There was a fair show of this gum-resin at the Crutched Friars warehouse, but with the exception of a few cases of Siam, it was all of indifferent quality. The following were the kinds and quantities offered, and the selling prices:—*Siam*: 18 cases good crumbly and almondy block bought in at 10*l.* 10*s.*, and 13 cases woody, stony, and dull at 70*s.*; dusty sold at 6*l.* 12*s.* 6*d.* *Sumatra*: 9 cases medium seconds bought in at 6*l.* 5*s.*; of 30 cases, slightly almondy in centre and false packed at surface, 8 sold at 56*s.*, and 22 at prices ranging from 5*l.* 7*s.* 6*d.* to 7*l.*; 9 cases good seconds bought in at 6*l.* 5*s.* *Palembang*: 15 cases bought in at 42*s.* 6*d.*

GUM ELEMI.—There was no demand at all for some lots of exceedingly fine pasty white, which was bought in at 55*s.*, but 20 cases of stuff going by the name, which was dry, dark, and woody, but odourless, sold at 2*s.* 3*d.* to 3*s.*

GUM GUAIACUM.—Several cases of good bold creamy tears, partly block, sold for 46*s.*; the rest was of an inferior quality, and was bought in.

GUM MASTIC.—Fourteen cases fine picked white tears did not sell.

GUM MYRRH.—A fair supply on show, and part was sold—viz., good sorts, 85*s.* to 87*s.* 6*d.*

GUM OLIBANUM.—Two cases of small clean tears sold at 14*s.*

GUM SANDARAC.—A small supply of good bold and clear tears sold at 80*s.* subject. There is an ample supply of this gum to be obtained privately at prices ranging from 60*s.* to 80*s.*

GUM THUS.—A hundred barrels of nice clean pieces were all bought in at 8*s.*

GUM TRAGACANTH.—Some fine colourless flake is on the market, but did not meet with bidders to-day.

HAMAMELIS-LEAVES.—Two bales offered and bought in at 2*d.*

HELLEBORE (GREEN).—Four bales of good root offered and taken back again.

HONEY.—*Australian* honey was in small supply, and the only part sold consisted of 41 cases of darkish-coloured fluid, fermenting and dirty, for which 15*s.* and 15*s.* 6*d.* was paid. *Chilian*, partly crystallised, sold at 22*s.* 6*d.*; and *Jamaica* at the following rates:—Part crystallised and unfiltered, 24*s.* to 27*s.*; bright uncrystallised, 25*s.* (a lot in 2-lb. bottles selling at 3*s.* a dozen); good white crystallised at 30*s.* and 32*s.* 6*d.*

INDIAN HEMP (GUAZA).—A lot in nice bundles sold at 8½*d.* About 100 packages of loose dusty dull to bright and stalky bought in.

IPECACUANHA.—The supply was mostly damaged, and sold at from 6*d.* to 10*d.* per lb. lower. The prices obtained ranged from 5*s.* 10*d.* to 7*s.* 2*d.*

IRISH MOSS.—A nice clean lot, consisting of 5 bales, was bought in at 20*s.*

KOLA.—There was a good supply of rather inferior nut, which met with no demand.

LOOFAHS.—There are several lots of these on sale in Mincing Lane just now; and at to-day's auctions one broker put up 9 bales, comprising about 25,000 pieces. All were clean, and ready for retail, and were bought in at the following rates:—Large, 1½*d.*; medium, ¾*d.*; and small, ¼*d.* each.

MUSK.—Four tins Tonquin sold at 34*s.* to 60*s.*, according to quality. Amongst these were three tins of small thick skin, with thin and partly blue under-skin, which fetched 47*s.* Most of the pods were bought in, and grain did not sell.

NUX VOMICA.—The supply of 318 packages was all bought in at from 8*s.* 6*d.* to 11*s.*

OIL (CASTOR).—East Indian and Italian in small supply, but no bids.

OIL OF CAJUPUT.—Nine cases of good bright green unclouded oil taken out.

OIL OF CAMPHOR.—Fifty cases pale Japanese sold at 18*s.*

OIL OF CASSIA.—Ten cases clear "unworked" bought in at 3*s.* 5*d.*

OIL OF CINNAMON.—Eight cases of pale to dark amber of good aroma bought in at 2*d.*

OIL OF EUCALYPTUS.—One case slightly citronella-scented sold at 2*s.*

OIL OF GERANIUM.—In auction 6 tons of dark-green *Spanish* had to retire.

OIL OF LEMON.—A turpentine sample from a single case was bought in at 9*s.* per lb.

OIL OF PETIT GRAIN.—One case bought in at 1*s.*

OIL OF ROSEMARY.—Three cases of *Spanish* distilled oil bought in at 1*s.* 8*d.* per lb.

OIL OF THYME.—A supply of three cases, apparently from the same distillers as the rosemary came from, bought in at 3*s.* per lb.

OIL OF YLANG-YLANG.—For 12 and 17½ oz. bottles an offer of 12*s.* 6*d.* was refused.

RHUBARB.—Canton: Extra bold, with even-coloured coat, and pinkish marble fracture, 5 bought in at 1*s.* 6*d.*, and 3 at 1*s.* 7*d.*; fair to good bold, coat slightly uneven, and fracture partly rusty *Round*, all bought in at prices from 1*s.* 6*d.* to 1*s.* 8*d.*; *Flat*, 4 bought in at 1*s.* 8*d.*, and 1 at 1*s.* 9*d.*; *Flat and round* sold at 1*s.*, a better lot bought in at 1*s.* 8*d.*; rough, flat, part trimmed, flat, high-dried, unequal fracture, 13 sold at 9½*d.*; 1 lot at 9¼*d.*; seconds sold 1 at 9¼*d.*, the remainder at 9½*d.*; fine trimmed round firsts sold at 1*s.* 4*d.*; small and very compact, 1 bought in at 2*s.*; seconds and thirds sold at 1*s.* 4*d.*, and 1 at 1*s.* 5*d.*; small to bold clean compact and good fracture, round, 2 sold at 1*s.* 5*d.* and 1*s.* 6*d.*; remainder bought in at from 1*s.* 6*d.* to, for better sorts, 3*s.* 2*d.* and 3*s.* 6*d.* *Shensi* sold without reserve at 1*s.* 3*d.*

SAFFRON.—Only one firm offered this article, the stock having previously been exposed. It consisted of 26 parcels, of which 2 only were slightly inferior. They were all bought in.

SANDALWOOD.—Over 300 packages offered, but none sold.

SARSAPARILLA.—Part sold; fine bright *Jamaica* at 1*s.* to 1*s.* 3½*d.*; fair to dull, 9½*d.* and 10*d.*; Lima, 9½*d.*, and one sold at 11*d.*; Honduras bought in at 1*s.* 6*d.*

SENNA.—The supply was only of moderate quality, and sold at the following rates: *Tinnevely*—small dark leaves, ½*d.* to 1*d.*; fair ordinary, 2*d.* to 2½*d.*; good bold green leaf, at 5½*d.* to 5½*d.*; a few bales of extra fine and bold sold at 6*d.* and 6½*d.* *Alexandrian*—only one package out of 53 sold; this was dull brown and green mixed, the price being 7½*d.* subject.

SOY.—Thirty-five casks were exposed without reserve, and sold at 1*s.* 1½*d.*

TAMARINDS.—Good bright, whole pod, and fresh (June import), sold at 7*s.* to 8*s.* 6*d.*

TONQUIN BEANS.—Four cases fair black beans bought in at 1*s.* 6*d.* Two lots sold at from 7*d.* to 9*d.*; one good lot, dark good hard bean, at 1*s.* 8*d.*

VANILLA.—The show this week was very good indeed, some samples being exceptionally fine, and the prices obtained were from 1*s.* to 1*s.* 6*d.* higher for good crystallised; 4¼ to 7½ inch, 7*s.* 6*d.* to 12*s.* 6*d.*; and for fine 7 to 8½ inch 12*s.* 9*d.* to 14*s.* were the principal offers obtained.

WAX (BEES) was in large supply, but Australian, Mogadore, and Zanzibar met with no demand. Sales were effected of other varieties at the following rates:—*Italian* fine yellow, strained, sold privately, and for part of it at the sale 7*l.* 5*s.* was refused. *Jamaica*, medium to fair bright mixed, 6*l.* 10*s.* to 7*l.*; good bright yellow, part dark, 6*l.* 17*s.* 6*d.* to 7*l.* 5*s.* Some fine lots of hard clear fracture, of equal colour, sold at 7*l.* 7*s.* 6*d.* The supply of Madagascar was over 1,000 packages, but only a few of these sold at 5*l.* 10*s.* to 5*l.* 15*s.*

WAX (CARNAUBA).—No business done, although there was a fair supply.

WAX (JAPAN).—Thirty cases fine clear block sold at 39*s.*

THE LIVERPOOL MARKET.

BALSAM COPAIBA.—All the cheap lots have been cleared off the market, and now 1s. 9d. is quoted for Maranham.

CASTOR OIL.—There is considerably more inquiry forward. Recent arrivals have been cleared from the quay, and price is now firm for good seconds Calcutta at $2\frac{9}{16}$ d. to $2\frac{1}{2}$ d.; first press French continue to sell at $2\frac{1}{16}$ d.

CHILIAN HONEY.—There has been a better inquiry for shipment abroad, and values are firm at 24s. 6d. for Pile 3 to 35s. for Pile X.

GRAINS OF PARADISE have been selling at 24s. for good bright, recent arrivals.

KOLA-NUTS.—At auction a bid of 1d. was refused, and 6d. was asked for fine dry.

PARA TONQUIN BEANS.—The cheap parcels that were offering have been taken off the market chiefly for export.

TURPENTINE is again lower, and 23s. has found sellers.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, July 5.

ALL the analyses for the cinchona-bark sale here on July 14 have now been published. The manufacturing bark contains about 13 tons sulphate of quinine, or 4.44 per cent. on the average. About 5 tons contain 1-2, 32 tons 2-3, 85 tons 3-4, 97 tons 4-5, 38 tons 5-6, 7 tons 6-7, 6 tons 7-8, and 24 tons 8-9 per cent. of sulphate of quinine.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday evening.

FIFTEEN chests have been sold since last report at a decline of 2d. per lb.

THE ROSE CROP OF 1892.

(From a Bulgarian Correspondent.)

THE writer of the following letter is the gentleman who previously wrote on June 1 (THE CHEMIST AND DRUGGIST, June 11, page 846):—

The distillation of the rose harvest lasted a little over three weeks. It is now over, and full reports have already been collected and received as to the yield of this year's crop. As reported before, about the middle of April, the crop was damaged by frost to the extent of 25 to 30 per cent. This damage was considerably retrieved by the plentiful rainfalls which followed the frost, and the crop would have again been a pretty large one had the weather been favourable during the first half of the distillation of the harvest. Unfortunately, the weather during that time was extremely hot and dry, and the result was that while the hot weather lasted we had to use as many as 300 to 320 lbs. of rose-flowers to make 1 oz. of otto of rose, instead of 180 to 190 lbs. as usual. This, of course, reduced the crop enormously, and at one time it was feared that the crop would prove the poorest since 1881. Happily, during the second half of the harvest the weather was all that could be desired: it rained almost every day, and this favourable turn in the weather benefited the crop to the extent of at least 10,000 to 12,000 oz.

In regard to quality, this year's crop is, beyond all doubt, one of the very finest we have had for many a year. The odour is exceptionally rich and strong. This is principally due to the fact that in the production of this year's otto at least 25 per cent. more rose-flowers have been used. In regard to quantity, the crop is considerably less than any of the previous five years. It is estimated variously from

45,000 to 60,000 oz. As far as we have been able to check the produce of every place in the rose district, we feel quite positive that the total yield of this year's crop is fully 55,000 oz. This renders it about 30 to 35 per cent. less than last year's.

Concerning the price of the new crop, nothing definite can yet be said. Judging from the smallness of the crop, and the excellence of its quality, it should bring from 10 to 20 per cent. more than last year's otto. Such an increase in the price would be both reasonable and proper, for the new otto, compared with the old stock in hand, is worth at least 25 per cent. more. Much, however, will depend on the action of the dealers and exporters here, as well as on the action of the importers and consumers abroad. Unfortunately, most of the dealers and exporters here have a pretty fair stock of old otto, and as they desire to dispose of it at a high price, and before the new crop could be placed for sale in the West, they have been trying ever since the fall of the frost, and are still trying, to do their utmost (1) to cause a panic abroad, and thus force the consumers to buy their old stock at a high figure, and (2) to raise meantime as much as possible the claims of the small producers, either by purchasing small lots at a very high figure, or by assuring them, directly or indirectly, that the new crop will sell at 40 to 50 per cent. dearer. Only three weeks ago one of these houses bought a lot of otto "1891" at 26s. per oz.; another has been declaring through its agents everywhere in the rose district that they will be buying the new crop at 30s. to 32s. per oz.; while a third has been openly asserting that the foreign markets have nothing to do with the fixing of the price here, and that importers and consumers could be made to pay, "bon gré, mal gré," any price the producers and exporters here chose to demand.

Of course all this has not only raised the expectations and claims of all holders of otto in our market, but it has also made them believe that this year's price will indeed be 40 to 50 per cent. higher, and that is what most of them expect and ask at present. Had there been no large stock in hand from last and previous crops, the decrease in the yield this season, being so considerable, would have rightly caused serious anxiety abroad, and prices might have immediately gone 30 to 40 per cent. higher. There is, however, as much old stock as 30,000 oz. in the hands of some producers, jobbers, exporters, and dealers, which, added to this year's crop, brings the total stock of otto for sale to about 85,000 oz.—a figure nearly as large as last year's crop. Part of this old stock may have been disposed of in the course of this month for immediate use, but the very fact of its existence being known and acted upon seems to have made, so far, a rose-famine an impossibility. It is also through the influence of this fact that the Western markets have remained inactive and prices stationary.

The firmness of our market, being artificial, cannot remain for more than two months. It could be maintained a little longer only if all the exporting houses here shared the same views, and backed it. Two of the most influential houses are against it, and if these act jointly and wisely, they will surely prevent any rise in the price of the new crop beyond 10 to 15 per cent. above last year's price. Much depends also upon the sort of influence the Western markets bring to bear on this market. If the principal markets abroad continue to remain inactive for another month or two, if the leading importers and dealers take up at present only as much otto as is absolutely required for their immediate demand, if the consumers refuse to buy the old otto at a high figure, decline to accept any very high quotations for the new crop, and, above all, content themselves with placing such orders as are necessary only for their monthly use, the present firmness in our market will give way even in less than a month, the claims of the producers and the expectations of some exporters will come down at least 25 per cent., and the pure otto of this year's make—65° to 66° F.—will be from 22s. to 24s. per oz. The later the importers and consumers abroad place their orders with their suppliers here, the less courage they will have to sustain the present firmness of our market, consequently the weaker our market will become, and the cheaper the new rose will be sold.

As yet no sales of any importance have been effected here. The few purchases made last week were only in small villages, producing otto from 100 oz. to 400 oz., and the price paid ranges from 23s. to 24s. 6d. per oz. The

best and largest localities, however, which produce the finest and the most otto, still continue to ask and to expect for their otto as much as 30s. and 32s. per oz. The other day one of the exporting houses here interested in the rise of the price offered in one of these localities as much as 27s. per oz., but the offer was refused. This offer may have been only a sort of test to see whether the two leading houses, opposed to any too considerable rise in the price, will follow suit. They have not, and, what is better still, their assertion "that in the determination of the price of otto it is not the supply alone that should be taken into account, but the demand from abroad as well," which, undoubtedly, is a correct one, is daily gaining ground. Therefore, the firmness of our market can now be sustained only by a corresponding firmness of the Western markets.

Kizanlik, Bulgaria,

June 27.

BRITISH AND FOREIGN CONSULS' REPORTS.

ARGENTINE REPUBLIC.

It is not surprising that Consul Bridgett, writing from Buenos Ayres, in April, should devote the principal part of his report to the financial condition of the Republic; but in referring to the high duties which are imposed on spirituous liquors, he calls attention to the evils of sophistication thereby caused. He says that the printing of false labels is a trade in itself, and is paid for at three times the price of other labels. Atkinson's and other perfumes are largely imitated, and entering a shop to buy the former's "eau de Cologne," he has been asked if he wanted the genuine article or that made on the spot. Side by side the bottles are indistinguishable, and the excuse offered is that unless the bottle bears the words "London" or "Paris," no one would buy. There is a law protecting trade-marks, but it is defective, and great difficulty arises in obtaining a conviction, and holders of European protected marks have given the matter up as hopeless. A change in the law was promised last session of Congress, but it was shelved, and will likely be brought forward again this year. A new industry seems likely to develop itself in the shipment of salt obtained from natural surface-deposits in the south of the province of Buenos Ayres. The promoters are sanguine of success, and are doing their best to open up a foreign and home trade.

BRITISH WEST INDIES.

Arrowroot. Next to cocoa, arrowroot is the most important product of the West Indian island of St. Vincent. In 1890, 20,847 barrels of it, valued at 31,270l., were exported. In 1891 the market price rose considerably, so that, although only 17,591 barrels were shipped, the value remained almost stationary—viz., 31,095l.

CHINA.

Formosa Camphor. In 1891 there was a slight improvement in the export of camphor from Tainan, in Southern Formosa. It reached 2,524 cwt., as against 904 cwt. in 1890. The Government monopoly is said to be abolished, but the heavy tax imposed in order to defray the expenses of frontier defence prevents foreigners here competing successfully with the Government farm. The expenses of transport, too, are heavier than in the north of the island, and it does not seem probable that there will be any great development of the camphor trade here unless the tax is abolished or reduced. There has been very little trouble from savages in the centre of the island; indeed, there has only been one instance of the savages attacking camphor-distillers during the last five years. In the north, apparently, the distillers have not been so fortunate.

Opium. Mr. Pelham Warren gives an intelligent criticism of the condition of the opium business at Tainan, in his report dated March 29, 1892. The import of Indian opium is on the decrease, and Persian is increasing. One reason for the decrease of the Indian is because it is much dearer than Persian; another is the uncertainty in regard to the weight of the drug contained in each chest.

There ought to be 120 catties, but the weight varies from 116 to 110. Although Persian opium is not so good as Indian, it is being steadily improved to suit Chinese taste. After it has been once smoked, the ashes, if the opium is of the best quality, can be used mixed with fresh opium some six or seven times, whereas Benares cannot be thus used more than once. The smoke of Persian opium is milder, and, in consequence, more suited to a tropical climate, and this opium can be smoked alone. Unless some change is made in the Indian opium to suit popular taste there is no chance of its recovering the position in the Formosa markets that it once held. Native opium is imported from Tung-an, about twenty miles from Amoy, and also from Wenchow and Taichow, and is, as a rule, smuggled in junks. It is made into square cakes, and, being very soft, is usually squeezed into large bamboo pipes, and thus evades search.

FRENCH COLONIES.

Tahiti Vanilla. The following quantities of vanilla have been exported from Tahiti during the last two years:—1891, 24,585 lbs. (value, 7,456l.); 1890, 15,882 lbs. (3,248l.).

MONACO.

Mr. Vice-Consul Smith states that there is here a small factory for distilling perfumes, but the trade is very limited, the quantity exported in 1891 being valued at 1,400l.

PERSIA.

The city of Meshed, in Eastern Persia, is the centre of a district in which British and Russian traders are now struggling for supremacy. Much of the trade of the province of Khorassan (of which Meshed is the capital) is still done through Bombay and the Persian Gulf ports—about 280,000l. worth of goods coming that way in 1890-91, against 210,000l. worth imported from Russian territory by way of the Transcaspian Railway, Astrabad, and Merv, or Bokhara. The trade with Afghanistan is dwindling to nothing, as the Ameer is doing everything he can to stop the importation of Indian goods through his dominions.

The number of British traders in Meshed during the year 1890-91 was 11. The number is slowly on the increase. They are all men of substance, doing a large trade with Bokhara and Samarkand, and other places in Russian Central Asia.

Drugs. The chief articles of export were 47,316l. worth of opium, which goes mostly to China, though the Russians are also beginning to take a great deal, and 5,612l. worth of asafoetida, all of which goes to India.

Gum Tragacanth. Gum tragacanth was scarce throughout Persia in 1891, hence only a small quantity was brought to market at Burudjird during the summer, and prices were high. Arrivals also took place from the Bakhtiari Mountains, but the gum from those parts is all of second and third quality, nearly all of which is bought by Persian merchants and forwarded to Kermanshab.

The Opium Industry. The opium industry, although introduced into Persia at a relatively recent date, has largely developed within recent years. In 1870 there were exported 800 boxes of 150 lbs. each, and now the production is distributed in the following manner:—Ispahan, 2,300 boxes; Yard, 4,000; Kerman, 500; Khorassan, 3,000; Chiraz, 1,200; Kermanshab, 300; Burudjird, 500; other districts, 1,200; total, 13,000 boxes, of which 3,000 are consumed in the country. The product is prepared differently according as it is destined for Europe or China. That which is sent to Europe is as pure as possible; each box contains 90 kilos. of opium. For China, on the contrary, raw opium is sent which has to bear an addition of from 10 to 12 per cent. of oil; consignments are made in boxes weighing 62 kilos., and in blocks of 1 kilog. each. The Hotz and Ziegler houses, as well as the Commercial Company of the Persian Gulf, at Ispahan, analyse their opium and guarantee 10 per cent. of morphine; certain consignments yield 12 per cent. and even more. Persian opium is, therefore, by no means inferior to the Turkish product of the same quality.

PINEAPPLE JUICE has, like rennet, the power of curdling milk.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Assistants and Employers.

SIR,—I have read with interest the letters of assistants on their grievances, and as I have been an assistant in all sorts of "sits," but am now an employer, perhaps my experience as one who has tried both sides of the question might prove beneficial. While I was an employé, most of the indoor "sits" were very comfortable, for, taking everything into consideration, they are equal to any outdoor "sit," where cooking was wretched and lodgings indifferent. It was my own fault if I did not succeed in making friends of the "boss" and his family. I tried to be agreeable, and usually left my situation more as a friend than a servant. I suppose the secret was "I tried to please them, and they in turn tried to please me." Now that I am an employer, my experience of assistants is not wholly a pleasant one. No one could complain of the hours, as we work by turns, so that no one exceeds 62 hours per week, including Sunday duty; but the indifferent assistants recommended by blazing testimonials is not satisfactory. When they come to actual work, even qualified ones, beyond the mere mechanical mixture or pill, know not how to divide a bottle, make a suppository, coat or silver a pill, and many, beyond the stereotyped "ter in die," know little or nothing of Latin. All this is not conducive to a "boss's" good temper. In the house I have tried to make my assistants feel at home, and in no sense whatever to feel "interloper"-like. I have tried to cultivate in them knowledge for its own sake, looked upon and treated them as gentlemen of equal standing as myself, done everything that I thought would interest them or make them comfortable, but only in one instance have I succeeded in establishing an agreeable footing. In other cases all advances have been sullenly repelled. My humble opinion is that if assistants would only study their employers' interest more while with them, employers, as a rule, would do much to forward the interests of their employés. An assistant loses nothing in being agreeable, civil, and obliging. PHARM. (65/5)

SIR,—Why cannot a qualified chemists' managers' and assistants' union be formed? Are the difficulties greater than in any other undertaking? If so, why not conquer them by daring to attempt them? What a reproach to us that mechanics and labourers have unions regulating the working hours and the payment for same! A subscription of 2s. 6d. per quarter should be sufficient to ensure the working of such a scheme. We have been asleep for years. Now is the time to shake off this lethargy.

I think I am not mistaken that THE CHEMIST AND DRUGGIST will lend its powerful influence, and help to promote the formation of such a desirable object.

Yours truly,

NIL DESPERANDUM. (65/17.)

SIR,—If chemists' assistants would look at their work in a different light, it strikes me there would be less grumbling. A stranger, looking at some of the letters sent to you, would think that chemists were a grabbing, selfish lot. I have not had very much experience with them; but from what I have had

I find that they are a very easy-going, well-informed set of men, and I don't think anybody sympathises more with chemists' assistants than chemists themselves, and if the assistants would settle down, and not think so much of their alleged grievances, they would get along better. No one who wishes to do well for himself and his master would wish for less than 74 or 75 hours a week. The "stores" assistant, who finishes, say, at 7.30, is not a very respectable being; he must do something to pass the night away, and "constitutionals" get dry, and surely this time is better spent in a shop than in a public-house or music-hall. Of course, an assistants' union would do a deal of good with regard to increasing wages and stopping "stores" dispensing at cutting rates; but if it tended to bring short hours, it would transform the respectable chemists' assistants to a low, degraded, theatre-going body. "A Brother Pill" says we can arrange our own time when we have our own business; but we cannot. "When in Rome, do as Rome does"; and so with pharmacy. When "Brother Pill" starts business, he will, most likely, be as eager to do a good trade as anyone.

Your obedient servant,

ÆNEAS. (65/22.)

SIR,—Kindly allow me to support the ideas set forth in the excellent letter of "Anti-Slavery." I am very glad to find that at last the worm has turned, and that chemists' assistants are coming to the conclusion that they are made of the same stuff as assistants in other trades, and cannot see why they should be worked half as long again. The remedy is in our own hands. Let us form a union, the first object of which should be to limit the hours of duty to 72 per week. At present we are driven to the stores by the terrible hours we have to work. Masters should see this and help us; and especially would I appeal to those of them who already work their assistants under 72 hours.

Will not one of the large London pharmacy schools take up the matter and receive the names of those willing to join? I can promise to get nearly every assistant in this town to become a member, and other towns would soon follow their example.

Yours, &c,

Cheltenham.

OVERWORKED. (65/60.)

66/15. *Unitas* writes at considerable length to "direct the attention of qualified chemists' managers and assistants to the desirability of forming an association for the protection of their interests. It is surely time something were done in this direction, when we see the unqualified obtaining situations as chemists' managers and assistants, whilst the qualified, who have spent time, trouble and money in order to prove themselves capable of filling these positions, in numerous instances are passed by, often for the sake of an extra shilling or so per week."

The Patent medicine Trade.

SIR,—As bearing on the correspondence which has lately sprung up in connection with "patents," it may be of service to state that, some two years since, I was asked to make inquiries as to the position of the patent trade in my locality and the feeling that existed in reference to some combined action for remedying the deplorable state into which that portion of our business had fallen. I consequently called upon twelve chemists, and, amongst other things, asked each to about what proportion he thought he had diverted the sale of patents from the former channel to articles put up by himself. Of this number three did not put up anything; the other nine estimated the influence from 5 per cent., the lowest, to 50 per cent., each of the two highest. Of the nine three informed me they had determined not to play into the hands of "cutters," by either distributing bills or exhibiting cards other than those relating to their own preparations.

If action is to be done towards restoring the past state of things, I opine it can only be effected through a combined action of the makers with the wholesale houses, the latter engaging not to supply any but chemists, and not even those unless they will agree only to sell at stated prices—say, no reduction beyond price of stamp, and *pro rata* when stamp is not required. If a few of the wholesale dealers will not agree to this, let chemists determine if they will supply

"cutters," they shall live by them, and refuse to deal, even at a little inconvenience to themselves, either with or in any thing they either supply or make, which, I apprehend, would soon show in which direction their best interests lay.

If chemists, as a body, have not this amount of interest in their own affairs, and will not to this extent help themselves, it only remains for them to grumble and starve on, as many are now doing.

Yours respectfully,
Chatham. RUSTICUS. (65/23)

Growing Hemlock.

SIR,—Will you permit me to correct one statement which appears in your article on "A Visit to the Hitchin Drug-farm" in your last issue? In speaking of hemlock I am reported to have said that the best time for collecting is before flowering, and that the plant grows two or three feet after flowering and before running to seed. I have little doubt that hemlock is really at its best in respect to alkaloidal value when the fruit begins to form; but in order to obtain the green-coloured extract which many buyers prefer, it is necessary to select a time when the chlorophyll is most fully developed, and which usually occurs at an earlier stage in its growth. The plants mentioned in your article are now about ten feet in height and are in flower. I do not imagine that much further growth would take place before running to seed.

Yours faithfully,
Hitchin, July 4. F. RANSOM.

Insane Root.

SIR,—I translate the following from article in Lemery's "Traité Universel des Drogues Simples," 1723:—

"*Nux Insana, al affectu prunula insana Nantes Belgæ*
—Clusius; *Prunæ Insana Spinosa*—J. Bank.

"This is a fruit growing in the Indies, about the size of a small plum, round, enclosed in a hard shell. This nut contains an ashen-coloured almond. The tree itself resembles a cherry-tree, and bears long, narrow leaves like those of the peach. If the fruit is eaten, it causes a swimming in the head and delirium, which often continues for three or four days. It also frequently brings on *cours de ventre*."

I trust that will not shock Mr. C. C. Bell's Bœtian modesty.

I am unable to find any reference to this fruit in the English Herbals; but Hehn ("Wanderings of Plants and Animals"), in an article on plums, mentions an "Indian nut" having similar properties, but gives no specific means for its identification.

Yours truly,
Stapleford, July 5. J. HENRY BELL.

The Half-price Closed-letter Company (Limited).

SIR,—From letters we have received from two correspondents, we gather that you have been gratuitously going out of your way to tender legal advice to defaulting debenture-shareholders in our company which may lead them into useless expense and worry. But as you had not the common courtesy to send us a copy of your issues containing such, we do not know nor care what you have said, and until you condescend to do so, we shall simply ignore your effusions as the tattle of irresponsible "penny-a-liners." We think it would be better to confine yourself to discussing the composition of pills and boluses, and let the law alone.

Yours faithfully,
For the Half-price Closed-letter Company (Limited),
ALFRED BAABA & Co,
Managers.

[We are sorry that a copy of last week's issue was not sent to this company. It was an oversight. We sent one on receipt of the above, though we may observe that it is not asked for in the prettiest of ways.]

DISPENSING NOTES

Polypharmacy.

A Scotch subscriber (64/13) sends us a recent prescription for a cough-mixture, which contains sixteen ingredients,

beginning with syrup of codeine and ending with dec. sarsae co. There are such things as acet. potas., Fellows's syrup, tinct. mur. ferri, and mist. salinae between. The prescriber ought to have been compelled to take the stuff himself.

Spanish Prescription, July 2, 1892.

D. de	Gr.	Give of	Grammes
		White essence (solution) of	
Esencia blanca de quina	6	quinine	6
Tintura de canela	10	Tincture of cinnamon ..	10
Vino rojo	100	Red wine	100
Agua pura	500	Pure water	500
Prendor de fluido 30 gr.		To take of the mixture 30 grammes	

Brighton, July 6.

C. S. ASHTON.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY pp. 151-9.

63/13. *Rea* asks: "Is it legal for unregistered persons to use the title 'drug stores' or 'company'? As I understand the word 'drug' to be an abbreviation of the word 'druggist,' and a druggist, we conclude, must be a chemist; hence a man calling his business a drug store or company should be registered according to the Act."

[The Act protects certain titles which it specifies. Drug-store is not one of these. It is therefore not illegal for an unregistered person to use it. The Act is construed strictly—that is to say, it means exactly what it says, and nothing more. In reply to your other question, medicines sold as homeopathic are just as much affected by the Act as any others. But in any prosecution it would be necessary to prove the presence of the poison, and in some of the dilutions this might be difficult.]

64/16 *C. J. C.*—The law requires that sales of Easton's syrup should be registered. We do not know that all chemists obey the Act so strictly as this.

65/16. *Lindum*.—A person who has passed the Minor examination is a licentiate of the Pharmaceutical Society, and we do not know why he may not so describe himself. The only possible legal objection could be that the assumption of such a title implied that the user was a member of the Society, which would render him liable to a penalty of 5*l.* under section 12 of the Pharmacy Act, 1852; but we should not think this could be established.

66/18. *Wales*.—We know of no law under which a chemist can be compelled to supply, for payment, a copy of a prescription which he has dispensed. An inspector, officer, or constable duly authorised to obtain a sample of a drug under the Sale of Food and Drugs Act, may demand to be supplied with any drug a chemist may have on sale. In case of refusal the chemist is liable to a penalty of 10*l.* Under no other circumstances can a chemist be compelled to sell any of his articles unless he choose to do so.

67/24. *John*.—Cod-liver oil is a medicinal drug, and when used in combination with malt extract the preparation is one that may be rendered liable to duty (see Alpe, pp. 60, 61). Your preparation is recommended by the handbill in such a manner as to make it chargeable, and, moreover, you call it a "medicine."

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

62/41. *Machine*.—Please refer to the advertisements of makers of sifting-apparatus in this journal and the DIARY.

63/27. *Tenax*.—Obviously if gelatine capsules are to be made impermeable to dilute nitromuriatic acid, they must also be unaffected by the gastric juice. It would be ridiculous to administer medicine on that principle, and probably the prescriber will see the point if you put it gently to him. The gelatine basis is dissolved or softened by aqueous liquids.

63/55. *Crinis*.—We do not consider it wise to assist you in embarking on minor surgery. Your master, who knows you better than we do, apparently thinks it dangerous to entrust you with this branch of his business, and it is better for you to stick to the B.P. and other pharmaceutical work. The surgical you will get soon enough.

63/68. *Query*.—Directions for cleaning steel engravings. —See THE CHEMIST AND DRUGGIST, October 31, 1891, page 662.

60/70. *W. S.*—You must use dried Epsom salts for your Health Salt. Try the following formula:—

Bicarbonate of sodium	3xvj.
Tartaric acid	3xivss.
Dried sulphate of magnesium	3ij.
Sugar	3viiiiss.

Dry the ingredients separately and mix.

You may use more sugar if you wish a sweeter preparation.

62/33. *J. J. S.*—The Bottle used by Naturalists for killing insects contains cyanide of potash and plaster of Paris. Break down a quarter of an ounce or so of the cyanide, put it in a wide-mouthed 1-lb. bottle, and pour on it a paste of plaster of Paris to the depth of an inch. Allow to set.

62/40. *General Election*.—A good Tannin Gargle such as your name is thus made:—

Glycerin. acid. tannic.	3ss.
Inf. rosæ acid. ad	3viii.

M.

60/30. *Pickle*.—For Sauce Formulæ see THE CHEMIST AND DRUGGIST, August 29, 1891, page 352, and February 27, 1892, page 323.

62/44. *Manicure*.—You will find the descriptive note on manicure in our issue of November 1, 1890, page 628.

62/39. *Violet*.—Violet Powder is a mixture of starch 7 parts and finely-sifted orris-powder 1 part. For cheap retail it may be perfumed with bergamot and a little eucalyptus oil.

63/19. *Lincoln*.—We are sorry we cannot advise you how to get rid of the bats which infest the church. Perhaps

someone who reads this reply, and who has personal experience in the matter, will communicate with us.

61/69. *H. H. Read*.—(1) For beginners in qualitative analysis Slatter's "Outlines" (Murby, 2s. 6d.) is good, and Valentine's book (Churchill, 7s. 6d.) is also very popular. Pharmaceutical students generally stick to Attfield. We do not recommend or prescribe any special book for the Students' Corner, but you cannot be wrong with any of those named. (2) There is the Ontario College of Pharmacy at Toronto, and if you look through the volumes of THE CHEMIST AND DRUGGIST for the past five years, you will find much information about it. We are not aware of any scholarships being attached to it. Address the Dean of the College, Professor A. Y. Scott.

54/25. *Boots*.—Your Polish for the Bottoms of Boots is of such a nature we would not like to venture a formula. Roughly speaking, it seems to contain curd soap, and a little beeswax emulsionised. The suspended powder is either very fine calamine or French chalk coloured with it; perfumed with oil of sassafras. Working on these lines you should be able to hit a similar preparation.

55/42. *Zingiberis*.—Ginger-beer Powder to retail in 3d. and 4d. packets.—See July 18, 1891, page 98, and further detail, July 25, page 165. Note that the quantities of rice and sugar are immaterial, and serve principally to make bulk, so as to give plenty for the money. Direct to float the yeast on pieces of toast, &c.

53/15. *Carboy*.—To Colour Carboys which have become Cracked, your best method will be to make a varnish of Canada balsam in spirit or ether; you may add some mastic, but not essential, and colour with any of the aniline colours. A little to be poured into the carboy, and moved about until all the inside is uniformly coated. Your carboy must be thoroughly clean and dry.

55/3. *G. R.*—Liquor Euonymin.—Use the young bark of the euonymus, and prepare according to the process given in the Pharmacopœia for ext. cocæ liq. See also the B.P.C. Formulary.

64/65. *Hydrokinone*.—Formula for Backing Dry Plates.—Obtain a small quantity of burnt sienna, ground in water, put into a small earthenware dish, add a teaspoonful of glycerine and a little gum. Mix thoroughly with enough methylated spirit to bring it to the consistency of cream, coat the plates with a flat camel-hair brush, and dry in a light-tight cupboard. The red paint may be easily removed before development with a damp cloth or sponge. Negative-varnish.—Dissolve 2 oz. shellac in 20 oz. of methylated spirit. When dissolved add 1 oz. of finely-powdered chalk or whiting to clear it. Allow to stand for a couple of days; if not then perfectly clear, filter through paper. We should advise you to buy your negative-varnish ready-made.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

63/22. Maker of spongio-piline.

64/46. Address of makers (Wright & Holdsworth) of Naldire's dog-soap.

66/19. Paramuthion: formula or where obtainable?

PALM HONEY.—The centre of the Chilian palm-honey industry is at "Palmas de Ocoa." The improvement in the methods of extraction has increased the annual production to about 100,000 piastres. In one of the warehouses of the Palmas de Ocoa establishment there are at present 200,000 tins containing about 200,000 litres of honey.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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AUSTRALASIA.

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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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PUBLISHER'S NOTICE.

FIRMS who wish to produce a good effect in our Summer Number (July 30) should, without delay, set about preparing a handsome circular for insertion therein. We give the best distribution of druggists' circulars which can possibly be obtained, and we do it at a fraction of the cost of postage. This is the way to advertise profitably. Particulars will be supplied by the Publisher.

The Summer Number of 1892 will be of notable interest and attractiveness, and it is high time that circulars and advertisements should be arranged for it.

The immediate attention of firms who wish to make an effective display in that issue is requested.

Summary.

WE report several excursions of the employes of London wholesale firms last Saturday.

WE note some of the most recent photographic novelties, and give a report of the Edinburgh Convention.

OUR French correspondent rather disputes the alarming reports of cholera in Paris, which have been prominent in the daily papers lately.

IN an editorial note we give some particulars regarding the Keeley drink-cure, which the Society for the Study of Inebriety has condemned.

CORRESPONDENCE on the Assistants' Union topic continues. This is resolving itself into a protest against the long hours in pharmaceutical businesses.

A CORRESPONDENT gives us his views on the use of food-preservatives, and agrees with our opinion that the matter is one which Government authorities should settle.

WE print the questions given at the Preliminary and Jacob Bell Scholarships Examinations held in Great Britain on Tuesday; also those for the Irish Licence Examination.

WITH this week we begin reports of the second half-yearly competition for analytical students, the usual monthly prizes being awarded. There was a good contest on this occasion.

THE General Election has clashed with most businesses during the past week. We give portraits of a number of the successful and defeated candidates who are associated more or less closely with the drug and chemical trades.

THE Irish Pharmaceutical Council have secured the support of the authorities in their efforts to secure a fair field for their licentiates in the competition for dispensary appointments. The Council appear to be proceeding with the Selkirk case.

LEGAL reports are brief this week. A question of Spanish agency for an English patent medicine, the sale of adulterated tincture of rhubarb, an Inland Revenue prosecution of a sweet-seller for not stamping some 1d. boxes of cough lozenges which were liable, are the subjects of the principal cases mentioned.

AT THE COUNTER.

THE following was handed in to be made up on Saturday last (writes a Peterborough chemist): " $\frac{1}{2}$ gill mall vinegar, $\frac{1}{2}$ noggin spirit tuppent, 2d. oil rigmer, 1 lump camphor."

A LEICESTERSHIRE CORRESPONDENT sends us the following collection of originals: "Gun by a cum," "Glysreen," "1 Pennyworth E. P. sales, 1 pennyworth tared ased," "Scqintobneil," "Scotch nail," "Beas ick accied," "Phadaphalne pills."

THE following come from classic Hackney: "Elmet elitric," "Blue unchen," "Blue hunkshen," "Gold amantinc," "Ketchuput," "1d. allround," "Hembendon seed," "1d. worth of rubbub pill coted," "Odoine of pctassum," "Persisic powder."

A MONMOUTH SUBSCRIBER contributes the next lot: "3d. worth of Gragripouder," "1 ounce of yellow asnek," "1 ounce of redpercipety powder mixed with fresh lickier."

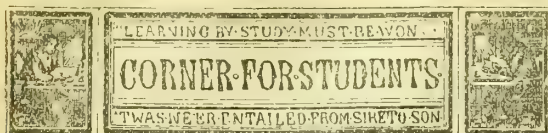
"Pennyworth dildock,

" swallows.

" ringerdum.

" hartshorn."

"Palmer's City ointment," "2 shillingsworth of powder called diacaluminthes or syrup of calamit."



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of three salts. The mixture is to be submitted to a thorough systematic examination; its constituents are to be detected, and all other substances proved absent.

Students' applications for portions of the mixture will be received up to Wednesday, July 20, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday July 30. Each report should contain a concise account of the work done, and should include a list of the constituents detected; in this list accidental impurities should be distinguished from the principal constituents of the mixture.

REPORTS.

The mixture of salts issued last month consisted of 4 parts of magnesium sulphate, 1 part of ammonium chloride, and 1 part of potassium nitrate.

The following is the calculated composition of this mixture:—

Mg ..	..	..	..	..	..	650
K ..	..	..	..	..	..	643
NH ₄ ..	..	..	..	..	..	540
SO ₄ ..	..	..	..	..	..	2603
NO ₃ ..	..	..	..	..	..	1023
Cl ..	..	..	..	..	..	1106
H ₂ O ..	..	..	..	..	..	3415
						10000

Packets of the mixture of salts were sent to eighty-five students, and fifty-six reports were received. Twenty-seven students detected all the constituents correctly. The omissions were—potassium 9, magnesium 3, ammonium 2, the nitric radicle 20, the sulphuric radicle 1, chlorine 1.

One of the most sensitive and convenient reactions to employ for the detection of nitric acid is that known as the ferrous-sulphate test. When nitric acid is liberated from a nitrate by sulphuric acid in the presence of certain reducing agents nitric oxide is evolved. If the reducing agent is ferrous sulphate in solution, the nitric oxide combines with it, yielding a dark-brown liquid. The colour is due to a definite compound consisting of two molecules of ferrous sulphate and one of nitric oxide; it is very unstable, and is readily decomposed by heat. To render this reaction available as a qualitative test, there are several conditions to be observed, and as they chiefly refer to the manipulation, they are best found out by actual experiment. It must be remembered that when strong sulphuric acid is added to the solution to be tested the heat disengaged will spoil the experiment unless the acid is added very cautiously so as not to mix freely with the solution.

Mistakes arose in several cases through the addition of too little ammonium chloride to prevent the precipitation of magnesium hydrate when ammonia was used as a group reagent. The mixture contained ammonium chloride, so it was not necessary to add much, but the few drops of the

reagent used by some of our correspondents was not enough to keep the magnesium in solution.

PRIZES.

The First Prize for the best analysis has been awarded to
WALTON PORTER, Edge Hill, Whitehaven.

The Second Prize has been awarded to

JAMES A. HARE, care of Messrs. Bell & Riddle, Market Place, Hexham.

Marks Awarded for Analyses:—

Walton Porter (1st prize) ..	100	Tyro ..	87
J. A. Hare (2nd prize) ..	99	Bynol ..	85
Cogito ..	98	Perseverance (St. Leonards) ..	84
F. F. A. Tunbridge ..	98	T. O. B. ..	83
Atropine ..	97	H. McL. R. ..	82
Zirconium ..	97	Danwer ..	82
A. Lander ..	97	C. E. Ashby ..	81
J. Ross ..	97	Potassium ..	81
Belladonna ..	97	R. I. P. ..	80
Ornum ..	96	P. Macrocephalus ..	80
A. Bunsen ..	96	Botanic ..	78
H. Bowden ..	96	Leo ..	78
H. F. ..	96	Antipyrin ..	76
A. Howard ..	96	Tempus Edax Rerum ..	75
Pepsine ..	95	Nena ..	73
Verax ..	95	Sapientia ..	70
Bee Gee ..	95	Nulli Secundum ..	68
Bismuth ..	95	Aconitum ..	65
John ..	94	Eudema ..	65
Ulexine ..	94	Styrax ..	63
Moyhitt ..	93	M. F. C. S. ..	62
Schizocarp ..	92	Palladium ..	60
Bowser ..	92	Agricola ..	55
T. K. Dublin ..	92	Salipyrin ..	50
Perseverance ..	90	S. G. B. ..	50
Vigovina ..	90	Victory ..	48
L. F. M. ..	90	Success ..	40
W. Hood ..	88	Acidulous ..	30

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

VERAX.—You employed a fresh portion of the solution for each group reagent, a proceeding which caused great loss of material unless the portions employed were very small, and in this case you greatly reduced your chance of detecting any constituent present in very small quantity.

JOHN.—Your report, which you found so difficult to draw up, compares favourably with many others. We are unwilling to adopt any special form of report, as it is to a great extent a matter of taste and convenience. The form which conveys the clearest idea of the work done and the results obtained is the chart form, of which you will find a specimen in most handbooks. A narrow column to the left is ruled off for notes on the treatment of the precipitate produced by the first group reagent, while the remainder of the page is devoted to the filtrate. On adding the second group reagent another column to the left is ruled off from the latter space, and so on. This form has the advantage of assigning a special place to each precipitate and filtrate. For such work as the Preliminary examination the best plan is to devote a column to the experiments made, and another to the results observed and the inferences drawn.

T. K. DUBLIN.—See remarks to "John."

VIGOVINA.—You give a very meagre account of your work. The proof of the absence of substances requires more attention; for example, you note that on heating the mixture (in a tube, no doubt) a sublimate was obtained. You probably noticed that there was no charring, and inferred that certain organic bodies were absent, but you say nothing about this in your report.

TYRO.—The only explanation we can offer of the reaction you obtained with starch paper is that the starch paper contained an iodide. Such a paper is used for the detection of nitrous acid.

BYNOL.—The absence of red fumes when a solution of a salt is warmed with sulphuric acid does not prove the absence of a nitrate. Under certain conditions as to concentration, heat, &c., or in the presence of deoxidising

agents, nitrates would yield red fumes, but unless you could be sure that these conditions were observed no decided inference could be drawn from a negative result.

PERSEVERANCE.—Anhydrous oxalic acid may be sublimed with little decomposition, but no oxalate yields a sublimate of oxalic acid on heating. You did not adduce any proof that the gas evolved on heating with strong sulphuric acid consisted of carbon monoxide and dioxide.

H. McL. R.—Effervescence on the addition of an acid after ignition would show the probable presence of an organic salt, if you had any proof that the gas evolved was carbon dioxide. The precipitate you obtained with calcium chloride was calcium sulphate.

T. O. B.—According to your report you did not perform any experiment that would show whether a nitrate was present or absent. The same remark applies to most of the other acids.

DANWER and C. E. ASHBY.—See remarks to "H. McL. R."

POTASSIUM.—It would be difficult to say why you did not obtain the red fumes with copper or the brown ring with ferrous sulphate, but if you repeat the experiments with a mixture of your own preparation you will probably find out the cause of your failure.

P. MACROCEPHALUS.—The test depending upon the colour produced on ignition with cobalt chloride must be used with caution, and only after a proper experimental study of the test with known substances. In the presence of fusible salts it is useless.

BOTANIC.—The precipitate you obtained with ammonium carbonate must have been due to magnesium, and it arose either from an insufficiency of ammonium chloride in the solution, or from the use of a too concentrated solution of the mixture of salts.

LEO.—The irritating fumes evolved on heating with sulphuric acid did not smell in the least like acetic acid; such a mistake ought to be impossible. It is important to be able to make a proper use of the sense of smell; carelessness in this respect may lead to serious mistakes.

TEMPUS EDAX RERUM.—If a sulphite were present, sulphur dioxide would have been evolved on merely adding hydrochloric acid to the solution.

NENA.—You detected magnesium, but omitted to include it in the list of constituents.

SAPIENTIA.—Heated on a platinum wire the mixture gave a distinct potassium colouration to the flame.

NULLI SECUNDUM.—Your proof of the presence of tin is startling; you do not say whether the metallic beads you obtained were malleable.

EUEDEMA.—Elections and chemical investigations are clearly incompatible. You should practise the ferrous sulphate test for nitric acid, and try what is the smallest quantity you can detect. There are certain conditions to be observed which you can only find out in this way.

STRYX.—Your supposed zinc sulphide was simply magnesium hydrate—you did not add enough ammonium chloride.

M. F. C. S.—There is no mention of a test for ammonium in your report. One would not expect to find barium along with a sulphate in a mixture of salts readily soluble in water. We hope the next exercise will not prove so puzzling.

SALPYRYN.—You detected ammonium, but omitted it in the list of constituents.

ACIDULOUS.—There was no trace of effervescence on adding a dilute acid to the aqueous solution of the mixture.

SECOND HALF-YEARLY PRIZE.

The list above is the first score in the second series of competitions for the special prize offered by the Proprietors of THE CHEMIST AND DRUGGIST. The object of this prize is to encourage students to compete steadily and consecutively. We offer Mendeléef's "Principles of Chemistry," or Fresenius's "Chemical Analysis—Qualitative and Quantitative," to be awarded to the student who obtains the largest number of marks in the Corner for Students during the last six months of the year 1892. Competitors will please use the same names or *noms de plume* throughout the six months. Certificates will be presented to those students who secure first, second, and third places when the marks for the series are totalled.

English News.

Excursions.

Last Saturday was a day provided for the reduction of the population of London. The efflux by the London, Brighton, and South Coast Railway was appalling. London Bridge Station was gay, crammed, and humming between 8 and 9. Spottiswoode's men and girls had torn themselves away from THE CHEMIST AND DRUGGIST and were off to Brighton until Tuesday. Lynch & Co.'s staff from Alders-

gate Street were following in their track, and Burroughs, Wellcome & Co. had a party of five hundred from Dartford and Holborn, who were going to Southsea. A CHEMIST AND DRUGGIST chiel went with the last. It was a lovely day for an outing, and a jolly party—larger, of course, than last year, for new ideas and fresh enterprise, originating with the two gentlemen constituting "the firm," mean more hands and heads to assist in carrying them out. Portsmouth Town Station was reached shortly before noon, and with consistent unanimity the hundreds made the Esplanade Hotel, Southsea, their beacon, for only at this point were all to meet together as a body—at dinner and tea. The party has become so large now that it is found to be impracticable to arrange for adequate "sports," and the firm is so thoroughly established in the United Kingdom that the committee can never be quite sure that the American authorities will favour them in the matter of weather. Sports in bad weather are a melancholy spectacle; but good weather without sports is a thing that Burroughs-Wellcome people know how to make the best use of. They go to Cowes and Ryde by steamboat and explore the Isle of Wight. The country round Portsmouth is found to be big enough for scores of parties of two or a multiple thereof, and the harbour of Portsmouth is liberally taken advantage of for boating with sail or oar. It was in directions such as these that the large company spent the interval between the early dinner and tea on Saturday. The dinner, served in the Esplanade Hotel, was a cold collation of a sumptuous character, and after it Mr. H. S. Wellcome (who was chairman this year) intimated that the Lynch & Co. party telegraphed from Brighton their hearty wishes for a good day. At that moment the torrents of rain were easying off, and when Mr. A. H. Mason rose to propose "The Firm," a gleam of sunshine welcomed his observations, and the company responded most heartily to his high commendation of the enterprise and personal qualities of Mr. Burroughs and Mr. Wellcome. In reply, Mr. Burroughs spoke of the cordial relations between "self and partner" and their employes, which sentiment Mr. Wellcome cordially seconded in chaste phrases. There was honest and hearty cheering when he announced that the progress of the business this past six months had been such as to astonish even Mr. Burroughs and him, and he considered that it would not have been possible for them to cope with the largely increased demand for their goods had not the employes worked with their hearts as well as their hands. Through Mr. Sudlow, for the City staff, and Mr. Searl, for the Dartford, the employes replied to Mr. Wellcome's toast. Mr. Sudlow, as always, was eloquent and humorous, and he explained that not one penny of the expense of the day's entertainment was contributed by them, the firm defraying the whole of it. He threw a little more light upon the gratifying increase of the firm's business, and it was capped by Mr. Burroughs, who said, in proposing "The Visitors," that the firm were to double the share of the profits given to the employes. From half-past 1 to half-past 6 was filled in the manner already indicated. At 6.30 tea was served in the hotel, the stewards were thanked for their services (Mr. Astill, hon. sec., replying), and at 8 o'clock the special train started on its return to London. From beginning to end it was a day of good things, even the rain favouring the company while all were engaged in the dining-room. Not a drop fell after that.

The employes of Messrs. Lynch & Co., of Aldersgate Street, held their annual "beanfeast" on Saturday last at Brighton. They dined at the Criterion, Queen's Road. Mr. H. Booth-Fuller (traveller) occupied the chair, and Mr. Vineall (warehouse) faced him in the vice-chair. The Chairman gave the toast of "The Firm," which, he aptly remarked, still retained, through the energy of its head, its good name against all competitors. Notwithstanding the "great era of cutting," the union of employes with the firm enabled them still to maintain that "a good article commands a fair price." The toast having been heartily drunk, Mr. Paddon (town representative) proposed "The Warehouse," and with a few well-chosen words expressed the good wishes of those working "outside" for those "within." Drives to the Devil's Dyke and Rottingdean and other pleasures filled up the day most agreeably.

Messrs. G. B. Kent & Sons, Great Marlborough Street, W., took their staff to Brighton on Saturday last, and a substantial dinner was served in the banqueting-hall of the Royal Pavilion. Mr. Arthur B. Kent was in the chair, and

Mr. Ernest N. Kent was vice-chairman. The proceedings were marked by cordial good feeling between employers and employed, nearly two hundred being present at the dinner. After the usual loyal toasts, which were given with great heartiness, Mr. Benwell, sen., proposed "Success to the Firm," and in a neat little speech took the letters K. E. N. T. as a text to signify, "knowledge, enterprise, notoriety, and tact." The whole of the arrangements were carried out by the stewards, Messrs. Hawtin and Tindley, and all present pronounced the outing, dinner, and everything a great success, the weather being very favourable.

The staff of Messrs. Fletcher Fletcher & Stevenson, of the North London Chemical Works, were entertained to a strawberry tea and a substantial supper at the residence of Mr. F. W. Fletcher, Enfield, on Saturday last.

Ringing the Doctor's Bell.

Joseph M. L. Gleeson, who was assistant at Dr. O'Regan's dispensary at London Fields, and who at North London Police Court recently was bound over to keep the peace, was again before the Court, on Friday last, on a summons to show cause why his 10% recognisances should not be estreated. The police had taken out this summons because the defendant had again gone to the dispensary which he once occupied, and rang the bell and annoyed his successor. Mr. Edmunds, solicitor, who appeared for the defendant, urged that the offence was too trivial to construe into a breach of the peace. He said Mr. Gleeson was going to Chingford, and would not go near the place again. Mr. Corser: If he goes he need not expect any further leniency. I shall dismiss this summons on payment of costs.

Institute of Chemists.

The reformers of this body have not done with it yet. Next week, on the occasion of the annual meeting of the Society of Chemical Industry in London, there will be a meeting of the Reform Association at the Guildhall Tavern, Gresham Street, at 5 P.M., on Wednesday, to receive a report from the committee and to discuss matters relative to the management of the Institute.

Is Coffee a Disinfectant?

At the ordinary meeting of the St. George the Martyr Vestry, held at the Vestry Hall, Borough Road, some discussion took place in reference to the disinfecting of the parish. Dr. Waldo, the medical officer, stated that for some years past the chemicals used by the Vestry for disinfecting purposes had cost about 80% a year, and he was of opinion that the money was well spent, and that the present system should be continued.

Mr. Hennesy asked the doctor whether he had ever heard of, or tried, the plan of disinfecting by means of coffee. The system was very popular in Asiatic countries, and was considered to be very effectual as a disinfectant.

Dr. Waldo said he had travelled very considerably in Oriental countries, and had heard of the process, but had never seen it in operation. He was of opinion that it might act as a deodorant, but he certainly did not think it could in any degree be regarded as a disinfectant, and therefore he could not advocate its use as such.

Carbolic acid Poisoning.

On July 8, Mr. A. Langham, the deputy-coroner for East Surrey, held an inquiry concerning the death of Joseph Barleycorn, who committed suicide by taking a quantity of carbolic acid.

Mr. Charles John Fryer was called, and said he was a chemist carrying on business at 410 Wandsworth Road, and shortly before six o'clock on the previous Thursday evening the deceased man called at his shop, and requested to be supplied with some carbolic acid. Witness asked him what kind he would have, but he did not appear to know there was more than one kind, and said he wanted it for the purpose of cleansing the drains at his residence. Witness supplied him with a bottle containing 4 cz, and told him to be very careful not to let it touch his skin, and to dilute it with half a gallon of water before using it. There was nothing at all strange in the deceased's manner, and he appeared to be perfectly sober.

The Coroner: I understand that there is no restriction whatever placed on the sale of carbolic acid?

Witness: None whatever. And it is not necessary that it should bear a label.

The Coroner: It is an article which is being constantly asked for, is it not?

Witness: Yes; and especially at this time of the year, when there is a good deal of fever about.

Dr. Brent deposed to being called to the deceased, but when he arrived he was almost gasping his last, and little could be done to assist him, as he had swallowed an ounce of the acid. Five drops would have been a dangerous dose.

The jury ultimately found that the deceased committed suicide while in a state of temporary insanity.

Last week a lad, aged 15, died at Plaistow through drinking carbolic acid, which had been placed on a window-sill in the yard after being used for cleansing the drains.

An inquest was held last week, at Racliffe, touching the death of Emily Lomax. The deceased had suffered from influenza in the early part of the year, and was in a very depressed condition. She took carbolic acid, and died.

A Surgeon's Earnings.

In the Westminster County Court, on Thursday, his Honour Judge Bayley had before him the case of Bond v. Price, on an application by the defendant to reduce a former order made against him. He is a surgeon in Hatton Garden, and holds the position of medical officer to the Holborn Union. He was, he said, totally unable to comply with the order which had been made on June 6, and he asked to be allowed to pay in instalments of 3 guineas a quarter. It was true he was medical officer to the Holborn Union, for which he received 100 guineas a year; but beyond that he did not make more than 50% a year by his practice as a surgeon. He had been laid up for a long time with influenza and bronchitis, and this and serious domestic difficulties had brought him to a state of impecuniosity. He thought he could pay 3 guineas a quarter. The Judge made an order in the terms asked for.

Seidlitz powders in Essex.

Mr. T. A. Pooley, the public analyst for Essex, in his quarterly report, says that among the adulterated drugs submitted to him for analysis were two Seidlitz-powders, which he found were not prepared in accordance with the formula of the British Pharmacopoeia.

A Bogus "Insect Destroyer."

At Hastings Borough Police Court, on Saturday, Joseph Griffen was charged with stealing 3s. 6d. by means of a trick from Mr. Atkins. It appears that prisoner sold to plaintiff a compound for destroying insects, and which was supposed to have been manufactured by a company known as "The Griffonia Company." Mr. H. F. Cheshire, the borough analyst, stated that he had examined the fluid, and found that it was composed of 10 grs. of solid matter, which appeared to be a dye, to a gallon of water. He found no trace of chemicals whatever. He tested it, but could not see that it had any material effect upon insects. Mrs. Mary Ellen Millson, manageress to Mr. Henry Jasper, confectioner, White Rock, said she purchased three bottles of the fluid from the prisoner. She had tried it on ants, but it did not seem to have any effect. Inspector Oldhamstead, of the City of London police, said there was no such title as "The Griffonia Company" in Mincing Lane, London. Prisoner said he had no intention of playing a trick. He saw the recipe to make the stuff in the *Cornhill Magazine* for 1854, and maintained that, if used in sufficient quantities, it would drive insects away. The Bench convicted, and sentenced prisoner to one month's hard labour.

Poisons in Beverage-bottles.

It is, perhaps, idle to expect much result from protests against the carelessness which allows poisons to be left about in bottles of all shapes and sizes such as ordinarily contain customary beverages, but at least some provision might be made by which such bottles should be labelled "Poison." Persons can now go to oilshops, and, no matter what vessels they take, the poisons placed in them are not labelled "Poison." If a person went to a chemist, then the bottle

would have to be labelled "Poison." While grocers and oil-shops are allowed to sell poisons they ought certainly to be placed under similar restrictions as to labelling.—*British Medical Journal*.

Excited over the Election.

Mr. Thomas Baylis Ellery, a clerk residing at 43 Christie Road, South Hackney, was found dead in a garden in Annis Road, South Hackney, on Wednesday of last week. There were two bottles lying beside deceased, one of which was labelled, "Laudanum; poison," and the other "Chlorodyne." Deceased was said to have been very excited over the election. He was in the habit of taking narcotics, and the Coroner's jury attributed death to an excess by misadventure. Deceased tried to poison himself with laudanum six years ago, and had been in a depressed state ever since.

Theft of Syphons.

At the Marylebone Police Court, William Johnson, 45 King Street, Notting Hill, and George Jackson, 45, of the same address, were charged with being in the unlawful possession of a carpenter's axe and two glass syphons. William Phillips, 19, of Chapel Street, Portland Town, was charged with stealing the syphons, worth 4s., the property of G. R. Parkes, chemist and druggist, of 196 Belsize Road. Mr. Parkes said the prisoner Phillips had been in his employ for three years, and he had believed him to be honest, but he now feared that this was not the first transaction of this kind. Detective-Sergeant Welham, S, who arrested Phillips, said the latter told him the other prisoners gave him a shilling for the syphons. The prisoners pleaded guilty, and the magistrate sentenced them each to fourteen days' imprisonment.

Lime Contracts.

At the meeting of the London County Council, on Tuesday, it was reported that nine tenders had been received in response to the advertisement for 6,000 tons of lime. The prices range from 15s per ton (the lowest) to 20s. per ton (the highest). Two of the tenders were for the supply of quantities less than 6,000 tons. The Council resolved to accept the lowest tender—viz., that of Messrs. C. Christopherson & Co., for the supply of 6,000 tons of lime at 15s. per ton.

The County Council's Chemist's Department.

On April 5 the General Purposes Committee of the London County Council reported to the Council that they had granted to Mr. P. A. Estcourt, a second-class assistant in the chemist's department, two months' leave of absence on half-pay in consequence of ill-health. At the meeting of the Council, on Tuesday last, it was reported that, Mr. Estcourt not having returned at the end of two months, his father was communicated with, and the committee learnt from him that Mr. P. A. Estcourt was abroad, and that his health had not sufficiently improved to enable him to return to work. The father asked that his son's place in the Council's service might be kept open some time longer without pay, and, as the chemist had a temporary assistant in Mr. Estcourt's place, the committee thought that this arrangement might be allowed until the end of September. The recommendation was agreed to.

The Kensington Analyst's Salary.

The Kensington Vestry have decided to increase the salary of the analyst, Mr. Charles E. Cassal, F.I.C., from 350*l.* to 400*l.* per annum, subject to some slight alterations in the terms of his arrangement with the Vestry.

Suicide of an Analytical Chemist.

Mr. Carttar, coroner, held an inquest at Deptford last week on the body of John Cox, aged 56 years, described as an analytical chemist, of Kerry Villa, Kerry Road, Deptford. The deceased appeared to have inflicted a severe wound in his left arm below the elbow, and to have died from exhaustion in consequence of loss of blood. He had suffered for two years from a painful abscess in his side. A verdict of suicide whilst labouring under mental derangement was returned.

The Sale of Poisonous Proprietary Medicines.

Recently an inquest was held at Rochester on the body of an infant, whose death, it was alleged, was due to a dose of cough-mixture, which contained morphia, supplied from the shop of Mr. Tuck, a herbalist. The jury, however, returned a verdict of death from natural causes, and since then Superintendent Broadbridge has been in communication with the Public Prosecutor upon the question of the legality of the sale of the medicine, and at first it was thought that proceedings would be taken; but as Mr. Tuck has since died, and his wife and daughter acted under his instructions, the matter will be allowed to drop, and Mrs. Tuck has promised to sell no more of the mixture.

The Bermondsey Mystery.

At the inquest now being held regarding the death of the woman whose body was found in a stable at Bermondsey, Inspector O'Dea said that a laudanum-bottle had been found in the stable, and it had been ascertained that a man having the appearance of a horsekeeper purchased a shillings-worth of laudanum at Mr. Smart's, a chemist, of 27 Aldgate, on May 27. The inquiry has been adjourned in order that an analysis of the stomach and its contents may be made.

Chemists as Complainants.

Mr. Frederick R. Bell, of Swaffham, chemist, charged a servant, at the Petty Sessions, with stealing four gold studs. The girl pleaded guilty, and was fined 10*s.* or seven days.

At Southport Police Court, on July 7, Frederick Spiney, assistant to Mr. J. Joye, chemist, London Street, was complainant in an assault case. A man named Cogrove, who had been frequently convicted before, went into the shop and offered a comb for sale. He became abusive, and Mr. Spiney, going to fetch a policeman, was struck in the chest. Cogrove was fined 1*l.* and costs, or twenty-eight days.

Irish News.

Hitting Them Again.

At the Belfast Summons Court last week Messrs. J. & J. Haslett, wholesale chemists and druggists, were summoned for having failed to comply with the terms of a notice in writing, dated June 30, 1892, requesting them to take down or secure the dangerous portions of their recently burned premises at North Street. The Bench ordered the dangerous portion to be at once taken down or securely barricaded.

A Disputed Account.

Last week, at the Navan Quarter Sessions, an action was brought by Mr. Thomas Moore, wholesale druggist, Belfast, against Elizabeth Harte to recover 4*l.* 1*s.* 6*d.* alleged to be due for goods sold and delivered on May 11, 1891. Plaintiff deposed that the defendant had ordered goods through his traveller amounting to 6*l.*, of which 2*l.* had been paid. The defendant stated that she ordered some patent medicines, pills, and porous plasters; that a double quantity of each article was sent, and that she warned the plaintiff to remove the surplus goods at his own expense, which he had not done. She had never ordered goods from the plaintiff until his traveller called on her, and then she had only authorised 2*l.* worth altogether. After evidence the Court held that the whole amount of defendant's liability was 2*l.* 14*s.* 2*d.*, as 2*l.* had been paid by defendant, a decree was made for the payment of 14*s.* 2*d.*, the defendant to return all the goods not ordered.

Pharmaceutical Licence Examination.

The following were the papers set at the recent (July) examinations:—

MATERIA MEDICA.

R. J. Montgomery, M.B., F.R.C.S.

(Three Questions to be answered.)

1. Pulv. aromaticus—give a brief description of each of the bodies contained in this powder.

2. *Lupulus*—give the B.P. definition, characters, and preparations, with doses.
3. Name and describe accurately the oils in pitch plaster.
4. Valerian rhizome—characters, dose, and preparations.
5. Theriaca—definition, characters, test, and preparations.

BOTANY.

(Answer Two Questions.)

1. Give a botanical description of Scotch fir.
2. What are the characters of the fern family.
3. Mention and describe the different forms of stem which are met with, giving examples from the B.P.

PHARMACEUTICAL CHEMISTRY.

Dr. Ninian Falkiner.

(Answer Three)

1. How may the following acid radicals be distinguished by chemical tests:—Sulphate, sulphite, thiosulphate, sulphide?
2. What are the official preparations of silver? How are they prepared? Give equations. Also give the tests for silver.
3. What is the formula and true chemical nature of phenol? How is it obtained? And tests for recognition.
4. Give an accurate account of the estimation of dilute HCN by the method adopted in the B.P.

GENERAL CHEMISTRY.

Dr. Ninian Falkiner.

(Answer Two.)

1. What weight of lead iodide will result from the double decomposition of 100 grains of KI with $\text{Pb}(\text{NO}_3)_2$?
2. Define the following terms:—Equivalent, electrolysis, allotropic, isomeric, organic chemistry.
3. How can menthane be obtained by [the method of synthesis?
4. Estimate the strength of a given solution of thiosulphate of sodium.

PHARMACY.

John Evans, L.R.C.S.I., L.A.H.

1. State the formula of pil. ferri iodid. Describe the mode of preparing the liquor for it and for the syrup. ferri iodid.
2. The ointments of the alkaloids—state how made and strength of each.
3. Mention suppositories of B.P., giving ingredients of those containing glycerine, and describing minutely those which are poisonous, stating name and quantity of active ingredient.
4. Name the preparations of jalap. with dose of each. State accurately how the extract is made.
5. What are the ingredients in pil. galbani co., and how are they directed to be mixed?

Prizes for Pharmacy and Chemistry.

Prizes for the summer session of the Schools of the Royal College of Surgeons, Ireland, have been awarded as follows: For pharmacy—1st, Mr. R. M. Hamilton, 3*l*. and medal; 2nd, Mr. H. B. S. Montgomery, 1*l*. and certificate. For chemistry—1st, Mr. H. E. Eardley, 3*l*. and medal; 2nd, Mr. H. F. Conyngham, 1*l*. and certificate.

Pharmaceutical Society of Ireland.

Preliminary Examination.—Miss M. F. Pierse; Messrs. A. Galashan, D. S. Jardin, C. S. O'Hare, F. Harpur, R. H. Mervyn, W. G. Mitchell, J. J. Gibney, W. R. Hamilton, W. W. C. McBride passed. Four candidates were rejected.

Licence Examination.—Messrs. R. S. Moore, T. J. Walsh, G. F. Walsh, T. Whelehan, G. F. Stevenson, M. L. Tierney, R. J. Cabir, W. J. Hartnett, C. O'Connor, J. H. F. Graham, H. A. Kelso, J. W. Peatt have passed.

Scotch Notes.

Short Sunday Hours.

At present four Edinburgh firms—namely, Messrs. J. Robertson & Co., Messrs. Gardiner & Ainslie, Mr. J. B. Stephenson, and Mr. Peter Boa—are trying a very commendable experiment in the direction of curtailing their business hours on Sundays. The usual Sunday hours in Edinburgh are from 10 to 10.45 A.M., from 1 to 2 and 6 to 8 P.M. The firms referred to have reduced the time they open in the evening to one hour—namely, from 7 to 8.

Edinburgh Pharmacy Athletic Club.

The first annual "sports," under the auspices of the recently formed Edinburgh Pharmacy Athletic Club, and confined to amateurs connected with pharmacy, were held at Powderhall Grounds, Edinburgh, on Wednesday, July 6. There was a large turnout of spectators, notwithstanding that the weather was extremely unpleasant, rain falling heavily at intervals. The prizes competed for, some of them very handsome, had been presented by Mr. Thomas Beecham, Messrs. Burroughs, Wellcome & Co., Mr. Richard Clark, Messrs. Duncan, Flockhart & Co., Mr. J. Laidlaw Ewing, Messrs. Lever Brothers, Messrs. John Mackay & Co., Mr. David McLaren, Messrs. Maw, Son & Thompson, Messrs. Gosnell, and Messrs. Raimes, Clark & Co. All the events had attracted a considerable number of entries, and they were for the most part keenly contested. The following are the results:—

Putting the ball.—1, G. F. Anderson; 2, W. J. Smith.
100-yards flat-race handicap.—1, S. Cooney; 2, George Somerville; 3, W. J. Smith.
High jump.—1, W. J. Smith; 2, T. Welsh.
One-mile bicycle handicap.—1, W. B. Cowie; 2, James Robertson; 3, J. Laughton.
Quarter-mile flat-race handicap.—1, George Somerville; 2, James Robertson; 3, Wm. Irons.
Half-mile flat-race handicap.—1, J. P. Gibb; 2, W. A. Purdie; 3, W. Mehrose.
Two-miles bicycle handicap.—1, J. Robertson; 2, J. Laughton; 3, W. B. Cowie.
One-mile flat-race handicap.—1, R. K. Kinninmont; 2, J. P. Gibb; 3, J. Blake.

A consolation race was won by A. P. de Sainte Claire.

In the one-mile bicycle handicap an unfortunate spill occurred, and one of the competitors upset was slightly injured.

A swimming competition in connection with the sports had been decided at the Edinburgh Corporation Baths on June 29, Mr. J. D. Horsburgh being first, and Mr. R. Wood second.

Mr. Robert Dick (of Messrs. Duncan Flockhart & Co.) presided at the presentation of prizes, and the prizes were presented by Miss Dick.

Aberdeen Chemists on Picnic.

The Aberdeen and North of Scotland Society of Chemists and Druggists went to Braemar on Wednesday, July 6, for their annual picnic. The excursion was the largest and most successful ever held under the auspices of the Society. A party of fifty-seven left the city by the 7.50 A.M. Deeside train, and arrived at Ballater two hours later. They proceeded by coaches to Braemar, where a substantial dinner was provided at the Invercauld Arms Hotel. Only four toasts followed the dinner. These, which were all given by the Chairman, were "The Queen," "The Prince and Princess of Wales, &c.," "The Strangers," coupled with Mr. T. Ritchie, Manchester, and "The Ladies," to which Mr. G. J. Shepherd, Aberdeen, responded. Oratory over, coaches were again called for to convey the party to the Linn of Dee. There were slight showers on the journey, but they were not enough to interfere with the enjoyment of the lovely highland scenery surrounding the residence of the Duke of Fife. After tea at Braemar the return journey was taken, and Aberdeen was reached at 9 P.M. Amongst the visitors were Mr. Ainslie, junr. (Gardner & Ainslie, Edinburgh), Mr. Clark (Sumner & Co., Liverpool), Mr. Ritchie (Standring, Son & Co., Manchester), Mr. Fox (R. Hendrie & Co., London), Mr.

Cunningham (T. & H. Smith & Co., Edinburgh), Mr. Beaumont (Pinkerton & Gibson, Edinburgh), and Mr. Fraser (Inverness). The President, Mr. Johnston, was in the party, and Mr. John Cruickshank, the convener of the committee, spared himself no trouble to make everyone comfortable.

The Photographic Convention.

The annual meetings of the Photographic Convention of Great Britain were held this week in Edinburgh, for the first time since it was instituted. They were inaugurated by a reception, which took place on Monday evening in the Royal Scottish Geographical Society's Hall. At that function there was a large attendance, the Lord Provost being among the number, and giving a welcome in the name of the citizens. Mr. George Davison, the President for the year, then delivered an address, in the course of which he dealt with the artistic application of photography, the state of the progress and the new methods employed in that direction. No one method in photography had the monopoly of all the qualities. The artist in miniature might have as much perception as the impressionist of broader treatment, although it might be a different perception. The subtle combination and direction of line and arrangement of light and dark spaces, or the charm of naturalness and effect of the spirit, and characteristic of natural scenes or incidents, were the distinguishing characteristics. The man who married the two methods in his expression by painting, without seeming effort, was the genius they all conspired to worship. The lecturer proceeded to speak of the need for a State photographic record office, and also of a photographic institute where photo-mechanical processes, industrial applications of photography and methods, and experiments could be taught. The Society of Arts, he suggested, might possibly help to initiate a movement to supply the national want of such a school. A great exhibition in London practically showing the extent to which photography was applied in sciences, industries, and the arts, would, he believed, be a good proof of the need of such an enterprise. Photographic art exhibitions more on the lines of ordinary painters' galleries had, he said, done something by selection to raise the standing of photographs as pictures. There was, he held, more interest in pictorial photography, and greater advance in that respect in this country than in any other. Mr. Davison was thanked for his address.—On Tuesday an excursion took place to Melrose and Dryburgh. Wednesday was devoted to business, papers upon photographic subjects having been read by Mr. H. P. Robinson (Tunbridge Wells), Miss Catherine Weed Barnes (New York), and Mr. A. Pringle (London). The programme for Thursday included an excursion to St. Andrews and Dunfermline, with a meeting in the evening to hear several papers. For Friday excursions were arranged to Dalmeny and Cramond Bridge, and Roslin and Hawthornden.

Aberdeen Infirmary Dispensership.

Mr. George Cowie, Ph.C., who has occupied this position for several years, has resigned the appointment, and Mr. H. M. Dugan has been selected to fill the vacancy. Mr. Dugan is a well-known athlete, being a member of the Aberdeen Club, which has of late been winning all along the line and lately gained the notable distinction of being the champion club in Britain. Mr. Cowie, who has done some good work within the past two years as tutor to the local pharmacy classes, is now studying medicine.

Scottish Drug Company.

At a meeting of the principal creditors of the Scottish Drug Company (Limited), held in London last week, it was unanimously resolved that the creditors should support the proposal of the shareholders' committee to take up the debentures of the reconstructed company, redeemable by periodical ballots within three years, said debentures to be secured by the assets of the company as reconstructed. It was intimated at the meeting that shareholders and a large number of the creditors had already agreed to take up a large proportion of the debentures, several of the latter having agreed to accept the balance of their claim in the liquidation in debenture bonds at 5 per cent.

French Pharmaceutical News.

(From our Paris Correspondent.)

A CHEMICAL EXPERT IN TROUBLE.—It is sufficiently rare to find that a man who gets a loan of 12,000*fr.* and at once disappears is not a swindler, to make it worth while to record a fact of the kind. The chemist whose arrest was announced in the French pharmaceutical news of last week has been released from prison as an honest man. A committee of chemists was appointed to examine the nature of the claimed invention, and found it to be a matter of some importance. It consists of the chemical production of a very light metal, having great force of resistance, and which can be sold at a very low price. The expert chemist had hidden part of the money lent to him in his cellar at Montfermeil, and thus was able to satisfy the claims of the party who had made the heavy loan.

RAVACHOL EXPIATES HIS CRIMES.—The famous anarchist, author of the Rue de Clichy outrage last April, which wrecked M. Fournier's pharmacy, and so nearly caused the death of his wife and new-born child, met his fate under the guillotine last Monday morning at Montbrison. The details of the outrage in question were duly published in THE CHEMIST AND DRUGGIST. The infamous wretch met his fate with some show of bravado, and the knife of the guillotine fell before he had scarcely terminated a blasphemous and obscene song. Ravachol has been credited with having been connected with pharmacy in his early life, but nothing definite on the subject has been proved. The skill shown by him in manufacturing explosives tended to prove, however, that he had more than a superficial knowledge of chemistry.

CHOLERA IN PARIS.—That we have cholera in Paris is a fact which cannot be denied, but not to the extent that London journalists in quest of sensational headlines would have us believe. Cases of "cholera nostras" or "choleriform diarrhoea," as the malady is just now being called, are very few. Some of the western Paris suburbs have been slightly visited, but the city itself is comparatively free, except, perhaps, in the crowded districts of the working classes. The Prefecture of Police has issued a circular relative to the special medical service recently organised with a view of coping with any serious outbreak. Dr. Dabief is specially charged with the study of disinfectants. Pharmacists are naturally amongst the first to be aware of the serious outbreak of any epidemic, and the correspondent of THE CHEMIST AND DRUGGIST was able to assure himself last Tuesday that matters have not gone beyond a normal state, after a careful inquiry at a number of Paris pharmacies. Cases of diarrhoea exist, but not more than is usual at this time of the year, and it is not surprising to learn that the trade in disinfectants is becoming brisk. Some of the Paris newspapers published last Monday alarming news concerning the state of M. Pasteur. According to them, the famous *savant* was suffering from a severe attack of cholera at his country seat at Villeneuve l'Etang, near Garches. It transpires, however, that M. Pasteur is in a very satisfactory state of health.

ILLEGAL PHARMACY.—As is generally known, a section of the Germinal law, Year XI., still in vigour, prohibits the sale in France of anything that can be considered as a pharmaceutical product, except by duly qualified pharmacists. A grocer, named Trottin, of Vitry, has just been condemned for contravening this law. He was ordered to pay a fine of 500*fr.*, but, thanks to the recent Bérenger law, which gives the judge the option of postponing the sentence, he escapes this time.—Under the same law druggists are prohibited from selling drugs in medicinal doses. This has caused the rivalry existing between the pharmacists and druggists of Reims to be brought to a climax. The former decided to try to put an end to the competition of their unqualified townsmen. As a result, two druggists appeared before the Correctional Tribunal of the city on the charge of illegally exercising pharmacy. The trial was somewhat curious. The usual procedure had been followed to prove the offence. Two persons were delegated by the pharmacists to purchase medicaments from the druggists. Iodide of potassium, iodine, and quinine, in small quantities, were the articles selected in

order to show that medicinal doses were sold. The druggists fell into the trap, and at the right moment an arm of the law, in the form of a "huissier," appeared to prove the offence. Maître Taillefer represented the interests of pharmacy. He contended that druggists can only sell simple drugs, and in wholesale quantities, and the defendants had sold compound drugs, and in medicinal doses. The illegality, he considered, was flagrant; he asked for a fine of 500*fr.*, an equal sum as damage, and the insertion of the judgment in all the newspapers of the district. Counsel for the defence maintained that the offence did not exist; the drugs sold were of a simple nature, and no prejudice was occasioned, as the customers were not *bonâ fide*. The tribunal fell in with the latter views, and gave judgment for the defendants, with costs. The "huissier" who accompanied the parties delegated by the pharmacists was censured by the judge. Reims druggists have thus an authority behind them which they will probably not be slow to use to their own advantage.

Foreign and Colonial News.

SALT AT 1*d.* PER OZ.—The *Rio News* states that salt is selling at a dollar per litre in Goyaz just now.

THE INTERNATIONAL MEDICAL CONGRESS will be held in Rome during the last week of September, and it is probable that it will be a success.

SUDDEN DEATH OF A CAPE CHEMIST.—On June 15, Mr. C. H. Rhodes, a chemist and a well-known Kimberley citizen, formerly of Fort Beaufort and Graham's Town, died suddenly in his dispensary.

A NEW GERMAN COMPANY.—The chemical factory of Messrs. Vorster & Grüneberg, in Kalk, near Cologne, has been transferred to a limited company with a capital of 4,500,000*m.* The price paid for the business is the amount of the last ten years' profits.

A JAVA EXHIBITION.—Batavia, the capital of the Dutch East Indian Colonies, will hold an exhibition in 1893. The show is to comprise all products of the Dutch Colonies, as well as articles of foreign origin which are, or may be, used in the Dutch Indies. Mr. S. B. Zeveryn, of Batavia, has accepted the office of president of the Exhibition Commission.

CANADIAN PHARMACY DEGREE.—The first examination for the Phm.B. of the Toronto University has been held, and twenty-three candidates from the Ontario College of Pharmacy have passed, acquitting themselves with great credit. The first one to receive the degree was Professor Heebner, who directs the pharmacy classes at the College. It was complimentary in his case.

THE BUITENZORG BOTANICAL GARDENS.—On May 18 last the seventy-fifth anniversary of the founding of the Buitenzorg Botanical Gardens was celebrated with considerable festivity. Dr. Treub, the director, reviewed the history of the gardens in a long speech, which has since been published in pamphlet form. An interesting feature in the festivities was the presentation to the Garden of a handsome address of congratulation and appreciation signed by a number of the principal German scientists.

AMERICAN TRADE-MARKS.—The following trade-marks were registered at Washington, U.S.A., on June 28:—"W. W. W.," for stomach, liver, &c., remedies, by W. H. Daniels, Dubuque, Iowa; "Howards" well-known engraved medal label, for internal and external remedies, by Howards & Sons, London; "Kill'em," and figure of an insect, for a preparation for destroying vermin on the body, by F. W. Baker and Henry Levy, Chicago; "Pancura," for topical remedies, by M. Gebhart & Son, Baltimore; "Dr. Wood's Norway Pine Syrup," for cough-syrup, by Foster, Milburn & Co, Buffalo; "Otonga," on a black background, for tablets for female complaints, by F. Plumb, Saginaw, Mich.; "Root, Bark and Blossom," for blood, &c., remedies, by E. C. Vick, Newark; "Microzotal," for antiseptics, by C. Truax, Green & Co, Chicago; "Hygeia," for phosphated extract of wild cherry, by A. G. Thompson, Chicago; "India bouquet," for perfumes, by the firm of Solon Palmer, New York.

ONTARIO CHEMISTS' MANUFACTURING COMPANY.—It was mentioned last week that this company was about to be formed. Latest advices show that it has been, with the following as the first directors:—P. C. Blaicher, Esq., Mayor of the City of Hamilton; John J. Hall, Esq., Woodstock, President Ontario College of Pharmacy; John A. Clark, Esq., Hamilton, Ex-President Ontario College of Pharmacy; William T. Strong, Esq., London; A. B. Petrie, Esq., Guelph, Vice-President Guelph and Ontario Loan and Savings Company; R. A. Harrison, Esq., Dunnville, President Brantford District Druggists' Association; W. A. Howell, Esq., Hamilton. The officers (provisional) are:—President, P. C. Blaicher; vice-president, W. T. Strong; secretary-treasurer, John A. Clark. Only qualified members of the Ontario College of Pharmacy, in business on their own account as retail druggists, and residing in the province of Ontario, may hold shares, the objects of the company being to manufacture "simple household remedies, toilet articles, &c., under the supervision of competent pharmacists, who, having selected the formulas with great care, would have them prepared by a qualified chemist under the control of a board of directors composed of intelligent druggists."

THE FLÜCKIGER TESTIMONIAL.—The *Pharmaceutische Zeitung* states that a sum of 12,723*fr.* was contributed for Professor Flückiger's testimonial, and a further sum of 7,127*fr.* has been gathered by personal friends of the Professor in North America. The following are the numbers of subscribers in different countries and the amounts subscribed:—

		Francs
Germany	.. 219 subscribers gave	3,669
Switzerland	.. 191 " "	1,365
Russia	.. 113 " "	870
France	.. 41 " "	660
England	.. 33 " "	3,574
Norway	.. 23 " "	300
Italy	.. 27 " "	341
Austria	.. 21 " "	444
Denmark	.. 9 " "	438
Holland	.. 6 " "	93
North America	6 " "	263
Sweden	.. 6 " "	53
Brazil	.. 6 " "	155
India	.. 6 " "	336
Australia	.. " "	27
Belgium	.. 2 " "	30
Turkey	.. 1 " "	10
Spain	.. 1 " "	25

PHARMACY IN QUEBEC.—The Pharmaceutical Association of this province met at Montreal on June 14 in annual meeting. The report submitted by the Council was a satisfactory one, and showed that in the course of the year some success had attended the efforts of the Council to enforce the annual payment of dues by medical men who keep open shop. Slight alterations had been made in the examinations, especially in the matter of marks for the Minor and Major, 60 per cent. of marks in the aggregate being in future required for a pass. The financial statement showed a balance of \$2,038, but Mr. Contant thought this was not very satisfactory. In his address Mr. Henry R. Gray, the president, spoke of the history of the Society, paying a special compliment to two gentlemen from England, Mr. Nathan Mercer and Dr. I. Baker Edwards, who in 1867 became able coadjutors of the friends of pharmaceutical progress in Montreal, and reorganised the Association of 1864. From this effort the present Association has arisen. Mr. Gray also spoke of competition by grocers and storekeepers, advocating a *laissez-faire* policy; but the meeting was not altogether with him, and the sale of drugs and chemicals by photographers having been discussed, it was agreed that the photographers' exempting clause in the Pharmacy Act should be struck out, and a motion to promote an amendment Bill in the next session of the Legislature was agreed to. The following persons were elected members of Council:—Henry R. Gray, Joseph Contant, A. E. Du Berger, L. A. Bernard, Ed. Giroux, jun., and David Watson.

CALIFORNIAN FLOWERS are not strong enough to warrant the foundation of a perfume industry there, and the idea has been abandoned.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on July 6 at No. 67 Lower Mount Street, Dublin, at 3 o'clock. The President (Mr. William Hayes) was in the chair; and the other members of the Council present were Messrs. Wells, Grindley, Conyngham, Lyons, Gibson, Hodgson (Treasurer), Dr. Barnes, Simpson, Beggs, and Professor Tichborne.

REGISTRATION OF APOTHECARIES AS PHARMACEUTICAL CHEMISTS.

A letter was received from the Privy Council on the subject of the regulation made by the Council on April 6 with respect to the registration of licentiates of the Apothecaries' Hall as pharmaceutical chemists. The letter stated that such licentiates were entitled, under section 22 of the Pharmacy Act (Ireland) of 1875, to be registered without passing any examination; and that only a fee of 3*l.* 3*s.* could be charged.

The PRESIDENT said that letter was written by direction of the Attorney-General without a full consideration of the matter; and as he (the President) thought there was no use in continuing the correspondence, he wrote requesting an interview, which was granted. Accordingly Mr. Wells, Mr. Grindley and himself had a conversation with Sir William Kaye, who at first seemed not to take the situation in, but eventually understood and acquiesced in their views, and promised to set matters right.

Mr. HODGSON: Then the matter is in abeyance?

The PRESIDENT: The matter is in abeyance.

Mr. GRINDLEY: We can refuse to register any man who is not qualified under the old rules and regulations of the Apothecaries' Hall. He must be qualified under their Act, and must have served seven years' apprenticeship.

Mr. HODGSON: And the men coming up under the new arrangement are men who may have put in only three months' practical pharmacy, and that is what you object to, and very properly.

DISPENSARY COMPOUNDERS.

The PRESIDENT: Since the last meeting we have had a letter from the Local Government Board in reference to the question of accepting our licentiates as the apothecaries of dispensaries. Mr. Grindley and I had a very satisfactory interview with Dr. Mooney, and I have made a note of the result on the letter. He assured us that since the previous deputation waited on him, whenever any vacancy for a compounder of medicine had occurred in any dispensary his Board had issued an order to the effect that the office might be filled by either a duly qualified pharmaceutical chemist or an apothecary, according as the committee thought fit, and that that course—which was quite equivalent to a sealed order—the Board would continue to observe.

Mr. WELLS: That is very satisfactory.

Mr. GRINDLEY: They won't take the direct way of withdrawing the sealed order, but they go the circumlocutory way—that is, they will issue an amended instruction to the committee of the dispensary whenever a vacancy occurs.

Mr. WELLS: Before any appointment is made the vacancy is to be notified to the Local Government Board, and they will send an order to appoint somebody; and they have stated now that a man of either one class or the other may be appointed.

Mr. GRINDLEY: They also stated that if we found in any case that our man did not get as good a chance as any other, they would take action on our bringing the matter before them.

Mr. WELLS: We should take some step for the purpose of informing public bodies as to the position of our licentiates. I have been informed that recently, in reply to an advertisement, two of our licentiates offered themselves for the position of dispenser in a public institution. They were told that they were not eligible. Afterwards the committee of the institution could not get an apothecary, and then they appointed one of our men.

The PRESIDENT: Perhaps Mr. Wells and Mr. Grindley would draw up a circular on the subject, and submit it to us at our next meeting.

The suggestion was approved.

WANTS TO BE A DRUGGIST.

A letter was received from Mr. John Pelin, of Edenderry, respectfully requesting the Council to reconsider his application to be registered as a druggist without examination. He stated that for twenty-five years before his father's death he was the part proprietor and manager of the business which they carried on, and that if there had been a deed of partnership between him and his father he would have been entitled to be registered last year.

Mr. HODGSON said that no doubt the course the Council had been obliged to take was a hardship upon Mr. Pelin, but he did not see how it was to be got over. He knew that he conducted the business for his father for a great number of years.

The PRESIDENT: The difficulty we found ourselves in was that no application was made by him at the proper time, and if we granted him the licence which he asked for without examination we would have been breaking the law.

Mr. HODGSON: It is an unfortunate case.

Mr. WELLS: But if he was all that time carrying on the business he ought to have no difficulty in passing the examination.

The PRESIDENT: It is a very light examination.

Mr. HODGSON: The establishment has been a drug, colour, and oil establishment as much as shops in the country usually are, for a great many years.

Mr. WELLS: I think I remember it when I was serving my time.

Mr. HODGSON: His father dealt with our house for thirty or forty years.

Mr. GRINDLEY: Don't you think Mr. Pelin should be informed that he can't go on?

Mr. GIBSON: Can the police authorities prosecute without our consent?

Mr. HODGSON: Certainly; they have nothing to do with us.

WANTS TO BE A CHEMIST AND DRUGGIST.

A letter was read from Mr. Campbell W. Gilmer, of Wellington Street, Ballymena, stating that he had been incorrectly registered as a "druggist" and requesting to be registered as a chemist and druggist.

It was ordered that Mr. Gilmer should be requested to supply evidence of where he was in business as a chemist and druggist prior to the passing of the Amendment Act, and also that he used that title.

A MATERIA MEDICA MUSEUM.

Mr. WELLS, in the absence of Dr. Barnes, who did not arrive until afterwards, moved pursuant to notice given by Dr. Barnes—

That the School Committee be instructed to make arrangements for the establishment and maintenance of a museum in connection with the Society.

It should be an instruction to the committee, however, to take no steps and spend no money without reporting to the Council. It was certainly not to the credit of the Society that at some of their examinations the examiners had to bring specimens with them. The Council had already a set of specimens, but it was not of a complete character.

Professor TICHBORNE, in seconding the motion, said it was most desirable that this museum should be established if the funds of the Society admitted of it, but he thought the motion should be amended so as to merely refer it in the first instance to the committee to report on the matter to the Council. He was sure they would be able to get a very handsome collection of specimens.

Mr. WELLS: Mr. Holmes told us that he had duplicate specimens and would be very happy to assist us.

The motion was amended so as to request the School Committee to report on the subject, and was unanimously passed.

TWENTY MORE REGISTERED DRUGGISTS.

The PRESIDENT mentioned that it appeared from the reports of the examiners at the examinations for registered druggists in Dublin and Belfast that at the Dublin examination 11 candidates gave in their names, of whom 1 was afterwards absent, 3 were rejected, and the rest passed; and that

at the Belfast examination 15 presented themselves, of whom 2 were rejected and 13 passed.

DONATION.

A donation was received from the Smithsonian Institution, Washington, of copies of the Reports of the United States National Museum for 1889 and 1890.

On the motion of Mr. GRINDLEY, seconded by Mr. LYONS, thanks were voted to the donors.

THE SELKIRK CASE.

The PRESIDENT referred to the case of the Society *v.* Selkirk, in Cork, and mentioned that the decision of the magistrates having been in favour of the Society, the defendants appealed to the Recorder of Cork, who reversed the decision of the magistrates on the ground that no sealed order had been given by the Council to their solicitor, Mr. Julian, to act for them in the matter. He (the President) consulted Mr. Clay, who informed him that the decision of the Recorder was entirely incorrect, and that in five or six appeals in London on the same point, the decisions, including one of the House of Lords, had been in favour of the contention of the Society. The Act of Parliament on which the Recorder of Cork based his decision was passed for the protection of the solicitors of companies in order to enable them to get their costs; but in the present instance the decision of the magistrates having been against the defendants, their solicitor had no right to rely on that Act at all, and the solicitor for the Society was satisfied that the Registrar's letter was sufficient to enable him to get his costs. Mr. Clay had telegraphed to Mr. Julian for particulars in order to appeal against the Recorder's decision in the High Court at Dublin.

Mr. GIBSON said he thought the prosecution of the Messrs. Selkirk should have been dropped.

Mr. HODGSON: If you, as a licentiate of this Society, were to start a business in England, the English Society would prevent you from carrying it on. So long as there is no reciprocity, I don't see that we can do anything else than what we are doing.

Mr. WELLS said the case of Messrs. Selkirk was not the only one that the Council had to deal with. There were two others in the same position, one of whom stopped trading and the other promised to stop, and there was a third, who defied the Society.

The PRESIDENT: Mr. Gibson is taking a very strange view of the matter. If we were to allow the Messrs. Selkirk to go on, we should be overrun with English pharmaceutical chemists.

Mr. GIBSON: Mr. Selkirk was in business before this Society was in existence.

Mr. WELLS: Then he was breaking the Apothecaries Act.

Mr. GIBSON: It would have been an act of grace to let him alone; but I would be at one with you as regards any others coming over now.

Mr. WELLS: That would not be fair.

Professor TICHBORNE: I think Mr. Selkirk started about the time of the creation of this Society, or, perhaps, a year before it.

SALE OF POISONS BY UNQUALIFIED PERSONS.

Mr. GIBSON said that notice ought to be served in Dublin and Belfast warning seedsmen not to sell poisons.

The PRESIDENT: Give us the names of any seedsmen who do so, and we will direct the Registrar to serve notice on them.

Mr. SIMPSON: I believe that some drapers in Dublin have been doing so likewise.

The PRESIDENT: Give their names to the Registrar.

ELECTIONS AND NOMINATIONS.

Mr. James Hillock, of Armagh, was elected an associate druggist.

On the motion of Mr. WELLS, seconded by Mr. LYONS, Mr. William White of 24 Twickenham Street, Belfast, and Mr. William Kingston Young, of Charlotte Street, Newbridge, were nominated for membership of the Society.

On the motion of Mr. GIBSON, seconded by Mr. CONYNGHAM, the following were nominated for membership as associate druggists:—Messrs. John M'Clements, Newtownards;

Thomas M'Donnell, Portaferry; John Cairnes, Witton Street, Belfast; Harold H. Quigley, Melrose Terrace, Belfast; William Alexander, Great Strand Street, Dublin; and Andrew Kintead, Donegal Street, Belfast.

Some financial and other business having been disposed of, the Council adjourned.

Pharmaceutical Society of Great Britain.

PRELIMINARY EXAMINATION.

THE following are the questions given on Tuesday, July 12.

LATIN.

(Time allowed: From 11 A.M. to 12.30 P.M.)

I. For all candidates. Translate into Latin:—

1. Ye often praised the brave sailors.
2. No man can serve two masters.
3. It is the duty of a good citizen to obey the laws.
4. Who doubts that man lives to die, and dies to live again?
5. He said he would never have come, unless he had heard that I was here.

II. Translate into English either A (Caesar) or B (Virgil).

(Candidates must not attempt both Authors.)

A. CAESAR.

1. De tertia vigilia T. Labienum, legatum pro praetore, cum duabus legionibus et his ducibus qui iter cognoverant, summum jugum montis ascendere jubet; quid sui consilii sit, ostendit. Ipse de quarta vigilia eodem itinere, quo hostes ierant, ad eos contendit, equitatumque omnem ante se mittit. P. Considius, qui rei militaris peritissimus habebatur, et in exercitu L. Sullae, et postea in M. Crassi fuerat, cum exploratoribus praemittitur.

2. Haec si enuntiata Ariovisto sint, non dubitare, quin de omnibus obsidibus, qui apud eum sint gravissimum supplicium sumat. Caesarem vel auctoritate sua atque exercitu, vel recenti victoria, vel nomine Populi Romani detertere posse, ne major multitudo Germanorum Rhenum transducatur, Galliamque omnem ab Ariovisti injuria posse defendere.

Grammatical Questions.—For those only who take Caesar.

1. Give the genitive singular, and state the gender, of each of the following nouns:—*obsidibus, supplicium, auctoritate, exercitus, nomine, multitudo.* (Paragraph 2.)
2. Give the principal parts of the following verbs:—*possum, duco, fateor, nolo, fallo, proficiscor, audeo.*
3. Parse fully the following sentence:—*Quid sui consilii sit, ostendit.* (Paragraph 1.)
4. Render in *oratio recta* the last sentence of Paragraph 2.

B. VIRGIL.

1. Hic tamen ille urbem Patavi sedesque locavit Teucrorum, et genti nomen dedit, armaque fixit Troia; nunc placida compositus pace quiescit. Nos, tua progenies, celeri quibus annuis arcem, Navibus, infandum, amissis, unius ob iram Prodimur, atque Italiam longe disjungimur oris. Hic pietatis honos? Sic nos in secptra reponis?
2. Munera praeterea, Iliacis crepta ruinis, Ferre jubet, pallam signis auroque rigentem, Et circumtextum croceo velamen acantho. Ornatus Argivae Helenae, quos illa Mycenis, Pergama quum peteret inconcessosque Hymenaeos Extulerat, matris Ladae mirabile donum; Praeterea sceptrum, Ilione quod gesserat olim, Maxima natarum Priami, colloque monile Baccatum, et duplicem gemmis auroque coronam.

Grammatical Questions.—For those only who take Virgil.

1. Give the genitive singular, and state the gender, of each of the following nouns:—*urbem, sedes, nomen, pace, progenies, oris.* (Paragraph 1.)
2. Give the principal parts of the following verbs:—*possum, duco, fateor, nolo, fallo, proficiscor, audeo.*
3. Parse fully the following sentence:—*Nunc placide compositus pace quiescit.* (Paragraph 1.)

4. What is meant by *oratio recta*? Give a short passage in illustration.

ARITHMETIC.

(Time allowed : From 12.30 P.M. to 2 P.M.)

[The working of these questions, as well as the answers, must be written out in full.]

1. Divide thirty-nine millions three hundred and forty-two thousand one hundred and fifty-four by CCCXXXIII.
2. What is the price of a piece of timber 27 ft. long, 1 ft. 9 in. thick, and 1 ft. 2 in. broad, at 4s. per cubic yard?
3. If $\frac{2}{5}$ of $1\frac{1}{2}$ of an estate be worth 300*l.*, what will be the value of $\frac{2\frac{1}{2}}{14}$ of the estate?

4. Simplify $\frac{2 \cdot 375}{3 \cdot 16}$ of $\frac{4 \cdot 4}{\cdot 0625} \div \frac{8 \cdot 8}{7}$ of $\frac{4}{5 \cdot 625}$.

5. Write down the Metric Table of Weight. Express approximately, in avoirdupois weight, 664 hectog. 17 décag.
6. Express the rate per hour of a train in terms of that of a mail-cart, the former travelling $4\frac{1}{2}$ myriam. an hour, and the latter, at an average pace, travelling 135 kilom. in ten hours.
7. If 8 per cent. be gained by selling 218 lbs. for 92*l.* 13s., at what price per pound must it be sold to gain 17 per cent.?

ENGLISH.

(Time allowed : From 3 P.M. to 4.30 P.M.)

1. Give the force or meaning of the suffix *en* in the following words:—*sweeten, oven, maiden, broken, golden.*
2. Parse fully the following sentence:—"The little town that he founded stood securely on that hill."
3. Correct the following sentences, giving your reasons:—
(i.) It is me you have to thank for it.
(ii.) Neither Italy or Germany owe their reputation to that circumstance.
(iii.) If he runs so quick as that to-morrow he will win.
4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where necessary:—beautiful indeed echoed a red-haired man with an inquisitive nose and blue spectacles who had unpacked himself from a cab at the same moment as mr pickwick going to ipswich sir i am replied mr pickwick extraordinary coincidence so am i mr pickwick bowed going outside said the red-haired man mr pickwick bowed again bless my soul how remarkable i am going outside too said the red-haired man.
5. (This must be attempted by every candidate.) Write a short composition on one of the following subjects:—
(i.) Railways.
(ii.) Electricity.
(iii.) Eloquence as a power in the world.
(iv.) "How'er it be, it seems to me,
 'Tis only noble to be good;
Kind hearts are more than coronets,
And simple faith than Norman blood."

JACOB BELL SCHOLARSHIPS EXAMINATION.

THIS examination was held on Tuesday at the same time as the Preliminary examination, and the following papers were given:—

(I.)

Time allowed : Three hours (11 to 2). In awarding marks the neatness and legibility of the writing will be taken into account.

In framing Answers, Candidates should not enlarge upon the Questions, but should confine themselves to giving, as briefly and clearly as they can, the information required.

LATIN.

1. Translate into English:—

Ecce trahébatur passis Priaméia virgo
Crinibus a templo Cassandra adytisque Minervae,
Ad coelum tendens ardentia lumina frustra,
Lumina, nam teneras arcebant vincula palmas.
Non tulit hanc speciem foriata mente Coroebus,
Et sese medium iniecit periturus in agmen.
Consequimur cuncti, et densis incurrimus armis.
Hic primum ex alto delubri culmine telis
Nostorum obruimur, oriturque miserrima caedes
Armorum facie, et Graiarum errore iubarum.
Tum Danaï, gemitu atque ereptae virginis ira,
Undique collecti invadunt.

2. Translate into English:—

Misce. Capiat cochleare amplum mane quotidie; repetatur dosis ad tres vices et deinde capiat aeger haustum aliquem purgantem.

3. Parse *passis, periturus, obruimur*; and give the principal parts of these verbs. (Question 1.)

4. Translate into Latin:—

- (a) He came from Massilia to Italy, and lived for two years in Rome, the capital of the world.
- (b) The soldiers said that they had never obeyed a greater commander than Caesar, and that, when he led them to battle, they were not afraid of defeat.
- (c) When he became very intimate with him, he pointed out to him that, things having been badly carried out in Sicily, the Athenian power was waning.

ENGLISH.

1. Parse fully the words in italics in the following sentences:—

- (a) She *only* left of all the harmless train.
- (b) Thou *nurse of every virtue, fave thee well.*
- (c) *Uneasy* lies the head that wears a crown.
- (d) Remote from towns he *ran his godly race.*

2. Write a short essay on one of the following subjects:—

- (a) The Influence of Newspapers.
- (b) The Effect of Poverty on Character.
- (c) "A man is known by his company."

ARITHMETIC.

1. Reduce $\frac{1\frac{3}{4}}{2\frac{2}{3}}$ of $(\frac{5}{6}$ of $1\frac{1}{2}$ cwt. $-\frac{11}{18}$ of 23 $\frac{1}{2}$ lbs.) to the fraction of $1\frac{1}{3}$ tons.
2. Simplify $\cdot 0732$ of 8 ac. 0 ro. 7 po. $+ \cdot 012625$ ac. $-\cdot 02$ po.
3. The railway fare in France is 6 centimes a kilomètre. If 2,520 centimes be equal to 1*l.*, compare this rate with the English parliamentary rate of 1*d.* per mile.

FRENCH OR GERMAN.

The Candidate is at liberty to choose either French or German, and is not required to show a knowledge of both. Marks will be awarded for only one.

FRENCH.

1. Translate into English:—

Ce sont deux pauvres filles restées orphelines à quinze ans et qui, depuis, ont vécu comme vivent les femmes qui travaillent, d'économie et de privations. Fabriquant depuis vingt ou trente ans des agrafes pour la même maison, elles ont vu dix maîtres s'y succéder et s'enrichir, sans que rien ait changé dans leur sort. Elles habitent toujours la même chambre, au fond d'une de ces impasses de la rue Saint-Denis où l'air et le soleil sont inconnus.

2. Translate into French:—

- (a) After a long walk in the suburbs, I came in sad and discouraged; all that I had seen seemed to accuse the civilisation of which we are so proud.
- (b) General Murillo has himself said that it was impossible to prevent the mischief; that there was not a single soldier in the Spanish army who had not received letters from his family, in which they were enjoined to take advantage of the opportunity and fill their pockets in France.

GERMAN.

1. Translate into English:—

Der Schwan wollte einmal ein Gastmahl geben, und alles war dazu vorbereitet; aber sein Diener, der Frosch, hatte alle Einladungskarten, bis auf eine, verkehrt abgegeben. Als der Schwan sanft am Ufer des Teiches umherschwamm, und seinen schönen Hals hin und her bog, um nach seinen Gästen auszusehen, da erschienen zu seinem Schrecken der Kukuk, die Schwalbe, die Nachtigall, die Bachstelze, der Sperling und die Ente. Nur die Ente war erwartet; was sollte er mit den übrigen Gästen anfangen, die für das Wasser gar nicht taugten?

2. Translate into German:—

(a) The woman had brought with her into the house two daughters, who were beautiful and fair in face, but base and black at heart.

(b) On the evening of the battle an officer of the Hussars, who were forward in the pursuit, rode as far as the gates of Königgrätz, and, finding there were no sentries outside, rode in.

II.

Time allowed: Two hours (3 to 5).

CHEMISTRY AND PHARMACY.

1. What is meant by the valency or quantivalence of an element? Classify the following according to their valency:—Bromine, oxygen, calcium, bismuth, nitrogen, carbon, and sodium.

2. State (1) the volume, (2) the weight of oxygen in two litres of carbon dioxide measured at standard temperature and pressure.

3. Enumerate with formulæ the oxides of nitrogen and sulphur, and state how nitric and sulphurous acids may be prepared, giving equations.

4. How is syrupus ferri phosphatis made? Give equations of the chemical decompositions occurring in the process.

5. Describe the official process for spiritus ætheris nitrosi.

BOTANY.

1. How would you distinguish between a hair, spine, and prickle?

2. Define æstivation and placentation, and give diagrams illustrating the principal forms.

3. Describe in detail the flower of a poppy.

Legal Reports.

PUSHING A MEDICINE IN SPAIN.

In the Queen's Bench Division, on Saturday, the case of Vilanova Hermanos & Co. v. Salt Regal (Limited) was tried before Mr. Justice Wright, sitting without a jury. It was a dispute between the parties as to the terms of an agency in Spain and the amount authorised to be spent in advertising Salt Regal in that country.

Mr. Murphy, Q.C., and Mr. Blake Odgers were for the plaintiffs; Mr. J. C. Bigham, Q.C., and Mr. Mulholland appeared for the Salt Regal (Limited).

Mr. Murphy stated that the action was brought by a Spanish firm, carrying on business in Barcelona, who said they were agents for the defendants in Spain for the sale of Salt Regal—one of the preparations used for keeping away the influenza, although the company did not offer any rewards. (Laughter.) Messrs. Vilanova brought the action to recover 800*l.* spent in advertising Salt Regal, and the defendants said they only authorised the expenditure of 450*l.* Then came the question whether there was a good counter-claim with regard to goods which, he said, were sent on sale, but which plaintiffs alleged were sent on consignment. Messrs. Vilanova were agents in Spain for a great many patented

inventions. The transactions with the Salt Regal Company began in 1889.

Mr. Alberto Vilanova, in answer to Mr. Blake Odgers, said the defendants were a Liverpool firm. He was agent for things like Pears' Soap. They sold very little of the Salt Regal sent them. It turned out to be of bad quality. Instead of turning pink after the powder was put into water, it became a brownish colour. It effervesced properly, but left a kind of sediment. Mr. Peate (the company's manager) came out to Barcelona to see what was the matter with the goods, and witness showed him letters from customers.

Cross-examined by Mr. Bigham: He was not still the agent for Pears' soap. Their soap, when shipped to Spain, was too dear to compete with other goods, and he gave up the agency. There were three partners in his (plaintiffs') firm, but the partnership had been dissolved. The defendant's goods (nominally about 800*l.* worth) were in the warehouse at Barcelona. He was ready to give them up upon receiving payment of his claim. He had never heard of such an arrangement as a buying agency. He had heard of an arrangement under which a man had the sole right to buy in a country or particular district. The defendants first wanted them to buy out and out, taking minimum quantity. They declined such an agency. They had had such an agency in Spain in reference to goods that were well known in the country—Sapolio, for instance. The present action was brought to recover 800*l.* for advertisements over practically three months. He had written saying if the company would sanction the expenditure of 100*l.* for advertising, they would be well recompensed. That had reference to the first twenty-five cases. The company wanted them to order on their own account, and they refused, whereupon the company said they would not advertise to any extent. In June Mr. Peate gave witness authority to advertise for a year at the rate of 150*l.* a month. Mr. Peate wanted him to take a certain amount of goods, but eventually waived that stipulation. Before he incurred any considerable expense in advertising he was to submit a scheme. That was outside the 150*l.* a month for a year. He understood he had to submit plans showing how he was to spend the 1800*l.*, but meantime the advertising commenced. Mr. Peate was dead, but his evidence had been taken. Witness understood the goods were being sent on consignment. He did not agree with Pears' about advertisements. He wrote the defendants that they must pay the extra duty charged in consequence of their having "manifested" the Salt Regal as "effervescing" goods instead of drugs. Finally he wrote saying the Salt Regal was nothing more than a sort of "saponaceous" tooth powder.

As this juncture a consultation took place, the result of which was it was arranged that judgment should be entered for the plaintiffs for 450*l.*, they to keep the goods in Barcelona. It was stated the settlement covered all differences.

ADULTERATED TINCTURE OF RHUBARB.

At the North Holland Petty Sessions, on July 6, Mr. Thos. Burgess, of Surfleet, Risegate, was summoned for selling adulterated tincture of rhubarb, and, the case being proved, a fine of 2*s.* 6*d.* and costs was imposed.

A similar charge was preferred at the same court against Mr. Henry John Poulson, of Kerton, but in this instance the case was withdrawn.

A SIDE-LIGHT ON THE SAYDI'S REMEDIES FAILURE.

An application was made in the Queen's Bench Division of the High Court, before Justices Wright and Henn Collins, on July 7, on behalf of the Incorporated Law Society, that Mr. Edwin Morris, solicitor, North John Street, Liverpool, be struck off the rolls. Mr. Hollams, on behalf of the Incorporated Law Society, said that the matter had been taken up on behalf of Miss Mary Sinclair, who charged the defendant with having misappropriated 1,000*l.*, and that he induced her to invest 300*l.* in a worthless company in which he was interested. The defendant did not appear, and he was not represented by counsel. Their Lordships granted the application, and the defendant's name will be removed from the rolls.

COUGH-LOZENGES AS PATENT MEDICINES.

At the Yarmouth Police Court, on July 8, Charles Leach, sweet vendor, was summoned for selling sweetmeats as a patent medicine without affixing an Inland Revenue Government stamp. Mr. Patrick Kennedy, of the Inland Revenue Office, said that in consequence of the sale of some cough-lozenges at Boston, in Lincolnshire, he received instructions to purchase a box of the maker. In March he went to the defendant's stall in the Market Place, and purchased a box of American cough-tablets (produced). Defendant had been cautioned by letter from London not to sell these lozenges without a stamp. Defendant said that ever since he left America, twenty years ago, he had made and sold these lozenges. In November, 1891, he had received a notice that these lozenges must be sold under Government stamp. He asked why, and was told that the word "Leach's" made them a proprietary article. He thereupon destroyed all his labels, and printed another, "American cough-tablets." Then he was told that the word "American" would render him liable, so he dispensed with the word "American." He heard nothing more till six weeks ago, when he was again informed the labels were still objected to, because it was stated that the tablets were for coughs, colds, and asthma, but if he would pay 1*l.* to the Supervisor he would hear nothing more of an information which had been laid against him. He did not pay this because he did not know what it was for. He had erred in ignorance. He now put nothing on the boxes, and sold them as if they were fuller's earth. (Laughter.) It had been a serious thing for him, as the trade, which was his staple, had fallen off. He had a mother-in-law, wife, and seven children to keep. The Mayor: Why don't you put a 1½*d.* stamp on? Defendant: I can't afford to do it on 1*l.* boxes. He was fined 1*l.*, including costs, in two cases.

ACTION FOR DRUGS.

In the City of London Court, on Wednesday, before Mr. Commissioner Kerr, Mr. Edwin W. Livermore, drug-merchant, 13 Cullum Street, Fenchurch Street, E.C., sought to recover the sum of 9*l.* 13*s.* 3*d.* for drugs supplied to Mr. Rowland Matthews, chemist, 72 Bishopsgate Street Within, E.C. The defendant said most of the goods had been sent under a misapprehension. Indeed, he had returned them all except those valued at 1*l.* 8*s.* 9*d.* The plaintiff said that was not so. The goods were supplied in March, 1891, and in May of the same year the defendant wrote saying he would return 8*l.* worth of the drugs and would undertake that, if they did not realise that amount when resold, he would pay the difference. He could not resell the drugs until April 11, and then they only fetched 4*l.* 2*s.* 6*d.* He was claiming for the balance.

The Defendant: They were invoiced at an excessive charge.

The Plaintiff: That is not so.

The Defendant: Only a portion of them had been sold.

The plaintiff said he had some of the chemicals on hand, but what was remaining—principally sulphur—would not cover the warehouse charges. The charges would more than swallow up the value of the sulphur.

Mr. Commissioner Kerr said the defendant must pay the debt. He left it to the plaintiff to resell the chemicals. He could have those which were not sold.

The Defendant: I don't want them. They are not what I want.

Judgment was then entered for the plaintiff for the amount claimed, with costs.

AN UNSUCCESSFUL PATENT-MEDICINE VENTURE.

Two actions have been raised in the Court of Session, Edinburgh, against Robert Bell, M.D., physician, 29 Lynedoch Place, Glasgow. In the first, Mrs. Margaret Isabella Meason, or Thomson, 10 Park Quadrant, Glasgow, sues for recovery of the sum of 426*l.* 8*s.* 9*d.*, which she says she lent to the defendant. The plaintiff says that, in 1885, the defendant asked her and her husband to become his partners in the sale of a patent medicine called "Dr. Bell's Liniment," which he had invented, and he represented that large profits would accrue from the joint adventure. They, however,

declined the offer. In the beginning of November, 1885, the defendant proposed that the plaintiff and her husband should lend him money to enable him to proceed with the manufacture and sale of the liniment. On the 10th of that month the defendant wrote to the plaintiff, embodying his proposals for a loan in the following terms:—

29 Lynedoch Street, Glasgow,

November 10, 1885.

MY DEAR SIR,—I would like if you could let me have 50*l.* within the next week, as everything is now ready for advertising, and it must be gone ahead with at once. I would propose you pay 50*l.* in two instalments, and after ten instalments of 40*l.* This will give you one-fifth of the interest in the liniment, and I will agree to pay you back all you put into the company, with 5 per cent. added, at the end of five years if you desire it, which I am very certain you will not. There is a clear profit of 9*d.* on each bottle.

With kind regards, I am, yours sincerely,

ROBERT BELL.

The plaintiff avers that on the strength of his personal security she and her husband lent the defendant 500*l.* on the proposed conditions. These conditions were afterwards modified in terms of an assignment by the defendant in their favour, dated March 9, 1886, in consequence of which the loan was increased to 750*l.*, payable in the proportion of four-fifths by Mrs. Meason, and one-fifth by her husband. In consideration of this larger loan, the security of the plaintiff and her husband over the net profits was to be increased to one-third in place of one-fifth. The liniment, the plaintiff avers, was manufactured, advertised, and sold by the defendant under the firm of Ertell & Co, manufacturers of "Dr. Bell's Liniment," and premises were rented at 51 Woodlands Road, Glasgow. In November and December, 1885, the plaintiff advanced 40*l.*, being her proportion of the 50*l.* instalment of the loan. She subsequently advanced 32*l.*, being her proportion of the 40*l.* instalments till March, 1887, when she paid a reduced instalment of 24*l.* At that time she had advanced 520*l.*, but as the business proved an utter failure, and their security over the net profits was of no value, she made no further advances. The shop at Woodlands Road was closed, and the stock handed over for realisation to Messrs. Hatrick & Co., wholesale chemists, Glasgow. Since then the plaintiff had been repaid 213*l.* 2*s.* 5*d.*, but the defendant refuses or delays to make any further payment.

The second action is by Alexander Thomson, husband of the plaintiff in the first action. He sues for 106*l.* 12*s.* 3*d.*, being the unpaid balance of 130*l.* which he lent to the defendant under similar conditions.

The defendant, in answer to both actions, denies having borrowed any money from the plaintiffs, and says that he had no connection with the firm of "Ertell & Co." The record in the action has been closed, and the case sent to the procedure roll for debate.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

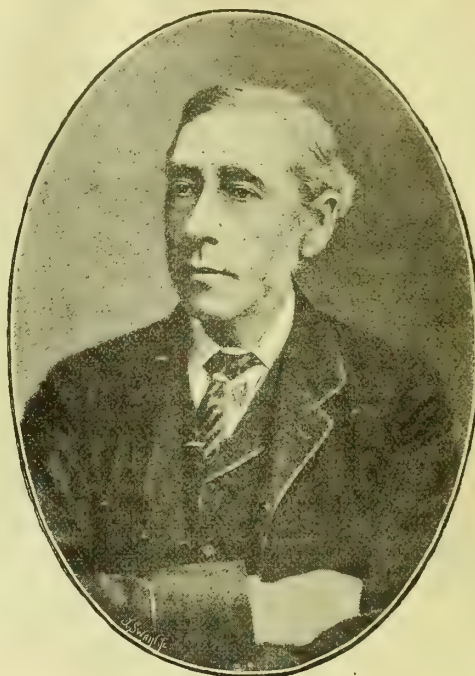
Prideaux, Thomas Engledine Pegamus, "Luson," Fore Street, Wellington, physician and surgeon. Trustees—James S. Haddon, Wellington, draper, and others. Dated July 5, 1892; filed July 11, 1892. Unsecured liabilities, 550*l.* 8*s.* 4*d.*; estimated net assets, 830*l.*; creditors fully secured, 980*l.* The following are scheduled as creditors:—

	£	s.	d.
Farquharson, W., N., London	80	0	0
Gale & Co., London	117	1	3
Haddon, J. S., Wellington	27	1	2
Ireland, G. W. H., Wellington	10	9	10
Janes, Thos., Wellington	24	7	7
King, Mendham & Co., Bristol	18	0	3
Maw, Son & Thompson, London	29	17	7
Prideaux, Miss F. E., Wellington	66	9	9
Prideaux & Son, Wellington	30	5	6
Wellington Gas Company, Wellington	31	7	9

General Election Portraits.



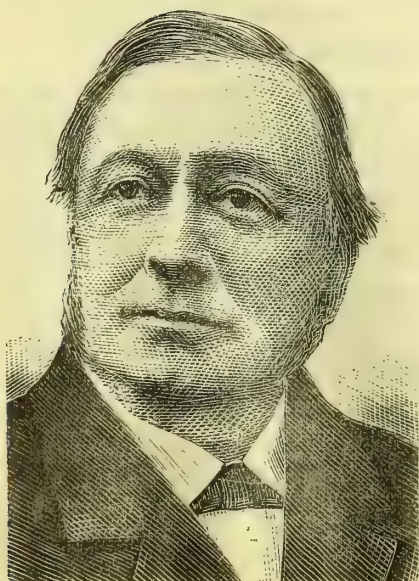
SIR JOHN LUBBOCK, M.P.



GAINSFORD BRUCE, Q.C., M.P.



T. HOWELL WILLIAMS, L.C.C.



SIR H. E. ROSCOE, M.P.



CHARLES TOWNSEND, M.P.



B. W. RICHARDSON, M.D.



MARK H. BEAUFOY, M.P.



J. T. BRUNNER.



OCTAVIUS VAUGHAN MORGAN.

DECEIT AND FRAUD.

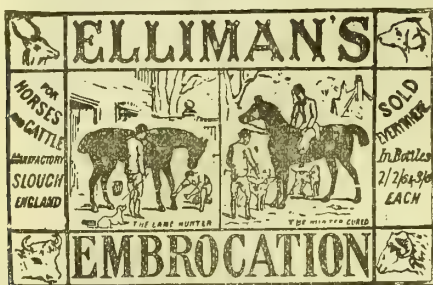
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The "Sanitas" Company, Limited, would also like to be favoured with the name and address of any printer who offers to supply such wrappers to the trade.

THE "SANITAS" CO., LIM., Bethnal Green, E.

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Free to any address in the United Kingdom

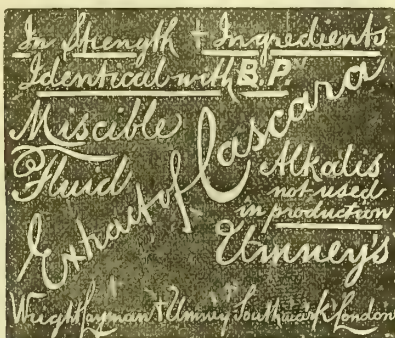


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Editorial Comments.

SHOP-HOURS.

THE complaints of long working-hours which we have been publishing lately are by no means novel, and we suppose it is reasonable to expect that the present manifestation of discontent will end, as all its predecessors have done, in a more or less sullen acquiescence in the unsatisfactory condition which has prevailed in the chemists' trade all through our time, and in the time of our fathers before us.

But need this be the case? Is there no possible and practicable way out of the miserable tyranny of this custom of long hours? This is not an assistants' question only. There are thousands and tens of thousands of owners of shops in this country who would change a dull, monotonous, colour-

less, joyless existence into a bright and cheerful one if they could be forced somehow out of their shop-life for an hour or two every day. They are often not aware of this themselves. To many of them the shop has become so entirely their home that it seems to have absorbed all their interests. It is men of this class in every trade who make earlier closing so difficult, and it is on account of them that some people advocate legislative interference.

The majority of healthy people recognise nowadays that everybody ought to have some other interest in life than merely getting a living. Working-men of all classes are declaring that they will not be satisfied to pass all their waking hours in working for their wages, and sympathy with the desire for a share in pleasures which the world provides is rising rapidly. Chemists' assistants may fairly put forward a similar claim, and we cannot think that they will lack the sympathy of the general body of their own employers even. The only definite statement of claim that we have seen yet is for a week of seventy-two working-hours. Will any chemist and druggist employer write to us and say that is an unreasonable demand? And yet, perhaps, half of the chemists' assistants in this country work, or at any rate have to be on duty, for more than seventy-two hours every week. Twenty years ago ninety to a hundred hours a week of duty was the normal condition. This has been to some extent ameliorated, but not much, among what are called the legitimate pharmacies. In all large towns there are pharmacies in the commercial districts where no business is done in the evening, and these have been driven into habits of early closing. But to a much larger extent the hours of many assistants have been limited by the store system. Yet the gas in suburban businesses, and in country-town businesses, still blazes away far into the night, long after all the neighbouring shops are closed. Then there are the wearisome waiting and watching in the little back parlour, the turns at Sunday duty, and the chances of the night-bell, which have to be added to the chemist's assistant's week's work. Is it astonishing that they should ask for some modest limitation of their hours of service?

We are aware of the difficulties in the way of a reduction of hours. Obviously they are greater in the chemists' than in any other business. But they do not seem to us to be insuperable. Uniform hours of closing are perhaps impossible. But a definite limitation of the hours per week to be given for a certain salary is a condition which is by no means unattainable, and which, we cannot help thinking, may be reckoned upon in the near future. Good assistants are in demand, and it is for them to make their terms. If they could once form the nucleus of a union pledged to bring about this one reform, they could carry their object. If firms who employ two, three, or four assistants should object that as it is they cannot keep up with the work, the answer is simple enough; they must have a larger staff. And the chemist who keeps only one must follow suit or do more work himself. This does not necessarily mean more expense. We are told that the dispensers at the stores often do more work in ten hours than an assistant in a legitimate pharmacy does in fourteen hours. However this may be, it is the public who will have to pay in the end, and neither public nor reasonable employer is wise in the long run in extracting work from a good servant to the maximum of his capacity.

DRINK-CURES.

THE "drink demon" is admittedly the curse of the world. It is not necessary to hold extreme views on temperance or

total abstinence to appreciate the truth of that statement. It would be out of place to discuss in this journal the social conditions which favour the growth of the evil, or the means which societies and nations have taken to repress it; what we may recognise is the fact that inebriety is ranked as a disease more or less amenable to medical treatment. It has been defined as a nervous disease closely allied to insanity, which manifests itself periodically or constantly. It may commence suddenly as the result of some severe shock to the brain, it may originate in the social habits of the patient, or it may be produced by other poisons than alcohol. But, as in the case of all nervous diseases, there must be a predisposition to it in order to effect its evolution. Hence hereditary conditions are amongst the most potent of the influences which determine inebriety. Such is the purely physical view of the evil, which brings inebriety into the province of the physician as a disease which can be cured, or at any rate treated. To that fact we owe the many "cures" which have from time to time become popular, and of which a notorious example is the Keeley or gold cure which is now creating some stir in medical circles in this country. Dr. Keeley, its originator, has come to London for the purpose of forming a syndicate to work his treatment, and 150,000% is the capital which is wanted to buy the secret and carry on the enterprise. This is not the usual way that medical men take to propagate any new or peculiar treatment which they discover; it is quite unorthodox, and on that account suspicion is thrown upon the remedy and its originator. In strict fairness this ought not to be, for a discovery which can offer any evidence of its value deserves unprejudiced trial, however it is brought forward, and that, we fancy, could be obtained with a syndicate having 150,000% behind it. The weak spot in this instance is that Dr. Keeley wished to work the orthodox and unorthodox methods together. He endeavoured to secure the sympathy of Dr. Norman Kerr, whose reputation is unquestionable, and concurrently he appealed to religious circles. The latter listened and applauded; the doctor listened and consulted his colleagues on the Society for the Study of Inebriety. That Society held a meeting last week and adopted the two resolutions following:—

This meeting is of opinion that any so-called "cures" for inebriety the composition of which is not disclosed, are unfit to be commended by honourable members of the medical profession, who are bound to place the full details of their treatment before their professional colleagues—a requirement as essential in the interest of the public as it is consonant with the disinterested practice of scientific therapeutics.

This meeting, having been informed by a competent London analyst, who has made a special analysis, that the alleged "bichloride-of-gold cure" shows no trace of gold or of chlorides, and contains 27.55 per cent. of alcohol, condemns unreservedly the prescription of such an intoxicating preparation to an inebriate.

These resolutions were arrived at after full statements by Dr. Kerr and Dr. J. E. Usher, of Melbourne, regarding the nature of the cure and the methods of working it. Full publicity has already been given to these in the United States, where the medical press and profession have universally condemned the "cure" during the past year or two. Dr. Keeley and his "cure" have created great public excitement there. He has a sanatorium at a town called Dwight, in Illinois; there he receives patients, who pay \$25 down, and from \$5 to \$25 per week. The patients get hypodermic injections four times a day, and take doses of a mixture. Chloride of gold is said to be an essential, but not the only, ingredient of the medicine, which is sold in the States in pairs of bottles at the handsome price of \$9 per pair. Various analyses of the medicine have been published in American journals, and the following formulæ are said to fairly represent the constituents:—

The Injection.

Strychnine sulphatis	gr. $\frac{1}{2}$
Atropinæ	gr. $\frac{1}{4}$
Acid. boracis.	gr. xv.
Aq. destillat.	℥iv.

Fiat solutio.

The Mixture.

Ammonia muriat.	gr. i.
Aloia.	gr. ij.
Tr. cinchon. comp.	℥ij.
Aque	℥j.

Fiat mistura.

Dose: A teaspoonful every two hours while awake.

That these formulæ are not far from the mark is supported by Dr. Usher's observations at Dwight. He found that, owing to the dilation of the pupils, 70 per cent. of the patients wore spectacles, and they also suffered from giddiness—symptoms which are traceable to the action of atropine. In the early stages of the treatment morphine appears to be used in conjunction with atropine. Dr. Kerr's analyst found in the mixture neither gold nor chlorides, but sugar (6 per cent.), alcohol (27.55 per cent.), traces of mercurial salts, principally lime, and 61.31 per cent. of water. This analysis does not agree with the formula which we have quoted, but the point that Dr. Kerr makes out of it is that the remedy is as intoxicating as port or sherry. That is the objection to most drink-cures; analyses of a score of them made in the United States a few years ago showed that they contained from 20 to 70 per cent. of alcohol, with, in many cases, notable quantities of morphine. In view of past experience with these "cures" and the unusual methods adopted by Dr. Keeley (he has spent 40,000% a year on advertising), it is surprising that the new cure should be taken at all seriously. The medicine has never been found, and we question if it ever will be, which will cure drunkenness. The disease is moral as well as physical, and, as Dr. Kerr says, "it needs moral, mental, and physical treatment. An inebriate to be cured must himself have a desire to be cured, and must exercise a certain amount of will-power. When the narcotic action of the drugs has been swept away from the brain by the exclusion and prohibition of alcohol, then the little will-power left reasserts itself." It is, unfortunately, the case that those whose duty it is to administer the moral and mental treatment are far too ready to accept and rely upon physical remedies. Consequently, cures of the Keeley class are extolled in religious circles, in religious newspapers, and by temperance advocates in perfect honesty, doubtless, but in woeful disrespect of the higher power of moral suasion and the first principles of Christian teaching. Some "cures" may be useful aids, but experience shows that they become magnified into positive antidotes. Therein lies the evil of fostering any of them, and we think it to be the duty of chemists and druggists who take more than a purely commercial interest in the sale of drink "cures" to apply the weight of their knowledge in fostering reliance upon moral education and purer social influences. For, after all, inebriety is more of a vice than a disease, and it must be treated accordingly.

THE GENERAL ELECTION.

OUT of the scrimmage of the past fortnight it is not difficult to estimate the net gain to pharmacy in the Legislature. By far the most important result to chemists and druggists has been the return of Mr. Charles Townsend, the well-known Bristol pharmacist, as one of the representatives of that city. We do not know what are Mr. Townsend's views on pharmaceutical politics, but we think we may rely on his friendly interest whenever any measure affecting the trade may come

before Parliament. He is, we believe, the first British chemist and druggist, actually engaged in the business, who has been a member of the House of Commons since Mr. Jacob Bell represented St. Albans.

Among the other results of the election we note that Sir Lyon Playfair was re-elected for South Leeds with a majority of 1535 over his Conservative opponent, Mr. Reginald C. Neville. Sir Henry Roscoe holds his seat for South Manchester by a majority of 181. His Conservative antagonist was Viscount Emlyn. Mr. J. C. Stevenson, the eminent chemical manufacturer, of Jarrow, held the seat for South Shields as a Gladstonian Liberal by a majority of 1,007. Mr. E. W. Grimwade, wholesale druggist and Australian merchant (Grimwade, Ridley & Co.), attacked the seat of the Hon. S. Herbert (Conservative), at Croydon, but polled only 4,834 votes against Mr. Herbert's 6,528. Mr. T. Howell Williams, pharmaceutical chemist, and head of the firm of Idris & Co., aerated-water makers, and a prominent member of the London County Council, took the field as a Gladstonian candidate for the Denbigh district, but in the result the Hon. G. T. Kenyon, the former Conservative member, repulsed Mr. Williams by the narrow majority of 98. Mr. O. V. Morgan, of the Morgan Crucible Co., Battersea, and part proprietor of this journal, left Battersea to attack Ashton-under-Lyne, but the previous member, Mr. J. Addison, Q.C., retained the seat by a majority of 135. Mr. W. H. Lever, the "Sunlight" soap maker, endeavoured to wrest Birkenhead from the Unionists, but fell 604 votes below Viscount Bury. In Birmingham (South), Mr. W. J. Lancaster (Gladstonian), the manufacturer of photographic apparatus, sought to unseat Mr. W. Powell Williams, the Liberal Unionist, but only scored 2,270 against his opponent's 5,193. Mr. M. H. Beaufoy (Gladstonian), the British wine and vinegar maker, retains his seat for Kennington, and Mr. J. J. Colman (Gladstonian) continues to share the representation of Norwich with Mr. S. Hoare (Conservative). Dr. B. W. Richardson fought for the Walton division of Liverpool as a Gladstonian, but was beaten by Mr. J. H. Stock (Conservative) by 3,707 to 2,493. Sir Henry Cochrane came forward as the Unionist champion in Dublin, but Dr. J. E. Kenny, the Parnellite, held the seat by 2,568 votes against the 1,441 which the famous aerated-water maker could score.

Mr. H. C. Stephens (Conservative), who won the Hornsey election, with a margin of 3,279 votes, is the maker of Stephens's inks in Aldersgate Street, and is a Fellow of the Chemical and of the Linnean Society. Mr. J. Bigwood, the Conservative member for the Brentwood division of Middlesex, is the head of the firm of Champion & Co., vinegar-makers, of the City Road. His majority was 1,792. Mr. Gainsford Bruce, Q.C. (Conservative), who retained his seat for Holborn against Mr. Bateman, a Labour candidate, by a majority of 2,472, has a reputation in pharmacy in consequence of his learned apology last October for the Research Laboratory of the Pharmaceutical Society, which is situated in his division. Mr. Gainsford Bruce, it is said, is likely to be appointed to the vacant judgeship, in which case Bloomsbury Square and Holborn will have to look for another representative. Mr. H. S. Foster, who secured the Lowestoft division of Suffolk for the Conservatives, has a Stock Exchange acquaintance with pharmacy, as he was credited with a large share in the Warrar Safe Cure *coup* of a year or two since. Mr. J. T. Brunner, a Gladstonian and famous chemical manufacturer (of the firm of Brunner, Mond & Co., Limited), has yet to fight for his seat in the Northwich division of Cheshire. Mr. Lough, the founder and principal of the Tower Tea Company, who is an Ulster Radical, succeeding in wresting West Islington from Mr. Richard Chamberlain, Liberal Unionist.

COMMENTARY.

THE ISOMERIC ACETALDOXIMES.—Messrs. Dunstan and Dymond communicate a further note to the "Proceedings of the Chemical Society" on the subject which they brought before the Society in the course of last session. The conclusion that they come to after further experiments is that two isomeric acetaldoximes exist which seem to correspond in their principal properties with the two benzaldoximes, which, however, are far from stable. The isomerism of the benzaldoximes is now generally adjudged to be stereochemical. Although it is probable that this is also true of the acetaldoximes, the authors consider that further experiments are needed before it can confidently be asserted that the isomerism is incapable of a structural explanation.

A NEW HAIR-DYE.—Silver salts have so long held the field as a hair-dye that some interest attaches to the German proposal to use paraphenyldiamine for the same purpose. The invention is protected by patent, and the details as revealed by specification are somewhat wanting in clearness. From this it appears that the hair is first well brushed with a solution of 20 grammes paraphenyldiamine and 14 grammes caustic soda in a litre of water, and then washed with a 3 per-cent. solution of hydrogen peroxide. In the course of a day the hair becomes very dark and, by repeating the application, of a blue-black colour, but if "a 5-per-cent. iron-oxide solution" is added to the hydrogen peroxide, the colour produced is brown. We should like to know what iron-oxide solution is, and how much of it is to be used.

MYSTERIOUS FATALITIES.—Mr. August Engle, proprietor of a drug-store at 49 Myrtle Avenue, Brooklyn, 52 years of age, died suddenly in his shop on June 25. Just before his death he asked the boy behind the soda-water fountain for a glass of Vichy. As he raised the glass to his lips he uttered a cry, and, placing his hand over his heart, dropped on the marble floor dead. This makes the fourth sudden death of proprietors of this drug-store. The place was formerly a liquor-saloon. Herman Frank opened it as a drug-store in 1885. He dropped dead in front of the soda-water counter on March 20, 1886. Not long afterwards his widow sold the business to Ernest Rohlfis. He dropped dead of heart-disease on November 18, 1888. Then William Meyer bought the business and ran it for about three months. He made money, but became despondent for some reason, and one day he went to Hoboken and shot himself through the head. Six months later Engle started in business. The business ought to sell cheap, and at any price the next purchaser will have to be a plucky man.

ADULTERATION IN NEW YORK.—It is one of the weak spots in American law that there is no adequate control of the food and drug supplies of the people. So far as drugs are concerned the present condition is simply deplorable. The New York Pharmaceutical Association report on the work done by the Adulteration Committee of the past year brings out the following facts: For hydrobromic acid 3 druggists gave dilute hydrochloric acid, and 1 plain water; not a single sample of dilute hydrocyanic acid was found to be good; 10 samples of "creosote" were mainly carbolic acid; 150 out of 288 samples of spirit of nitrous ether were inferior; most of the fluid extracts were found to be weak in alcohol; caustic potash could not be obtained of pharmacopœial strength, and a wholesale house declared that they could not get it; only 2 samples of bromide of potassium out of 11 were good; 25 druggists gave safflower for saffron; of 36 samples precipitated sulphur

7 were good, 27 calcareous, and 2 were washed sulphur; all the syrup of iodide of iron was inferior; tincture of aconite was found to be deficient in alcohol; but tincture of nuxvomica, owing to an exposure of a few years ago, was found to be much better. With proper inspection such a condition of things as this would not long exist, and until the United States Pharmacopœia is made binding upon each State adequate inspection is not possible.

SCIENCE ON DREAMS.—In the last quarterly number of his *Asclepiad* Dr. B. W. Richardson gives the text of a lecture delivered at the Royal Institution by himself on "The Physiology of Dreams." The lecture is curiously materialistic; unexpectedly so from an observer who has shown himself capable of distinguishing the limits of scientific investigation. According to Dr. Richardson, "dreams are all explainable on physical grounds; there is no mystery about them save that which springs from blindness to natural facts and laws." They are "nothing more than the common vibrations of terrestrial media, acting upon a corporeal vibratorium." This of itself is fairly mysterious; but the doctor goes on to give specimen dreams in his own experience, which his miserable physical formula certainly does not account for. We are told, for instance, of a man dreaming vividly of a scene which he had read about, and probably forgotten, many years ago. Is there no mystery in those chords of dormant memory? Moreover, Dr. Richardson appears to assume that he has disposed of the whole subject when he has classified and described in what looks like scientific language the dreams which he and his patients have had. Would it not be more truly scientific to assume the possibility of phenomena unknown to that comparatively little circle?

HENRY GEORGE ON DRUGGISTS' PRICES.—The apostle of "the land for the people" would make an able advocate of "drugs for the druggist." He says in regard to our prices: "When I go to a druggist's and buy a small quantity of medicine or chemicals, I pay many times the original cost of those articles; but what I thus pay is in much larger degree wages than profit. Out of such small sales the druggist must get not only the cost of what he sells me, but other costs incidental to the business, and also payment for his services. These services consist not only in the actual exertion of giving me what I want, but in waiting there in readiness to serve me when I choose to come. In the price of what he sells me he makes a charge for what printers call 'waiting-time.' And he must manifestly not merely charge 'waiting-time' for himself, but also for the stock of many different things only occasionally called for, which he must keep on hand. He has been waiting there with his stock in anticipation of the fact that such persons as myself, in sudden need of some small quantities of drugs or chemicals, would find it cheaper to pay him many times their wholesale cost than to go farther and buy larger quantities. What I pay him, even when it is not payment for the skilled labour of compounding, is largely a payment of the same nature as, were he not there, I might have had to make to a messenger." What more effective quotation could we have for circulars and price-lists?

BLACK PHOSPHORUS.—Flückiger has been investigating the existence of so-called black phosphorus. He is of opinion that the black colour is caused by the use of arsenious sulphuric acid in the manufacture, the phosphorus-vapour causing the solution of the arsenic in the acid. The reason why black phosphorus does not now occur so often as formerly is that the acid now used in the preparation is freer from arsenic.

PHOTOGRAPHIC NOTES.

PHOTOGRAPHIC "TABLOIDS."

MESSRS. BURROUGHS, WELLCOME & Co. announce this week that they are manufacturing photographic pyro. and accelerator in "tabloid" form.

PHOTOGRAPHY ANNUAL.

THIS half-crown's worth is the closest rival to Sell's "Newspaper Directory" that we have yet handled. Altogether 1,178 pages of matter in it, of which almost a fourth is advertisements. These alone are bound to be useful to retailers, but the literary matter and the accompanying illustrations are the more tempting portion. Here we find reference tables, tips for tyros, annals of photography for 1891, practical articles by practical men, photographic novelties of all kinds, lantern novelties, directory of societies, and much else that is useful to the amateur and the professional, the retailer and the manufacturer. Added to these are a score of beautiful reproductions of photographs, illustrating the various methods of reproduction. These alone are worth the half-crown, but Mr. Henry Sturmev, the editor, and Messrs. Iliffe & Son, the publishers, are record makers, and have eclipsed themselves this year.

THE EASTMAN COMPANY'S GELATINO-CHLORIDE PAPER.

THIS paper is as rapid as any in the market, and the company recommend the following combined toning and fixing bath:—

No. 1.—Alum and Hypo. Solution.

					Oz.
Hyposulphite of soda	..	..	..	..	8
Alum	..	..	..	..	6
Water	..	..	..	..	64

When dissolved add 3 oz. of carbonate of soda dissolved in 8 oz. of water, and allow to stand twenty-four hours, and decant the clear liquid.

No. 2.—Gold Solution.

					Grs.
Chloride of gold	..	..	..	..	15
Acetate of lead (sugar of lead)	..	..	..	..	74
Water	..	..	..	..	8

The toning-bath should be made up of 8 oz. of No. 1 and 1 oz. of No. 2 solutions. The prints are immersed without previous washing until the desired hue is obtained. When toned the prints should be washed in several changes of water, for at least an hour and a half.

PHOTOGRAPHIC BLOTting-PAPER.

THE frequent use of blotting-paper for drying prints has prompted Messrs. Dray & Son (Limited), of 6 Great St. Thomas Apostle, E.C., to introduce a book made of chemically pure blotting-paper. The book sells at 1s., and will find a ready sale amongst amateur photographers.

NEW FIELD-GLASS PATTERN HAND CAMERA.

MESSRS. DOLLOND & Co., of Ludgate Hill, are introducing numerous novelties this season. Their latest is a small hand camera, which when closed assumes the form of a field glass, and can be carried over the shoulders in the usual manner. It opens by means of a spring, and forms a quarter-plate camera as complete as any in the market. Three double backs and a finder, which can be placed on the side or top, are sent out with it.

CARBONATE AND BICARBONATE OF SODA.

AN amateur writes to *Photographic Scraps* complaining about the way chemists have treated him in regard to the new Ilford pyro. developer. He says:—"I went to five different chemists in the town and asked for carbonate of soda in crystals. They all gave me, or wanted to give me, a powder, which they called carbonate, and when I pointed out, as you had told me, that they were offering bicarbonate, they all laughed very cruelly at me for my presumed ignorance—carbonate and bicarbonate were the same thing, they said. I felt hurt and discouraged, but still persevered, and at last obtained from a photographic chemist the real thing, in clean bright crystals." Chemists are none the worse for knowing that there are such persons as the writer

about; and although there is only about one customer in a hundred who does not want bicarbonate of soda when he asks for carbonate, we should not think it possible that five chemists in succession would say that the two carbonates are the same thing. It is the photographers who do not know that washing-soda is just the thing for the Ilford developer.

A NEW PRINTING-FRAME.

MESSRS. R. & J. BECK, of 68 Cornhill, have just introduced a new printing-frame, the invention of Mr. Bynoe. It is quite novel in construction. The frame holding the negative is of metal, to which is attached, as will be seen in fig. 3, a

Fig. 1.

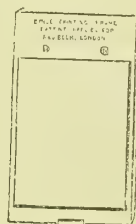
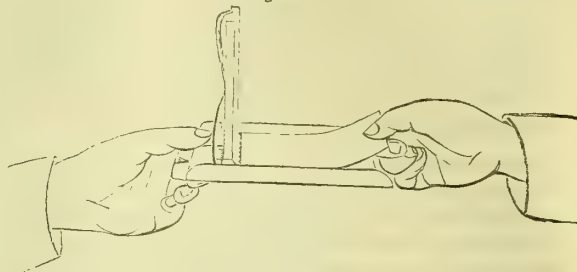


Fig. 2.



Fig. 3.

spring clip, upon which the back of the frame and spring is hinged. The great advantage of the "Bynoe" printing-frame is to be found in the fact that upon releasing the back spring the whole of the print can be examined, the paper being firmly gripped at one end (fig. 1). These frames are much lighter than any in the market, and require only one action to open them; they can also be hung up anywhere, and are exceedingly portable. Amongst both professional and amateur photographers they will be liked, and at this season of the year they will be a safe stock.

ETHER-OXYGEN LANTERN.

A NEW form of apparatus has been designed by Mr. G. R. Prouse, of Montreal. It combines both the lantern proper, the gas generator, and storage-bag or receiver. The generating part comprises a retort for the production of oxygen gas, a fitter or washer, saturator, and regulator. All the parts with the lantern are contained in a case measuring 18 x 18 x 10 inches, which also serves as a stand for the lantern. The generator is a steel tube with a semicircular cross section. Into the flat or lower side are inserted a number of copper cups. These contain sufficient mixture to maintain the light for about fifteen minutes. Copper is chosen as a rapid conductor of heat. In these cups a speedy fusion of the chlorate of potash results. The iron by its slower conductivity serves to retard the transmission of heat from cup to cup. Each cup is heated in turn by means of a spirit lamp or a small Bunsen burner, and the transfer of heat from one to the other is effected automatically by an attachment operated by the receiver when the gas has reached a certain degree of exhaustion. The washer, saturator, and regulator are combined in one piece, which is placed directly beneath the body of the lantern. There are several novel features in the other parts of the apparatus. When all is fitted, and the cups filled with black oxide of manganese and chlorate of potash in the proportion of 1 to 3, heat is applied, and gas will form in two or three minutes, and pass into the receiver. Under favourable conditions the light should be on the screen within five minutes from the first application of the heat to the retort. The capacity of the retort is such that sufficient gas may be generated to operate the light continuously for about two hours.

Trade Notes.

THERE is a very good idea on Messrs. Walker, Troke & Co.'s circular signifying their removal to 65 Bath Street, City Road, E.C. On the top of the circular are post-stamp photographs of Charles Troke and George Walker, suitably linked together, to show that they personally conduct their business.

MR. WILLIAM GARDNER, of Gloucester, informs us that he will supply his new list of sifting-machines (which we referred to in our Agricultural Exhibition report) to any chemist who applies for it. Mr. Gardner is about to erect a much larger factory than the one which he now occupies.

THE FIRM OF LYMAN BROTHERS & CO., TORONTO, was, as from July 1, formed into a joint-stock company, with a capital of \$150,000, in 850 shares. The directors are Mr. H. Lyman, sen., Montreal, and his four sons, Messrs. J. Henderson, G. W. Lillie, James Watt, and C. McD. Hay, of Toronto. The business will be carried on as hitherto, and no change in the management is contemplated.

COATED PELLETS.—Wyleys (Limited), of Coventry, are now making compressed pellets with a coating of pure sugar. The samples which they send us are very pretty. One contains 2 grs. of extract of cascara sagrada, the other 2 grs. of pepsin porci. The elegance of the form in which these popular medicines are thus exhibited will be appreciated by customers, and it is sometimes an advantage to have the preparations put up with no-name labels. The coated pellets are also supplied in bulk, and most combinations can be finished off in the same way.

MESSRS. NEWBALL & MASON, of Nottingham, send us a collection of the advertising material which they supply to their agents to help them to push the sale of their Mason's Extract of Herbs for the production of herb or botanic beer, wine and other essences. We are not surprised that with so much well-directed enterprise this firm have been so successful. Their circulars are marked by skill and originality, and artistic and literary ability are lavishly drawn upon. They are now issuing an imposing placard—card canaries which "sing the praises" of their extract, sensitive fish, card imitations of their bottles, poetic and other effusions tempting thirsty people to try their temperance beverages. Messrs. Newball & Mason, we understand, will provide a liberal supply of this material to their agents.

ARMOUR'S FORMULARY.—Messrs. Armour & Co., of 60 Tooley Street, S.E., have just published, and are presenting free to chemists who apply for it, a very useful collection of formulæ for digestive and pepsinated medicinal preparations. The collection is, we understand, the result of careful experiments by pharmacists, all the formulæ having been proved before they were adopted. The preparations are of a kind which are frequently required in English medical practice, the directions for making them are explicit, and the methods such as may be followed at the dispensing-counter. We observe that the prefatory matter contains a report from Professor Attfield, in which he speaks in high terms of the value of Armour's "2,500 test pepsin." Those who have not already got a copy of the Formulary should not fail to apply for one.

THE CHEMISTS' ASSOCIATION (LIMITED).—The directors of this Association inform us that a satisfactory response has been made to their invitation of last week, but they tell us that they had a number of letters from chemists in all parts of the country asking for application forms. They had intended to have sent such a form to as nearly as possible every chemist in the United Kingdom, but they find that their list of names was seriously defective. They have therefore reserved a proportion of the shares for chemists who on this account have been prevented from applying, and, as will be seen from their advertisement, they invite early application from such. The prospectus of this company was noted in the *Star* of Saturday last, and information as to the promoters and directors was asked for. It was also pointed out that nothing was said in the prospectus as to the terms on which the business was taken over. The following letter, from Messrs. Howard, Howes & Walters, the accountants, in reply, was published in Tuesday's *Star* :—

Your issue of the 9th inst. contains some very fair criticisms upon the prospectus of the above company, to which, as auditors to the Association we are able to give a complete answer.

The purchase-price of the business acquired consists of the cost of the stock and leasehold premises, both of which are taken at an independent valuation, and of the goodwill of the business, the price of which, allowing for the expenses they pay, gives the vendors little more than two years' purchase upon their average income.

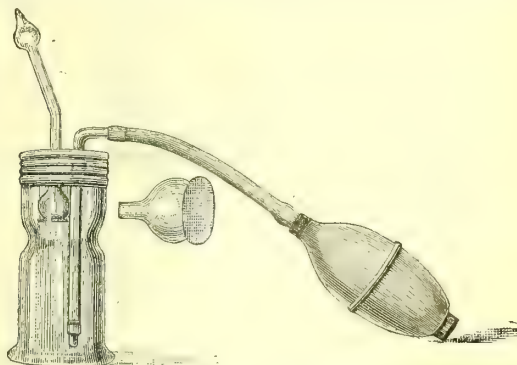
The directors, other than the vendors, are representative and respected members of their trade from different parts of the country.

The formation by chemists of a wholesale co-operative society, under conditions which appear to render it an assured success, may be of interest not only to that particular trade, but to members of trades which may with advantage follow this example. We are, therefore, obliged by the notice of the event which you have taken.

Notes of Nobelties.

COMPOUND STEARATES AND "PULVERFLATOR."

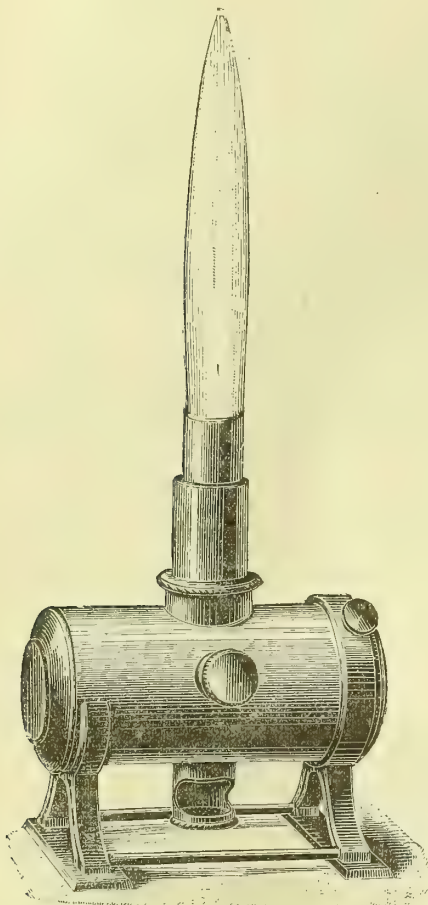
MESSRS. MCKESSON & ROBBINS have lately introduced in the United States, with marked success, a series of medicinal-stearate compounds for external application. They will submit these to the medical profession of this country at the forthcoming Nottingham meeting of the British Medical Association, but in the meantime chemists may desire to anticipate any demand which may arise in consequence of the attention which the Nottingham exhibition will attract. The insufflation in nasal and throat affections of finely-powdered remedies is now a thoroughly established part of therapeutics, and one of the difficulties observed with insufflations is to obtain an innocuous and adhesive powder which may be combined with more active remedies. This difficulty Messrs. McKesson & Robbins have overcome in the production of their compound stearate of zinc, which may be used as a universal diluent, while the mercury and manganese stearates present similar physical properties, but are used for their specific medication. In the composition of these stearates a certain proportion of other fatty acids than stearic is involved, and the method of manufacture is such



that, as in the case of the zinc stearate, the product is an extremely light and impalpable powder or dry ointment, with many of the properties of zinc oleate. It adheres readily to the mucous membrane and skin, but with such gentleness that its presence is unfelt. The manufacturers send it out in combination with boric acid, salicylic acid, tannic acid, aristol, balsam of Peru, bismuth subgallate, chrysarobin, cocaine, eucrophen, exalgine, gallacetophenone, ichthyol, iodoform arom., menthol, resorcin, rhubarb, salol, sulphur, and tar. The "Pulverflator," which is supplied for throat use, is shown in the figure. It is a dry spray with a special arrangement inside for sifting the powder as it is blown out of the bottle. This is shown in the enlarged thistle portion on the engraving. The apparatus works admirably, and will doubtless help to further popularise the application of remedies by insufflation.

"BARTHEL'S ROARERS."

As an instrument which develops a high degree of heat upon very little and cheap fuel we may draw attention to the apparatus known to the engineering world as a "roarer." In one of its forms it is designed to use methylated spirit, and the heat so obtained is declared to be not less than $1,300^{\circ}\text{C.} = 2,372^{\circ}\text{F.}$ It is employed as an automatic blow-pipe, or as a soldering or paint-removing lamp. The drawing is one-third actual size, the flame being fully 6 inches in length. The instrument consists of a container traversed by a tubular blowpipe, upon which is adjusted an external



tube. The space between the blowpipe and tube is in communication with the container, and serves as a wick-chamber, from which the wick reaches into the container. A narrow tube, at each end opening into the wick-chamber, traverses the blowpipe. From a small circular opening in this narrow burner-tube the spirit-vapours rapidly escape, well mingled with air (owing to the draught resulting in the blowpipe), giving, when lighted, a steady, powerful, and automatic flame. The principle embodied in this lamp is developed in very similar contrivances for the use of benzine as fuel instead of methylated spirit, the degree of heat attainable being as high, we understand, as $1,400^{\circ}\text{C.}$ These handy instruments are found to be serviceable in dentistry, whilst for glass-blowing, fusion of metals, and the general work of a laboratory they must be well-nigh invaluable. Otto Berend & Co., 61 Fore Street, E.C., are the agents in this country.

NEW COMPANIES

BRIGGS & Co. (LIMITED).—Registered by Jordan & Sons, 120 Chancery Lane, W.C., with a capital of 2,000*l.*, in 1*l.* shares. Object: To acquire the undertaking of a drug-merchant and chemist, dentist and optician, hitherto carried on by W. H. Briggs, at Market Street, Hebden Bridge, Yorkshire, and to carry on business as chemists and druggists generally. The first subscribers (who take one share each) are:—W. H. Briggs, 27 Market Street, Hebden Bridge, drug merchant; T. Briggs, Sowerby Bridge, chemist and druggist; A. Gumby, 2 Park Place, Halifax, clerk; F. Thompson, King's Cross, Halifax, grocer; Emma Briggs, 27 Market Street, Hebden Bridge; Clara Briggs, Sowerby Bridge; and Betsy Gumby, 2 Park Place, Halifax. Registered without articles of association. Office: 27 Market Street, Hebden Bridge, near Manchester.

NATURE'S BLOOD-FORMER COMPANY (LIMITED).—Capital, 1,500*l.*, in 1*l.* shares. Object: To acquire the undertaking of a patent-medicine manufacturer hitherto carried on at Leeds by A. Cooper, and to carry on and extend the same. The first subscribers (who take one share each) are:—A. Cooper, 13 Abbotsford Place, Leeds, chemist; Kate Cooper, 13 Abbotsford Place, Leeds; M. R. Knowles, 17 High Street, Skipton, solicitor; A. H. Wilkinson, Alma Terrace, Skipton, clerk; J. H. Davis, Bromley, clerk; J. Webber, 39 Grosvenor Place, Leeds, cashier; and C. E. Drake, 31 Hanover Square, Leeds, traveller. There shall not be less than three nor more than five directors. The first are A. Cooper, J. Webber, and J. H. Davis. Qualification, 20*l.* Remuneration, 25*l.* per annum. Registered Office: Oatlands Chemical Works, Meanwood Road, Leeds.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," July 6, 1892.)

"E. E. ROWLANDS, 'ALLIGATOR' OINTMENT," and sketch of an alligator; for ointment for human use. By E. E. Rowland, 36 Lower Marsh, Lambeth. The essential particulars are the device and the word "Alligator." 164,082.

"INWINI"; for a medical preparation for human use. By A. C. Granville, 1 Packington Street, Essex Road, Islington. 164,766.

"WILLIAM KEY" as signature; for mineral and aerated waters. By W. Key, Anstruther, Fifeshire. 164,502.

"JEQUILLA" and "MAREQUIL"; for perfumery and toilet articles. By Blondeau et Cie., Ryland Road, London, N.W. 164,945.

(From the "Trade Marks Journal," July 13, 1892.)

"BEN TROVATO" and sketch of bell-shaped house, and trees; for disinfectant liquid and powder. By H. Ellison and W. H. Mitchell, trading as Ellison & Mitchell, Don Chemical Works, Kūnhurst, near Rotherham. The essential particular is the device. 164,334.

"VINVET"; for medicated wine. By Butler & Crispe, 14 Charterhouse Buildings, London. 165,133.

Picture of the BRIG O' BALGOWNIE; for mineral and aerated waters. By the Balgownie Aerated and Mineral-water Manufacturing Company, 61 Rosemount Viaduct, Aberdeen. The essential particular is the device. 164,085.

Sketch of horse's foot with wings; for mineral and aerated waters. By P. Rothwell and J. Rothwell, trading as Thomas Rothwell & Sons, 26 Arkwright Street, Bolton. 164,875.

"ORIOLE"; for perfumery and toilet articles. By Napoleon Price & Co. (Limited), 164 Aldersgate Street, London. 165,236.

Personalities.

MR. ALFRED HORNBY, chemist, Richmond, has sold his business to Messrs. Wiseman & Palmer.

MR. W. WADE, chemist and druggist, Sidcup, has just completed extensive alterations to his premises.

MR. WILLIAM CURTIS, retired chemist, of Barnstaple, has been made a justice of the peace for that borough.

MR. GOFF, of the firm of Horrell & Goff, chemists and druggists, of High Street, Dartford, has been elected a member of the Dartford School Board.

MR. WILLIAM K. FORSYTH, the President of the Chicago College of Pharmacy, is a native of Cumberland, and served his apprenticeship to the drug-trade in a town there.

MR. S. M. BURROUGHS has accepted the invitation of the Balloon Society to read a paper on "Single Tax," on Friday evening, July 22, at 8 o'clock, at St. James' Hall, Piccadilly.

MR. ALEC. B. HECTOR, formerly manager to the Colombo Apothecaries' Company, has returned to Scotland for a short visit prior to going to South Africa for the benefit of Mrs. Hector's health.

MR. LUMLEY SMITH, Q.C., who has frequently argued for the Pharmaceutical Society in High Court cases, has been appointed Judge of the County Courts of Shoreditch and Bow, in place of Judge Prentice, resigned.

MR. JOHN COOPER, pharmaceutical chemist, has purchased the business of Messrs. Finch & Co., Waterloo Street, Weston-super-Mare. Mr. Cooper has for fifteen years been with Mr. Hall, of 17 High Street, Weston-super-Mare.

Gazette.

PARTNERSHIPS DISSOLVED.

Fairbank, F. R., and Lownds, H. A., under the style of Fairbank & Lownds, Doncaster, physicians, surgeons, apothecaries, accoucheurs, and general medical practitioners.

Greaves, C. H., and Blumer, F. M., under the style of Greaves & Blumer, Stafford, surgeons and medical practitioners.

Hampshire, H. J., and Hampshire, V. A., under the style of Hampshire, Turner & Co., Liverpool, general produce brokers.

Harris, W. J., Collet, A. H., and Collett, G. B., under the style of Harris, Collet & Collet, Worthing, medical practitioners.

Hills, H., & Hills, C. H., under the style of Henry Hills & Son, Amlwich, Anglesea, manufacturing chemists, and Low Walker-on-Tyne, Northumberland, copper smelters.

Hepworth, B., and Chadwick, W., under the style of Hepworth, & Chadwick, Kidderminster, chemical manufacturers.

Mason, W., and Smith, J. S., under the style of Mason & Smith, physicians, surgeons, apothecaries, and accoucheurs.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Coles, Charles Jenkin (trading as C. & C. J. Coles), Mill End Cottage, Bamberden, Oxfordshire, lately residing at Hertford Street, Mayfair and carrying on business at 7 Mincing Lane, E.C., colonial broker.

Hallsworth, John William, Armley, Leeds, manager of chemical-works.

Zimmermann, Charles Hermann (lately trading as the Sozon Oil Company), Crumpsall, Manchester, merchant and manufacturer.

ADJUDICATIONS.

Hallsworth, John William, Armley, Leeds, manager of chemical-works.

Hyams, Hyam, Middlesex Street, Aldgate, E.C., mineral-water manufacturer.

Zimmermann, Charles Hermann (lately trading as the Sozon Oil Company), Crumpsall, Manchester, merchant and manufacturer.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

DUGAN—ROSS.—On June 29, at Mann's Palace Hotel, by the Rev. W. Brebner, M.A., Gilcomston Parish Church, A. F. Dugan, chemist, Aberdeen, to Jeannie, third daughter of the late W. B. Ross.

MCRITHER—STEWART.—On July 6, at Redbraes, Edinburgh, by the Rev. Thomas Millar, St. Paul's, Leith, Alexander Buchan McRither, chemist, to Jessie, daughter of the late John Stewart, postmaster, Kinloch-Rannoch, Perthshire.

OUGH—BEER.—On July 13, at St. Michael's, Stoke, by the Rev. Mr. Wallin, vicar of St. Mary's, Devonport, Lewis Ough, F.C.S., pharmaceutical chemist, of Leicester, to Edith Mary, daughter of the late John Beer.

SHORTT—MILLER.—On July 5, at St. Peter's Church, Dublin, by the Rev. W. Verner Miller, M.A., assisted by the Rev. Thomas J. Miller, B.A. (brothers of the bride), and the Rev. J. G. Carleton, D.D., John Starrett Shortt, M.P.S.I., son of the late James Shortt, of Londonderry, to Anna Maria, youngest surviving daughter of the late John Miller.

DEATHS.

BALL.—On July 1, William Ball, chemist and druggist, Stockport. Aged 73.

LEECH.—On June 27, Fred. Leech, chemist and druggist, Tideswell. Aged 65.

OLIVER.—On June 21, Henry Oliver, chemist and druggist, Clerkenwell. Aged 72.

PROCTOR.—On July 3, at Newcastle-on-Tyne, Wm. Proctor, pharmaceutical chemist. Aged 83. Mr. Proctor was for the greater portion of the present century honourably and actively connected with the business life of Newcastle, and he was probably at the time of his death the oldest chemist in the city. His business career began a good many years ago, and was industriously, successfully, and honourably conducted. At the time of his death he was the proprietor of establishments in New Bridge Street and Westgate Road. A Novocastrian born and bred, Mr. Proctor took a warm but unobtrusive interest in all that concerned the social and business life of Newcastle. He witnessed during his long life many remarkable changes in the district, and took a delight in the inventive productions and manufactures of his fellow-townsmen. There was probably no one in the city who deserved more than he did the character of a loving father, a faithful friend, and a good citizen, and he was deservedly respected wherever he was known. Mr. Proctor has left a widow and a family of ten—four sons and six daughters.

RALPH.—On June 19, Thomas P. Ralph, chemist and druggist, Hammersmith. Aged 62.

TAXING NOSTRUMS IN SPAIN.—A new regulation came into force in Spain on July 1, according to which all specifics for the cure of disease, and mineral waters, must pay duty at the rate of 0.10 peseta (1d.) per packet, box, or bottle.

CANADIAN TRADE TERMS.—The wholesale drug-trade of Canada have met at Toronto to discuss the matter of terms to retail customers, and have adopted the following arrangements:—Credit, four months. For payment within thirty days from date of invoice, 3 per cent. off; thirty to sixty days, 2 per cent. off; sixty to ninety days, 1 per cent. off. On all overdue accounts and renewals at least 8 per cent. per annum will be charged. It was agreed not to allow more than three-quarters of the price charged for empties returned outside the city from where sold. The *Canadian Pharmaceutical Journal* also reports that "the secretary was instructed to write to the Quebec Pharmaceutical Association and the Ontario College of Pharmacy, urging upon them the advisability of taking steps to compel all manufacturers of patent medicines containing poisons to stamp such medicines with a poison-label, as is the custom in England."

EXPERIENCES OF A BUSH CHEMIST.

THE Australian bush is not exactly the sort of place a well-to-do chemist of Regent Street would care to spend the best years of his life in, yet I fancy there are many worse berths than that which I filled for some nineteen years.

I was a comparatively young man when I first set up as a general chemist and druggist in the very heart of the Australian bush. The settlement in which I pitched my tent, so to speak, was a very scattered one, and the population in my immediate neighbourhood was not more than three hundred at the outside. Within a radius of forty miles, however, there were a considerable number of small settlements, all of which I depended upon for trade.

My wooden shanty, with its three rooms, all on the same floor, was as unlike a chemist's shop as it was possible to make it. There was no plate-glass window, nothing to indicate the business carried on within; yet in a very short time my fame as a dispenser of drugs became known for miles round the country, and scarcely a day passed without my being called upon to serve customers who had come twenty, thirty, forty, and even fifty miles.

Whenever my stock ran short I used to write out a list of my wants, and send an old and trusty backwoodsman down to Melbourne with the order. As our settlement was nearly seven hundred miles away from this city, it generally took him a fortnight to go and return. He used to ride all the way there and back, and for fifteen years he never once failed me.

Such articles as Epsom salts, quinine, syrup of senna, &c., were in constant demand, and I had to take care never to run short of such drugs. Great burly weather-beaten hunters would, whilst passing through the settlement, invariably call in, and purchase a miscellaneous parcel of medicines. With this class of customers, pills were in constant demand, and I have sold as many as a score of boxes to a single backwoodsman. What he intended to do with such a large quantity was a mystery to me for some time, until one morning he called again, and purchased a similar stock. As I was packing them up for him, he remarked, "Can't ye make 'em a bit more powerful, mister?"

"More powerful!" I exclaimed in surprise. "Why, they're the strongest manufactured."

"That's true enough, maybe; but all the same I could do with them a little harder," he replied, as he took the parcel and turned to leave.

"Might I ask what you do with so many pills?" I ventured to inquire as he was walking away.

"Shoot with 'em, of course," and the tone of scorn and contempt in which this startling intelligence was given made me feel somewhat abashed.

Before I could address him further on the subject he had disappeared, and I felt that my profession had suffered an indignity. Just fancy, using stomach or liver pills for shot, with which to bring down small game!

I remember being called out of bed one morning at half-past three, by a farmer, who requested to be supplied with two yards of strong sticking-plaster. Upon my informing him that I had not half that quantity in stock he became abusive and threatened to smash my shop to smithereens, unless I acquiesced with his demand. Fearing that he might do something rash, unless I humoured him, I told him to wait a few minutes whilst I made a search for some plaster which I thought I had put away in another room. He gruntingly assented, and, rushing into my bedroom, I cut a long strip off one of the sheets, soaked it in a solution of strong gum, and hung it over a spirit-lamp for a few minutes. Whilst it was drying I returned to the shop, and told my irate customer that I would be able to give him what he required.

With an oath-accompanied admonition to "look slippery, as his cow was bleeding to death," he began to indulge in agitated paces up and down the narrow area of the shop. Anxious to get rid of him without further delay, I handed him the bogus plaster, together with a small square of the genuine article. He was in too great a hurry to notice the deception, and throwing down half-a-crown (more than the value of the purchase) he rushed out of the shop.

For the next few days I lived in a state of suspense, but my queer customer never showed himself again, and I concluded that his cow must have been benefited by the application of that gum-soaked piece of sheet.

I once had an exciting twenty minutes with a half-bred bushman, a veritable giant in strength and physique. Fully armed he came rushing into my shanty one afternoon, and bawled at the top of his voice that he had got the toothache. I said I was very sorry, and proposed that he should allow me to extract the offending molar for him, for I subsequently discovered, to my cost, that it was such. This proposition evidently angered him, and he told me he would put a bullet through me before I should be allowed to tamper with his teeth. I expostulated with him as mildly as I could, but without success. His idea was that by the external application of some liniment I ought to be able to alleviate his sufferings. I was in despair, for long experience had taught me that to attempt to cure such a troublesome thing as a firmly-set molar tooth in a few moments by the simple application of an liniment or any similar embrocation would be worse than useless.

Suddenly it occurred to me to administer a strong dose of chloroform to him, and under its soothing influence relieve his much swollen jaw of its unpleasant occupant. Strange to say he accepted my proposal, and after I had solemnly promised not to hurt him, he took the seat I offered him, and with a ludicrous stoicism resigned himself to the ordeal. He took the anæsthetic remarkably well, and I congratulated myself upon being able thus so easily to pacify and at the same time rid myself of such a disagreeable customer.

Determined to be on the safe side in case any untoward event should happen during the process of extraction, I took the precaution of binding the giant firmly to the chair.

Selecting my strongest pair of pincers I placed myself in position, and laid hold of the aching tooth. Having made certain that I had got the right one I gave it a mighty tug, and the next moment found myself sprawling on my back on the floor. The forceps had slipped just at the most critical part, and under such circumstances it was not to be wondered at that the victim had been prematurely aroused. For several minutes he bellowed like an infuriated bull, and once I thought sure that he would free himself from the leathern thongs which bound him to the chair. Had he succeeded it would have fared ill with me. For the time being I partly lost my presence of mind, and remained in my recumbent position upon the floor. Then I jumped up, seized the sponge, copiously saturated in the anæsthetic, and administered a second dose. It had the desired effect, and I succeeded this time in removing the largest tooth I have ever taken from a human jaw.

When the giant came to he was gratitude itself, and insisted upon my accepting a small bagful of gold-dust in recognition of my services.

DENTISTRY EXPERIENCES.

ALTHOUGH a fully qualified chemist, I must confess to an incompetent knowledge of the dentist's art. Yet, in spite of this, I unblushingly exhibit in my shop-window a neatly-framed card, containing the familiar inscription—"Teeth carefully extracted." Being the only chemist in a small country village, with the nearest dentist twenty miles away, my services as a tooth-extractor are being constantly called into requisition.

From some occult reason or other, there appears to be a perpetual toothache-epidemic in my locality, and I can say without exaggeration that my sale of remedies for this complaint is greater than that for any other. Both adults and children are affected, and in 50 per cent. of the cases initially treated by the internal and external application of miscellaneous nerve-destroyers, poisons, and embrocations, I am eventually called upon to exercise my prerogative as a tooth-drawer. It is this final stage which I positively hate, and I always endeavour, by every means in my power, to procrastinate as long as it is possible.

I dare not use anæsthetics without the presence of a medical man, and as the great majority of my victims—this is the most appropriate name I can apply to them—object to

the extra expense incidental to this precaution, I am compelled to operate under a disadvantage.

Never am I likely to forget the Herculean farm-labourer who almost pummelled me to a jelly because I failed to extract a huge lower jaw molar painlessly. With a face swollen to the size of the largest pumpkin grown, the poor fellow slouched into my shop one morning, and asked me if I could take out a sore tooth. I endeavoured to persuade him to try a little nerve-killer, and various other remedies; but he was obstinate, and emphatically refused to have anything to do with such things.

"Out wi' 't, mister, and," holding up his fist threateningly, "don't thee hurt me."

I saw there was nothing for it but compliance, and having got him to take a seat in the clamped chair, I made an ostentatious display of my instruments, thinking thus to deter him from undergoing the operation. But he was not to be frightened, and bracing myself for the ordeal, I very gingerly opened his mouth, and marked the offending tooth. My heart sank within me at the sight of that molar, and I knew that it would be an earthly impossibility to extract it under the then existing conditions, without the most acute pain. Here was an embarrassing dilemma, and I cast about me for some way of escape.

"My good man," I said, holding an ugly pair of forceps before his eyes, "your tooth's a terrible one to get at; I am bound to cause you considerable suffering. You'd far better take something for it, and go home to bed."

"Nay, nay, mister; until it's out I'll have no peace," he replied impatiently, and with such a decisive tone that I knew it was useless to argue with him.

No sooner had the cold steel of the forceps touched his gums than he gave vent to a mighty bellow, and knocked the instrument out of my hand. I now positively declined to have anything more to do with him, whereupon he jumped from the chair, and threatened to kick me round the place unless I took that tooth out. Well, to make a long story short, he resumed his seat, whilst I, now thoroughly nettled, thrust the forceps into his mouth and gripped the aching molar. Bearing down on it with all my strength, I gave one mighty wrench, which must have shook the foundations of the jaw, and brought away a huge treble-pronged tooth. So quickly had this been done that the patient scarcely knew what I was doing; but almost before I could remove the forceps from his mouth, he had laid hold of me by both hands and got my head into "chancery." Then he punished me severely, and I became unconscious. When I recovered he had gone; but a police-court summons for assault and battery was instrumental in mulcting him in a fine of 40s., or, in default, a fortnight's hard labour.

After that I removed the framed card from my window, and hoped that the publicity given to the police-court proceedings would prejudice the public against me as an amateur dentist. But, extraordinary as it may appear, it did not have that effect, and I was asked to pull out just as many teeth as of yore. I could not very well refuse, for I should offend customers, and thus lose my trade.

I once had a remarkable illustration of stoicism. The village squire, a man about fifty-five, sat like a statue, for fully three-quarters of an hour, whilst I extracted no less than eleven teeth. He refused to take an anæsthetic, and although I must have caused him the most excruciating agony, he never moved a single muscle during the ordeal.

I have had some lively times with both young and old ladies, the former especially. One morning, whilst I was at breakfast, the daughter of the local schoolmaster rushed into the shop, and asked me to draw two decayed stumps from her upper jaw. Questioned as to whether they gave her much trouble, she frankly admitted that they had not ached for several years, but still she desired to have them removed, for that morning she was to be introduced to her father's new assistant, upon whom she was anxious to make a favourable impression. To myself I was bound to admit that the removal of those two discoloured stumps would without doubt enhance her appearance, and made preparations for their extraction. To make another long story short, it will be sufficient for me to say that I have not yet succeeded in obliging that young lady, for the simple reason that she fled at the mere sight of the forceps. I would not have minded at all if she had gone as she came—quietly—but instead of this she rushed from the shop, screaming and

shrieking at the top of her voice. About half-an-hour later her father called upon me, and demanded an explanation as to the meaning of the treatment to which I had subjected his daughter!

In a few words I gave him the plain, unvarnished truth, and he left me in much the same manner as a whipped cur would. How the young lady fared at his hands when he got home I am not in a position to record.

Just as I was preparing to go to bed one night the bell rang furiously, and imagine my astonishment when, upon opening the door, I was confronted by the well-known form of my worthy washerwoman, who, in piteous accents, entreated me to remove a gathered tooth. Now, if there is one thing, above all others, which I have a special antipathy against meddling with, it is a gathered tooth, and I told her that I couldn't undertake to extract it. She flew into a passion at this, and threatened to smash every window in the house unless I gave her relief. Knowing the nature of the woman, I determined to practise a little stratagem, and invited her into my private room. Leaving there for a few minutes I went to the shop and mixed a powerful sleeping-draught, which I told her to gulp down before I could draw the tooth. She took it, and became calmer; gradually she got drowsy, and in a short time she fell asleep. She remained in my house all night, and in the morning awoke refreshed and free from pain. Having thanked me most profusely, she returned to the bosom of her family, with the impression that the gathered tooth had been extracted. It was not for nearly a week afterwards that she discovered the fraud, and then—well, I got it hot, and no mistake.

HECTOGRAPH MASSES AND INKS.

WE take the following formulæ from a Bavarian journal. They are a useful collection as showing the different styles of compositions which have arisen from Kwaysser and Hussak's invention of 1878, the English patent of which will shortly expire. In these formulæ the quantities, it should be noted, must all be taken by weight.

MASSES.

Girardin's Formula.—Gelatine, 10 parts; glycerine, 15 parts; powdered talc, 2 parts.

Lebaigue's Formula.—Gelatine, 10 parts; water, 37½ parts; glycerine, 37½ parts; kaolin, 5 parts.

Wartha's Formula.—(1) Gelatine, 10 parts; water, 40 parts; glycerine, 120 parts; barium sulphate, 8 parts. (2) Gelatine, 10 parts; dextrin, 10 parts; glycerine, 100 parts; barium sulphate, 8 parts.

Other Formula.—Glycerine, 12 parts; gelatine, 2 parts; water 7½ parts; sugar 2 parts.

Water, 10 parts; dextrin, 1½ part; sugar, 2 parts; gelatine, 4 parts; glycerine, 15 parts; zinc oxide, 1½ part.

The formula for the patented article was given in our issue of February 13, page 248.

INKS.

Lebaigue's Formula.—(1) Paris violet, 1 part; water, 3 parts. (2) Rosaniline acetate, 2 parts; S.V.R., 1 part; water, 10 parts.

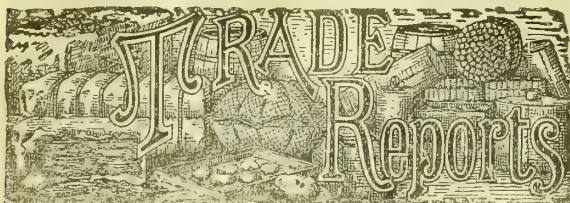
Kwaysser's Formula.—(See THE CHEMIST AND DRUGGIST as above stated).

Villon's Formula.—Bordeaux red, 3 parts; S.V.R., 2 parts; water, 20 parts; glycerine, 1 part.

Wilson's Formula.—Rhodamin, 3 parts; alcohol, 4 parts; water, 20 parts; glycerine, 1 part.

The following figures show the weight of any mass containing dextrin which is required for a specific surface:—

8 in. × 12 in.	require	24½ oz. of mass
8 " × 16 "	"	35 "
10 " × 20 "	"	52 "
12 " × 24 "	"	70 "
16 " × 30 "	"	122 "



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., July 14.

The London Markets.

Cinchona Dividends.

The report of the Java Cinchona Company "Kertamanah" for 1891 shows that the harvest of 299,333 half-kilos. of bark, which it cost 38,857f. to produce, has realised 81,650f. The net profit was, therefore, 60,997f., of which 21,997f. is carried to the new account, the remainder being distributed to shareholders, at the rate of 10 per cent. on ordinary shares.

ACID (CARBOLIC) has advanced in price, and business has improved owing to the reports of the approaching cholera epidemic. *Crystals*, 34° to 35°, are now quoted at 4d. to 4½d. *Liquid* crystallised is also held for higher prices, but it has not advanced so much as crystals.

ACID (CITRIC).—The market is very quiet, and there have been hardly any orders lately.—1s. 4½d. to 1s. 5d. is today's nearest quotation: juice being offered at 18l. 10s. to 13l. 15s.

ACID (TARTARIC).—Very dull of sale at 11½d. to 11¾d., according to brand.

ANTIMONY.—Crude Japan is somewhat firmer, sales having been made, it is said, at the rate of 27s. per cwt. on the spot.

BALSAM (CANADA).—The new crop of Canadian balsam is now arriving in New York, and prices are coming down. From 12½d. to 1s. 2d. per lb., c.i.f. terms, is quoted, according to packing.

BALSAM (COPAIBA).—The American market is reported dull and lower. *Pará* is offered at 1s. 7d. c.i.f., *Maranham* at 1s. 6½d. c.i.f., and *Cartagena* at 1s. 5½d. c.i.f. The London market is dull and lifeless, fair *Maranham* being offered at 1s. 7½d. to 1s. 8d. per lb.

BALSAM (TOLU).—The American market, we hear, is quite overstocked, and genuine quality is already being offered from New York at 11½d. per lb., c.i.f. terms.

BROMIDE.—An American firm offers American bromide of potassium, guaranteed B.P. standard, at 10¾d. per lb., c.i.f. terms, and American bromine at 11½d. per lb., delivered weights, London or Liverpool.

CALUMBA.—It is said that good natural root has been sold at 45s. per cwt., and that the drug is gradually becoming very scarce.

CAMPOR (CRUDE).—A very dull market. The quotations are nominally 127s. 6d. per cwt. for Japan, and 120s. per cwt. for China camphor on the spot. Sales of Japan have been made this week at 117s. 6d., c.i.f. terms, delivered weights, for May-June shipment.

CAMPOR (REFINED).—The German agents are very firm at 1s. 5½d. per lb. net on the spot. English is still quoted at 1s. 7d. per lb.

CARDAMOMS.—The following figures refer to the export of cardamoms from Ceylon between the periods of January 1 and June 20:—1892, 180,269 lbs.; 1891, 155,477 lbs.; 1890, 177,380 lbs.; 1889, 150,706 lbs.

CASCARA SAGRADA.—In America prices are declining, and quotations come from there at 25s. 6d. to 29s. 6d., c.i.f., for fair quality to fine selected quills; but these prices are not likely to offer any inducement to our buyers here. A New York correspondent, writing on July 1, says:—"Although we warned the collectors on the Pacific Coast that there was no chance whatever of higher prices this year, they discarded our advice, and large quantities have been gathered. The consequence is that we have to face another season of over-production. Like other products, this bark appears destined to become almost unsaleable before the collectors will realise the position, and allow the consumption a breathing-spell. The large holdings of old bark are still untouched, and now dozens of dealers and collectors are offering the new crop, but cannot find buyers at the figures they want."

CHAMOMILES.—It is reported that the Belgian crop is likely to be a bad one, worse even than last year. We also hear that in France the chamomile market has opened at very high prices, as much as 8l. per cwt. being named, which seems an excessive rate, and is not likely to be maintained.

CINCHONA.—The cinchona auctions on Tuesday were moderate in extent, the catalogues on this occasion being composed as follows:—

	Packages	Packages
	869 of which	869 were sold
Ceylon bark	737	737
East Indian bark	577	287
South American bark	358	358
African bark	2,541	2,251

The sales progressed with moderate vigour, the only lots left unsold being a few parcels of *Cuprea* bark, for which even the moderate limits that would now be acceptable to holders could not be obtained. The unit remains unchanged at 1½d. per lb. for fair bark, with a tendency to greater firmness. The following prices were paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Fair to good bright quilly chips and shavings, 2d. to 3½d.; fair but rather dusty root, 2½d. to 3d. per lb. Yellow varieties: Ordinary to good bright quilly branch and stem chips, 2½d. to 5½d.; good chips and shavings, 4½d. to 5½d.; fair bright root, 4½d. per lb. Grey varieties: Ordinary weak and damaged to fair bright quilly branch and stem chips, 1½d. to 2½d.; fine but dusty shavings, 5½d. to 5½d.; root, 3½d. to 3½d. per lb. Hybrid chips and shavings, 2½d. to 3d.; dust, 2d.; fair root, 3d. per lb. *Renewed.*—Red varieties: Dull to good bright quilly chips, branch and stem, 2½d. to 4d.; fair to good but dusty shavings, 3½d. to 4½d. per lb. Yellow stem chips, poor to good quilly strong, 2½d. to 5½d. per lb. Grey fair quilly chips, 3½d. to 4d.; shavings, 4½d. to 5d. per lb. Hybrid chips, 4d. to 4½d. per lb.

EAST INDIAN CINCHONA.—*Original.*—Red varieties: Dull small dusty to fair bright strong and quilly chips, 1½d. to 4d.; rather dull spokeshavings, 1½d.; root, 2½d. to 2½d. per lb. Yellow varieties: Very ordinary twigs to good bright quilly stem and branch chips, 1½d. to 5½d.; fair to fine bright shavings, 2½d. to 5½d.; fine stem chips, 7½d. to 7½d. per lb. Grey dull and small to good bright bold chips, 2½d. to 4½d.; small shavings, 2d. to 2½d.; good bright root, 4d. to 5d. per lb. Hybrid chips, 2½d. per lb. *Renewed.*—Red varieties: Small to good bright chips, 2½d. to 3½d.; good shavings, 4d. per lb. Yellow chips: Fair to fine bright quilly, 3½d. to 7d. Grey small thin shavings and chips, 4½d. to 4½d. per lb.

SOUTH AMERICAN CINCHONA.—Of cultivated Bolivian *Calisaya* 410 bales from Mollendo (*via* Hamburg) were offered today. The bulk of this parcel consisted of damaged bark, and the greater part of it, viz. 287 bales, was sold at 4½d. to 5½d. per lb. for rather broken to fair quill. Of *Cuprea* 167 bales, all of 1888 import, were offered and bought in, 1½d. per lb. being wanted, while only 1½d. per lb. was offered.

AFRICAN CINCHONA.—A parcel of 358 bales, imported *via* Lisbon, was offered at the auctions, and sold at 2½d. to 3½d.

per lb. for fair rather irregular *Succirubra* quill. The whole of it was slightly damaged. There was 1 bale of 31 lbs. from Chinde (South-eastern Africa), the first arrival from that coast, in dark red chips, which sold at 4d. per lb.

The following figures refer to the exports of cinchona from Ceylon between January 1 and June 20:—1892, 2,745,687 lbs.; 1891, 2,513,270 lbs.; 1890, 4,068,395 lbs.; 1889, 4,705,784 lbs.

CLOVES.—Zanzibar cloves are exceedingly flat, and at auction about 300 bales sold at 2½d. to 2¾d. per lb. for ordinary to good quality, showing lower value.

COCAINE is firm, and sales of crude have been made at somewhat higher prices. The quotation for *Hydrochlorate* is now 17s. 6d. to 18s., but we believe that it would still be possible to buy at the lower figure.

CUMIN-SEED.—It is reported that the crop of this drug in Malta has been a failure this year.

CUTCH is firm with sales, this week, of Star B at 29s. 6d. and Eagle (in Liverpool) at 29s. per cwt.

ERGOT OF RYE.—Reports from Russia state that the crop this year is again expected to be a very small one. The market is fairly steady privately, German and Belgian having been sold at 2s. 2d. per lb. For Spanish from 2s. 6d. to 2s. 10d., according to quality, is still asked, and it is believed that there may be an improvement in the market shortly, as there have been many inquiries this week.

GALLS.—At auction on Tuesday, 33 cases China galls sold cheaply, without reserve, at 42s. to 46s. per cwt. for dusty and stalky to fair.

GAMBER.—Selling slowly on the spot at 18s. 3d. to 18s. 6d. for whole bales, cubes at 30s. per cwt.

GINGER.—*Jamaica* is in less demand and lower, about 100 barrels selling at 70s. to 85s. per cwt. for good to fine, and 49s. to 58s. 6d. per cwt. for common to low middling. *Cochin* ginger is also flat, a few lots ordinary shrivelled rough selling at 26s., and five cases extra bold rough at 63s. per cwt. *African* ginger sold in Liverpool last week at 31s. per cwt.

GUM ARABIC.—At to-day's auctions a rather moderate supply of acacia gum was offered for sale. The market remained dull. Ordinary *Ghatti* gum was rather dearer; *Kurachee* dull and slightly lower; *Cawnpore* is also slightly easier. The following prices were paid: *Australian*—ordinary dark and woody to common red, 24s. to 25s.; dusty siftings, 15s. per cwt.; *Egyptian Amrad* (Jeddah), fair red, 36s. 6d. to 37s. per cwt. *East African* (a new source of supply)—115 boxes dull brown glassy Cape-character, imported via Zanzibar, 15s. 6d. to 17s. per cwt. Ordinary *Brown Barbary*, 40s. to 42s. per cwt. *East Indian*—common brown Amrad, 22s. to 22s. 6d.; fair to bright amber Cawnpore, 34s. 6d. to 39s.; fair to good amber Kurachee, 47s. to 59s.; small red to pale siftings, 22s. 6d. to 27s.; medium to fine pale Ghatti, 23s. 6d. to 45s. 6d. per cwt.

INDIGO.—The market in East Indian indigo has been exceedingly active lately. It is computed that no less than 2,000 chests have changed hands privately during the months of June and July at prices rising from 2d. to fully 6d. per lb. advance over the last auction rates. The quantity offered at the periodical auctions on July 11 was very small, consisting of 1,607 chests only, nearly the whole of which sold at a further advance, as compared with the previous auctions, of 5d. to 8d. on good to good ordinary Bengal, 5d. to 6d. on Ondes, and 4d. to 6d. on good ordinary to fine Kurpah. The crop news from India is very alarming.

IPECACUANHA.—Last week no less than 300 packages of *Rio* root arrived here, and this caused the heavy fall in the article at the last auctions. *Carthagera* root is said to be selling still at fairly steady prices, 5s. 6d. having been paid privately this week.

JABORANDI-LEAVES.—New York is said to be practically out of stock. For fair greenish leaves 10d. per lb. c.i.f. is quoted, and there is also a strong local demand.

JALAP has been in considerable request. It is said that 1s. 5d. has been paid, though we doubt whether that can be quite correct. The price now asked is 1s. 6d. per lb. for good Vera Cruz.

OIL (CASTOR).—On June 21 the Calcutta market was reported to be firm at somewhat higher rates, though the advance asked had had the effect of checking business.

OILS (ESSENTIAL).—*Star anise* has declined in price, sales having been made on the spot at 6s. 1d. per lb.; while for arrival 5s. 7½d., c.i.f., has been accepted. *Cassia* oil has sold at 3s. 1d. per lb., c.i.f. terms, but it is now possible to buy at 3s., c.i.f. *Peppermint* oil steady at 13s 4½d. per lb. for H.G.H. *Lemongrass* oil is quoted at 1¼d. to 1½d. per oz.; and *Citronella* at ¾d. to ¾d. per oz.

OPIMUM.—There is very little doing here in *Turkey* opium. Fine druggists' quality is being quoted at 6s. 3d. to 6s. 6d.; seconds at 5s. 9d. to 6s. *Persian* opium is rather more active, and it is said that the crop is not likely to come up to the estimate formed of it. In Persia and in China—which is one of the principal markets for this variety—prices have considerably advanced, but in London no business has yet been done at the higher rates asked by the holders—namely, 8s. 6d. to 9s. per lb. Under date of July 9, our Smyrna correspondent writes:—"Opium is now coming in much more freely from the interior. The arrivals to date are 350 baskets, against 483 at the same time last year, and very shortly there will be an increase in favour of this year, as large supplies will be received from the northern districts, where the harvesting of the crop is proceeding rapidly, owing to the continuance of very favourable weather. It is now almost a certainty that the Turkey crop this year will not be less than 9,000 baskets. Nevertheless, our market may not settle down to its lowest point for some time, as the prices that are paid in the interior are higher than here, consequently, for the present, holders prefer pledging their goods at a high rate of interest to selling at a loss." The arrivals of new opium in Smyrna up to July 2 were 189 packages, against 342 packages on July 2, 1891.

ORRIS-ROOT.—We are informed that the prospects of the coming crop in Italy are very poor. The root will be harvested in September, and it is said that the yield of the crop is not expected to exceed last year's very small output.

OTTO OF ROSE.—One of the Bulgarian otto-dealers has taken exception to our correspondent's letter on the otto crop, published in our issue of July 9. The London agents of the gentleman in question have sent out a circular traversing some of our correspondent's statements. They term him a "disappointed party attempting to impose Eastern fabrics upon Western readers," whatever that may mean, and then proceed as follows:—"There exist in Bulgaria no stocks of old otto, and if the stocks in Paris, London, and the United States be estimated from fairly known facts, there would hardly be a total of 5,000 oz., not of 30,000 oz.; moreover, what stocks exist are in consumers' or second holders' hands, and practically do not count. It is perfectly well known to buyers here that most old stocks were bought up at the very first signs and reports of the prospects of deficient collection of roses. The collection and distillation of this year was concluded on June 10 already, and the producers, knowing too well the outlooks of a pressure, are declining to commit themselves to any price whatever for this new product, and are most difficult to be dealt with. Comparative high prices to balance the deficiency of the crop are therefore the natural outcome of clearly defined and all-powerful circumstances." The brand by which prices are generally regulated opened last season at 23s. 3d. per oz., but this year a much higher rate is likely to be fixed for it, and the agents speak of 30s. as a not unlikely figure. Second-hand holders, they say, already want 28s. per oz.

POPPY-HEADS.—Sales of new Belgian poppy-heads have been made this week at rather high prices—namely, 12s. 9d. to 13s. per thousand; the crop will not be in for some weeks yet. English poppy-heads are held for 14s.; it is said that the crop will be small and the quality poor.

QUICKSILVER.—Steady at 7l. 2s. 6d. from the importers, and 6l. 19s. in the second hand.

QUININE.—A very dull market. About 20,000 oz. were sold on Tuesday and Wednesday at from 8½d. to 8¾d. per oz. for German bulk second-hand on the spot.

SENEGA.—The new crop, it is said, will be late this season, but it is likely to be of fair quality and extent.

SHELLAC.—The market closed last week with a moderate spot demand, and sales of unworked TN second orange at 79s. to 80s. per cwt., short prompt; while for AO garnet 72s. per cwt. was paid. With the opening of the present week a better feeling began to permeate the speculative market, and at the auctions on Tuesday an advance of 2s. per cwt. was established upon the prices of the small quantity of lac sold. *Orange* realised 80s. for good pale unworked, and 75s. to 76s. for blocky to flat reddish ditto; unworked buttonlac sold at 79s. to 86s. for ordinary seconds to good pale firsts. After the auctions the market remained steady, but only very little business was reported on the spot. About 1,500 cases sold for delivery, however, at 82s. 9d. to 83s. for August, 82s. 6d. for October, and 82s. for November.

SILVER NITRATE has touched the lowest point on record, and is offering to-day at 2s. 2d. per oz.

TONQUIN BEANS.—No arrivals of *Angostura* or *Surinam* beans have lately taken place in New York from South America. Good frosted beans of the latter description are quoted now as high as 2s. 6d. per lb., c.i.f. terms. In London the market was also rather firmer, with sales of fair black Pará, slightly foxy mixed at 1s. 6d. per lb. privately.

TURMERIC.—For fair *Bengal* 19s., and for *Cochin* in split bulbs 8s. 6d. per cwt. has been paid.

VALERIAN-ROOT.—Prices are still advancing, and a few bales, we are told, have been sold this week at 46s. per cwt.

WAX (CARNAUBA) is quite and difficulty of sale, the quotation being from 45s. to 65s. per cwt. for common dark to fine pale.

WAX (JAPAN).—Very flat. Small sales have been made privately at as low a price as 38s. 6d. per cwt.

THE LIVERPOOL MARKET.

OWING to the elections, the business done during the past week has been quite of a retail nature, and there are few changes to report.

BALSAM COPAIBA.—No further arrivals. The market is firm at the advance noted last week.

GUM ARABIC.—A parcel of old-fashioned Soudan description sorts offers at 90s. per cwt.

HEMP-SEED.—Owing to a large arrival, some parcels have changed hands on private terms, presumably at a reduction.

OIL (CASTOR).—The *Mira* has arrived with a large quantity on board, and there are now sellers ex quay at 2½d. for seconds.

WAX (BEES').—There is a large arrival.

THE GERMAN CHEMICAL INDUSTRY.

OUR consul at Frankfort-on-the-Main, in a report on the industrial condition of Germany, gives the following table of figures relating to the exportation of drugs and chemicals from Germany:—

Articles	Quantity		
	1891	1890	1889
	Met. centners	Met. centners	Met. centners
Essential oils	2,546	3,652	2,250
Soda, calcined	353,303	270,510	195,274
Potassium	110,934	105,281	115,759
Alkaloids	584	561	372
Quinine	1,869	1,565	1,716
Chloride of potassium ..	769,962	676,680	754,587
Iodide of potassium ..	977	1,662	1,076
Sulphate of potash ..	301,888	193,133	218,478
Mineral waters	335,632	363,629	304,773
Salicylic acid	2,170	2,440	2,375
Saltpetre	96,629	101,349	81,017
Hydrochloric acid ..	103,123	80,502	62,018
Tartaric acid	7,769	10,211	15,982

These figures, the consul says, show that the increases in the exports of this year are generally in the important, and the decreases in the less important articles. The opinion

therefore, formed of the trade in general of the chemical industry for this year will not be an unfavourable one. Germany's chemical industry takes a high place, and its products are forwarded to almost all countries of the world. The reason for this extension is to be found in the high theoretical talents of the German people and the excellent schools, which, year by year, furnish a body of educated chemists to advance the trade of the country.

The Potash Salts. One branch of the chemical industry is worthy of special attention—namely, the potassic salts.

This industry has formed a syndicate which publishes accounts every year, and thus facilitates inspection of the course of business.

Of chloride of potassium (80 per cent.) the sales were, in—

		Met. centners
1891 .. ..	.. ..	1,341,639
1890 .. ..	.. ..	1,265,526
1889 .. ..	.. ..	1,237,482

These quantities were distributed as follows:—

	1891	1890	1889
	Met. centners	Met. centners	Met. centners
Germany	437,989	408,125	446,882
North America	356,700	295,000	319,000
England	123,100	138,000	110,000
Scotland	81,500	91,000	48,000
France	151,000	152,000	107,000

The total amount of sales in muriate of potassium (90 per cent.) were:—

		Met. centners
1891 .. ..	.. ..	179,804
1890 .. ..	.. ..	129,471
1889 .. ..	.. ..	62,213

America is also the largest consumer of this salt, then follow Germany, the United Kingdom, and France.

Kieserite. The total sales of kieserite in 1871 were 285,591 centners; in 1890, 320,048 centners; and in 1889, 318,239 centners. Of these quantities the United Kingdom took, respectively, 251,454, 281,938, and 253,172 centners. Several products, of which kieserite is one, are almost exclusively manufactured in Germany for foreign countries.

With regard to the general condition of the industry, the consul remarks: "The Frankfort quinine factory records a further increase in its production. The consumption of quinine is increasing in almost all parts of the world. In glycerine, cocaine, strychnine, and other pharmaceutical preparations (of which the factory in question is one of the chief producers in Europe) the demand throughout the year was very active, although mostly at reduced prices. The coal-tar colour industry, too, had another good year. In 1891 a whole series of new medicines produced from coal tar were introduced before due examination of their merits or demerits. It is supposed that the public will sooner or later object to being experimented upon chiefly for the benefit of manufacturers."

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, July 14.

AT to-day's cinchona auction over 3,000 packages Java bark were offered, but half of this was bought in, the remainder (viz., 1,567 packages) selling at the low unit of 6½ cents per half-kilo (= 1½d. per lb.). This price shows hardly any advance upon the last sale-rates. The following prices were paid:—Manufacturing bark in chips and quills, 5 to 53 cents. (= 1d. to 9½d. per lb.); ditto root, 14 to 36 cents. (= 2½d. to 6½d. per lb.); druggists' bark in quills and chips, 10 to 39 cents (= 1¾d. to 7d. per lb.). The principal buyers were Mr. Gustav Briegleb, of Amsterdam, the Brunswick quinine works, the Frankfort works, and the Amsterdam factory.

A WOMEN'S PHARMACY.—The Women's Pharmaceutical Association of Illinois is planning to conduct a model pharmacy in the Illinois building at the World's Fair.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Assistants and Employers.

SIR,—Any attempt to relieve any portion of the community of oppression must enlist the sympathy of rational people. I can assure those whose letters have appeared in THE CHEMIST AND DRUGGIST *re* the formation of an Assistants' Union that they have my profound sympathy, and will have my assistance and support in any scheme tending to ameliorate the condition of assistants who are compelled by the present custom to work such unreasonable hours. I think it is high time something was attempted and persisted in. That the present condition of many of our brethren is nothing less than slavery is not even doubtful when we look round and see the many privileges even common working men enjoy.

We can congratulate ourselves upon having such an excellent medium as THE CHEMIST AND DRUGGIST wherein to express our dissatisfaction, but I don't think we can expect its proprietors to form a union for us. If assistants are really determined to alter the present state of things, they will be compelled to act steadfastly when we are properly organised.

Mr. Ryder's remarks of June 11 are worthy of our attention. He seems to be using the suggestion of forming an Assistants' Trade Union as a means of striking a blow at "cutters" and miserable competition. I heartily agree with him upon that, but I should like to remind him that we also have our grievance, to which it will be well to confine our attention for the present. I advise assistants to report any situations where more than seventy-two hours are demanded, this number of hours to include every kind of duty; I think any demand for more is a base imposition. It is pointed out that assistants tolerate the present state of slavish hours because they are anxious to build up a career. What kind of career? I ask. They are undermining their constitutions and laying the foundation for premature decay of the faculties just at the time when they should be expanded.

Assistants are in a strong position to reform this unsatisfactory state of things when they remember that the duties of our business are legally restricted to them. We need not condescend to denounce those who extort eighty and a hundred hours, but we should show them determinedly that it will soon be a matter of the past, but well remembered by those who submitted to it. I advise members of Chemists' Assistants' Associations to discuss the matter freely, and let us know what the feelings are. I should be pleased to subscribe; we cannot form unions and effect organisation without money. I trust some of our more fortunate brethren will identify themselves with an object which will be an advantage to us all. Trusting we shall be able to make something out of the present justifiable discontentment,

Yours faithfully,

Headless Cross, Redditch.

R. WRIGHT.

SIR,—That our hours are long is a fact admitted by all in the trade. But I think, in the general grumble, the thing is made too one-sided. I was therefore pleased to see that "Pharm." and "Æneas" had struck the other chord. I have had a fairly good and varied experience, generally living indoors, and have never experienced the feeling of being "an interloper"; indeed, the "comforts of the house" and

the "table", compared very favourably with what my outdoor friends had to put up with. I have always endeavoured to treat my employer's business with the same consideration as I should my own, and by that means, with only one exception, have succeeded in gaining their confidence and friendship, and when that state of things exists I hold that all the pleasures of life need not be crowded into the short space we are off duty. A week, a day, or a few hours off, I was never refused. But when a man refuses to pack a few *ld. magnesias* at a push as being *infra dig.* for a qualified senior, I think we have little cause to wonder why the "boss's temper is not good," or why there is constraint in the house. If we cannot get shorter hours we can get many considerations by sticking to duty.

July 7.

VÉRITÉ. (70/53.)

SIR,—The letter of your correspondent "Pharm." is sure to excite the sympathy of all readers. Here is a gentleman suffering from, one may say, the irony of fate in a most peculiar form. He may be said to have served in one world and been served by a totally different world. His experience of "sits." seems to have been of the happiest, and now he sits down to bewail the shortcomings of the "sites" (one is more tempted to say "settees," considering how some of us are sat upon). May I offer "Pharm." some consolation in the Oriental idea of fatalism? We have all a certain amount of good and evil to receive in this life, and he seems to have had the good first. Yet it seems to me a rather strong impeachment of his fellow-employers to say they systematically give false testimonials—for that is what his letter infers. There are indifferent assistants in the trade, no doubt, but it strikes me the dazzle of a few extra sovereigns a year in your correspondent's pocket quite outshines the "blazing testimonials." And his reference to the qualified being amongst the offenders rather strengthens than otherwise this impression. When I said the indoor assistant is treated as an interloper I was quite prepared to bear the statement out with evidence quite as solid as "Pharm.'s" experience is varied. Your other correspondent, "Æneas," is a bit of a wag. He believes in the old doctrine of discipline being good for the soul. Be wise, then, my brother, and work long; and if any man offer thee a hundred hours, give him a hundred and twenty. "Satan finds some mischief still," &c., is his motto, and it would be a pity to sink us to perdition for lack of hours of labour. Did it never strike you, heroic "Æneas," that some of those few hours of leisure might be profitably employed?

I think the suggestion that one of the pharmacy schools should take this matter up is a good one, and I am sure would be well received.

Yours obediently,

JOAN. (70/44.)

SIR,—A letter in your last issue, signed "Æneas," has afforded me much amusement.

What awful reprobates City men and all others who finish work at 5 or 6 o'clock must be, when "stores" assistants are not "respectable beings" because they close at 7.30!

I venture to suggest to "the pious Æneas" that, as he has such a horror of music-halls, he should insist on his assistants going to Exeter Hall or the British Museum, where there would be no danger of them becoming unduly exhilarated. I am afraid that chemists' assistants will continue to strive after shorter hours, even after "Æneas's" solemn warning that, if successful, they will become "low and degraded."

Yours, &c.,

July 10.

LIBERTY. (69/37.)

SIR,—The astonishing ignorance displayed by "Æneas" is equalled only by the unblushing effrontery of his sweeping assertions respecting his *confrères* of the "stores." One statement, however, I can fully endorse—namely, that chemists, as a whole (meaning, I suppose, the principals), are a good, easy-going set of men. From my experience of them, extending over thirteen years, I fully believe that they, as much as their assistants, deplore the system of such terribly long hours as are at present in vogue. But when "Æneas" speaks of an assistant who, wishing to do well to himself and to his master, must work seventy-four or seventy-five hours a week, I venture to say that such a statement is unten-

able. For, according to the doctrine of our leading "lights," the only hope of the future "pill-builder" lies in education. How he is going to educate himself, working in the ordinary pharmacy seventy-four or seventy-five hours per week, passes my comprehension. The "stores" assistant is, in this respect, infinitely better off, and I unhesitatingly assert that in respect of dispensing, at any rate, the former is a better man than the latter. At the present rate of wages, entire abstention from business for the purpose of "reading up" is well-nigh impossible, and to those whose only means is their weekly or monthly salary, establishments like the stores are a boon, and are largely utilised for that reason. Should such a dire calamity as a system of shorter hours be ever brought about, it is not likely that the stipend will increase, so that the fear of our becoming a "low, degraded, theatre-going body" is groundless, for the simple reason that this taste is an expensive one.

Yours truly,
W. R. M. (69/69.)

SIR,—I think apprentices have not less cause for complaint than assistants. I have to start the day's work at 8 A.M., and do not finish till 10 P.M., although in my indenture the hours are stated to be from 8 A.M. to 8.30 P.M. At 8.30 P.M. we partly pull down the shop-blinds, but do not actually lock the door till 10 P.M. or after. After we are supposed to close (8.30 P.M.) we have often a considerable amount of work to do which prevents me from ever getting out for exercise, although the assistants (there are two) go out every alternate evening. I am supposed to get one hour for exercise every alternate day (but this is usually cut down to only twice a week, and often only once), and one evening a week from 5.30 P.M. to 9.30 P.M. I have to take part of every Sunday duty, and all the night duty, which, in the winter, is no easy work. I do not suppose that I am the only victim of this system of sweating apprentices by men who call themselves Christians, in the high-class suburban establishments.

Faithfully yours,
JULY 9. XENOPHON. (69/59.)

SIR,—"*Æneas*" remarks in your last week's issue that chemists regret the long hours of their employés as much as they do themselves, but I should like to ask if this be the case, and if they really can do nothing to ameliorate their hapless condition and render life more agreeable? Is it necessary to keep an assistant in business all the hours of the day, and then, when he should be free, to put him on night duty without allowing an equivalent amount of time for recreation or amusement? Is the business so great all the day that no time can be spared? If this be the case the proprietor must be making a rapid fortune. But I think this is not so. It has simply been customary; that is the only reason.

Chemists, and especially assistants, can now alter this, and suppress their long-talked-of enemies, the "stores," if they will but form a society for the betterment of their position, and stick to each other.

In conclusion, I would like to inform "*Æneas*" that when I am in business I hope to do a good trade, but not by exacting the greatest amount of work and longest hours from my employés, as no one has more seen the folly of this system than

Your humble servant,

A BROTHER PILL. (72/30.)

SIR,—We chemists' assistants on the Continent are, as a rule, well off. We live out, have an hour and a half or two hours for our midday meal, and finish here, in Geneva, at 7 o'clock.

Our pay varies from 250f. to 400f. a month, and we are, as a rule, pretty well off because we stick up for ourselves.

We have read with great interest the discussion in your columns about chemists' assistants and their troubles, and I, for my part, must say that the extraordinary statement made by "*Æneas*" fairly took my breath away. I think there must have been some printer's error, for surely no man in his senses can contend that unless an assistant works more than twelve hours a day he becomes a low, degraded being.

Does he imagine that our business deteriorates the morality of those engaged in it to such an extent that

unless they are thoroughly worked out and incapable of moving they will, as soon as the shop is shut, go and make beasts of themselves?

Or is Mr. "*Æneas*" a satirical gentleman of a communistic turn of mind, and his letter an immense hit on those of the learned professions—clergymen, lawyers, bankers, &c.—who only work a few hours a day?—for, according to his standard, the more hours a day a man works the more intellectual he becomes, and, consequently, the less time a day he works, the more degraded and ignoble does he become.

No; Mr. "*Æneas*" has entered too much into the spirit of his *nom de plume*; things have changed since the siege of Troy, and even the most sleepy old apothecary must wake up and see that assistants are made of the same flesh and blood as himself.

There is at Paris an association of chemists' assistants, which has already done good service.

Anyone interested in the matter can have a copy of the regulations by writing to M. Lemaire, Secrétaire de la Chambre Syndicale des Elèves en Pharmacie, Pharmacie Centrale, Paris, and they would probably find in it a few hints for establishing a similar Association in England.

The Anglo-American Pharmacy, Yours very faithfully,
13 Rue des Allemands, Geneva. HORACE S. HILL.

Chemists' Trade Protection Society.

SIR,—Seeing that there is no probability of the Pharmaceutical Society becoming thoroughly representative of the trade, or doing its duty efficiently in the enforcement of all the provisions of the Pharmacy Acts till compelled by coroners and other officials, nor in protecting our best interests from being encroached upon by stores, companies, hucksters, unqualified men and other traders, I would suggest that immediate steps be taken to form a Society for the protection and advancement of our business, for the enforcement of the law on all offenders, and for the amendment of the law.

That all masters, managers, assistants, and apprentices be asked to allow their names to be entered as members, so as to enable the Society to be representative of everyone in the trade.

That each member be expected (but not compelled) to pay a yearly subscription, for the purposes of the Society, of not less than 2s. 6d.

That the chief objects of the Society shall be the protection of the trade interests of its members, by enforcing the law in every case where the exclusive right to do so is not held by the Pharmaceutical Society, for the purpose of urging that Society to action where at present it is dormant, and by assisting to supply evidence for the Society to act upon, and so increase the protection of the whole trade.

That inspectors be appointed whose duty it shall be to obtain evidence against offenders of the law which shall result in successful prosecution.

And, lastly, that, if found advisable, steps be taken, either conjointly with the Pharmaceutical Society or separately, to pass a Bill which shall restrict to chemists the sale of all medicines and medicinal preparations. I would suggest that the headquarters of this Society should be in one of the large manufacturing provincial centres, as it is evident most of its members would be provincial traders, and that it include manufacturers and wholesale chemists, except such as are merely "patent" medicine vendors.

Yours faithfully,

C. E. PICKERING.

The Retail Chemist's Remuneration.

SIR,—During the past few years I have often read letters from members of the trade complaining of the small income that many connected with it have, and I have also been told by parties having prescriptions for medicines of the different prices they are charged in the towns they have visited, showing in many instances the little value that some dispensers put upon their skill, knowledge, and time. Instead of complaining, as many do, that the Pharmaceutical Council do not help, would it not be much better if these grumblers would try to develop the resources within themselves, in doing which they might very properly estimate their abilities at a little higher rate than some appear to do.

As an illustration of my meaning I may mention that a few days ago, a chance customer refused to pay me 8d. for twenty pills, saying that he could get them anywhere for 4d. Before leaving he offered to pay 6d., as I had made them up, but this was respectfully declined. I can imagine many of your readers will consider that I would have shown more business tact by taking the amount offered instead of having the pills thrown upon my hands; but this is the very point where I think the retail chemist is too frequently at fault. The order was taken by an assistant, or the price would have been given when the prescription was presented, and when it was fixed I do not admit that it was good policy to make a change; but if the man's statement was correct how is it that he can get them elsewhere for half the amount? In considering the care necessary to weigh out the ingredients, the mixing, use of expensive scales frequently requiring adjustment, the cutting and finishing, box, label, and wrapping-up, is it not ridiculous to make such a small charge? I am aware there is no rule to guide us, and that a man with little to do may think he is well paid, and others who keep a dispenser continually at work may consider the charge fair; but I am inclined to think we ought to fix some value upon the time in the first place, and the ingredients and manipulation afterwards.

If six persons entered a solicitor's office at different hours of the day, and asked the same legal question, would he not charge each one the same fee, though he might not even touch a pen to write a sentence? Again, if overlookers are entitled to salaries from 300% to 1,000% per year, is it not fair to say that a retail chemist, who has such grave responsibilities hanging over him, should be paid a sum sufficient to cover the risks attendant upon his business?—and therefore, it seems to me, we ought to fix a sum not less than 2s. 6d. per hour for the time occupied in dispensing, taking a fair average of the time required to do the work well, and from this calculate the price of the mixture, pills, or other medicament required, and adhere to the price mentioned. If everyone in the trade would adopt this course, it would tend to raise the *esprit de corps*, and give better returns.

Yours truly,

July 11.

POOR CHEMIST. (70/59.)

Food-preservatives.

SIR,—I have read with much interest your article under the above heading in your issue for last week, and agree entirely with you as to the unsatisfactory nature of the legal decisions referred to. I should like, however, to point out that the two cases are not strictly on all-fours, as in one case the article is a natural product, and bought as "fresh from the cow," whilst the raspberry-wine, bottled for sale, is a manufactured article, and if the trade custom is such that salicylic acid is a recognised ingredient of such wine, the dismissal of the case by the magistrates was fully justified. With milk, however, the case is entirely different, and I have yet to learn—your article notwithstanding—that in London or any other large city, boric acid, or, in fact, anything at all, is required for the production or preparation of cow's milk, as an article of commerce, in a state fit for carriage or consumption.

The raspberry-wine case was dismissed, according to your report, by the magistrates, because they had come to the conclusion that the salicylic acid was not introduced into the wine to increase its bulk, or to defraud or injure anyone, although on reading the case it would seem as if they had formed an opinion rather on the evidence that salicylic acid, or other preservative, was required for the preparation of raspberry-wine as an article of commerce.

I trust that your article will lead to the authorities taking some steps towards systematising the law in these particulars, and it would be very desirable if the Medical Department of the Local Government Board would, as you suggest, undertake the thorough investigation of the whole matter. At present the unfortunate phrase "injurious to health" is without any definite meaning, and although the quantity of boric acid usually present in a pint of milk can produce little health injury to an adult, yet the very fact that it is not a foodstuff, nor a constituent of the body, makes it a substance foreign to natural diet, and, therefore, in the nature of a drug. When, as you point out, a borated milk is the only diet of an infant, the 15–30 grains of boric

acid per diem which would be absorbed under these conditions make the problem still more doubtful; and when it is recollected that this may be the daily dose for many months, I think most of us would concur in saying that such a milk for such a purpose is not suitable.

All these difficulties in deciding whether a given ingredient were hurtful or not would be remedied if the vendors were compelled to state clearly what they were selling.

Your readers know that this is necessary in the case of proprietary medicines which contain bodies which may have toxic action if taken in large doses, and some sort of guarantee seems to be necessary with foods under our present laws. I think analysts should report the presence of any foreign ingredient in a food. When boric acid is the preservative employed, I should feel inclined, at any rate for the present, to allow it as a necessary ingredient in butters and potted creams, but not in a milk which is delivered twice daily by the vendor, as either this act on the part of the vendor or the addition of the preservative must be fraudulent.

Yours truly,

F. I. C. (71/12.)

Did he Ask his own Candidate?

SIR,—As the original contributor of the suggestion that steps should be taken to secure promises of support from candidates for parliamentary honours "for a Bill having for its object that all medicines intended for internal administration shall be vended by duly qualified medical men and chemists only," I am very pleased to note that the one chemist (as far as I know) who took up the matter found no difficulty in securing the coveted promise from both candidates. Now, Sir, if it was possible to secure these promises in the Bassetlaw division, why should there have been any difficulty in obtaining the same promises everywhere—where a contest took place, at all events? I maintain the promise could have been obtained, and had the leaders of the Pharmaceutical Society embraced the opportunity, the finest we have ever had, we should have easily secured the monopoly of the sale of internal medicines. It is absurd that in this enlightened age ignorant people should be allowed to vend medicine. Surely every member of the public would be glad to know that whatever medicine they take is the correct medicine certified by the knowledge of qualified men.

Yours, &c.,

WALES. (72/14.)

The Profitable Sale of Patent Medicines.

On July 2 we published a letter from "One of the Large Proprietors" of patent medicines, intimating a willingness to come to terms with retailers so as to ensure that the latter shall get a fair profit on handling such goods. We have received, as a comment on this letter, two lengthy dissertations on patent medicines generally, which, as they do not seem to us very relevant to the question raised, we must considerably abbreviate.

Mr. J. Anderson Russell (Glasgow) writes:—

"This question of patent medicines is one not at all likely to be settled by the 'patent-medicine men' and the 'drug-trade.' Even could they come to terms whereby prices would be regulated to the satisfaction of both, the matter would only be 'bolstered' in the trade, and even there but for the time being; for chemists have not yet lost all consideration for right and wrong between themselves and their fellows.

"It will be settled by the public, for, once it understands the true state of matters, it will no longer allow itself to be the victim of fraud and wilful imposition, which it has so long been to small chemists and large patent-medicine proprietors alike. Those who do not make untruthful or exaggerated statements in the vending of their wares are not included in this remark.

"When, in passing a proprietary article over the counter, I am asked something regarding its properties, and as a result of the expression of my convictions the customer walks off without purchasing, or with something else, am I to be censured for having put an impediment in the way of the buyer? I trow not. He had the benefit of my knowledge, which did not happen to be in harmony with advertisements regarding the article asked about."

Mr. T. Place (50 Townend Street, York) writes :—

"In considering the question of patent medicines from the proprietors' point of view, as it emanated from one of them in your issue of the 2nd inst., one cannot help being struck by the coolness, selfishness, and effrontery displayed by any man for a moment entertaining the idea that it could be possible for any Government to sufficiently abrogate its highest function—namely, that of legislating entirely for the public good and avoid creating useless and pernicious monopolies—and pass an Act such as is proposed by 'One of the Large Proprietors.'

"To this large proprietor, to do him justice, the question of public good or public utility is outside the question altogether, so far as he is concerned. Patent medicines, to him, are only means of enriching 'the large proprietors' and a source of revenue to the Government."

Mr. Place then continues at great length to argue against the practice of self-medication on the part of the public, illustrating his remarks by uncomplimentary references to several popular medicines.

"In conclusion," he says, "I beg to offer a challenge to all whom it may concern—to the patent-medicine man, or the association of L.P.M.P.'s—that, if they think they have just cause to proceed against me for libel, they may come on; I am ready, and I beg to subscribe my true name and address, for publication, and as the best guarantee of good faith."

We admire Mr. Place's courage, but we may remind him that if we publish libels it might be ourselves, and not he, who would have to go to prison. We are not disposed to offer ourselves for martyrdom in the anti-patent-medicine cause.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY pp. 151-9.

67/73. *C. B.* asks whether it is legal for a firm who call themselves wholesale chemists to supply medicine-chests fitted with medicines for ships' use. There is no qualified man in the business, and, of course, several poisons are included in the supply.

The question resolves itself into whether the supply of medicines to a ship can be regarded as a wholesale transaction. There is no decision to guide us on this point, but we should say it is not a wholesale transaction, but unless the "wholesale chemists" branch out into ordinary retail trade, we should think it doubtful whether the Pharmaceutical Council would prosecute them.

69/71. *R. C.* (Belfast).—Apply to your chief post-office for a form of application for a trade-mark, and follow instructions. If you cannot get it there, you must send 5s. to the Trade-marks Office, Southampton Buildings, London, W.C. We do not think you will get registration of the word you name, and if you do not your 5s. will be sacrificed. If your stuff is a cattle-food it will come in Class 42; if a medicine, in Class 2.

66/11. *Tenax* sends us the following, as the copy of a notice which he says is issued with Frazer's sulphur tablets :—

IMPORTANT NOTICE.

This packet must be sold intact, with the Revenue stamp unbroken, otherwise vendors render themselves liable to a fine of 20s. for breach of the Revenue law applying to proprietary medicines.

The "Important Notice" is clearly wrong. A retailer licensed to sell stamped medicines may break a duly stamped packet of a dutiable medicine, and retail the contents without paying any further stamp-duty, provided he does not make them into new packets, or enclose them in

other boxes, bottles, pots, phials, or other enclosures. This virtually means that he may sell them loose, or merely wrapped in paper, without gum, sealing-wax, or string (Alpe, page 29). Common examples in practice are pills and powders, which are largely retailed in this manner; but there is no reason why the practice should not extend to tablets.

71/63. *Chemist*.—Your letter is scarcely definite enough. The Pharmacy Act, 1868, is frequently enforced.

72/53. *W. A.*—We have replied as fully as is possible to every one of your queries within the past few weeks. Whether it is necessary in a proprietary medicine to name the poisonous ingredient specifically is an open question. It is maintainable that the name of the preparation is the name of the poison. You will be on the safe side if you name every poisonous ingredient. It is impossible to say how much of the poisonous ingredient renders the mixture (whether it be hair-wash or toothache tincture) a poison in the eye of the law. We do not think a hair-wash containing a small proportion of tinct. canth. is a poison, but we should say a toothache tincture containing aconite and opium would be. We think cherry-laurel water should be labelled poison.

Mr. G. Betts, Norwich, sends us particulars of a claim made upon him by the Board of Inland Revenue for 20s. for having sold some "sweet little liver pills" which he described on a handbill as "most efficacious."

72/42. *Fairplay*.—We know of no law in this country under which a chemist and druggist can be compelled to dispense a prescription if he does not choose to do so. An apothecary is liable to a penalty if he shall "knowingly wilfully, and contumaciously refuse, to make, mix, compound, prepare, give, apply, administer, or sell" any medicines prescribed by a physician. But this does not apply to a chemist.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

70/42. *A Subscriber* (Birmingham).—We cannot undertake analyses of the kind, they being of no general interest.

63/72. *Chemically Inclined* asks what are the requirements of a chemist in, say, a paper manufactory. No degree is absolutely required, but young men who have not practical experience of the manufacture must show evidence of sound scientific training. There are many of that class in the market, and a large proportion of them have a science degree, or are associates of some university college or institution which requires from two to three years' training in a college before the diploma or degree is granted. All the technical colleges of the country now adapt their curricula to suit special branches of industry, especially those of local importance. Our correspondent also asks if there is a college of chemistry in Edinburgh: there are the University and Extra-mural classes and the Heriot-Watt College.

67/63. *Weed-killer*.—We have no idea what the preparation you mention is made of. See our issue of June 11, page 852, for a formula which provides a reliable preparation.

65/67. *Alpha* (Devon).—Stains of Black Enamel, and similar resinous bodies, sometimes cannot be removed with turpentine or the like until the spots have first been soaked with a fat, such as lard or butter. This softens the enamel, and the turpentine then removes it without difficulty. Try the plan with the white bodice.

65/53. *Apprentice*.—See our issue of June 11, on page 852.

67/58. *Senna*.—Liq. sennæ dulc.—THE CHEMIST AND DRUGGIST, November 28, 1891, page 797.

69/48. *Chromograph*.—Recipes were given in THE CHEMIST AND DRUGGIST, February 13, 1892, page 248.

67/43. *Ellis*.—While Kolbe's "Chemistry" would be useful to a candidate for the Bell Scholarship, none but the most brilliant could get profitably through it in time. Roscoe's is the book to read. Kolbe is suitable for the Minor. We have no experience of the "Botany" you mention. See the Educational number for further particulars.

69/21. *Leo*.—The specimen appears to be what we have said. It is much more profitable for students of botany to find out for themselves what plants are, and with the hint that we gave you you should have had no difficulty in satisfying yourself.

62/21. *S. P. S.*—(1) Tincture of Kola may be made from the bruised nuts with proof spirit. Strength, $2\frac{1}{2}$ oz. to the pint. (2) Kola liqueur.—See THE CHEMIST AND DRUGGIST, April 25, 1891, page 589. Is this what you mean by essence? (3) Longmans are the publishers.

38/19. *Yorks*.—Sausage-colouring.—We have had some difficulty in getting the sample matched in the market, but we now find that it is Ponceau, 3 RB. This is a sulphonated tetra-azo dye. It is the best colouring we have met with for polonies, being a fine dark red of great permanence.

37/6. *Country Chemist*.—Your sausage-colouring is a mixture of the above-mentioned Ponceau with ground rice.

69/18. *Enquirer*.—Oil of wintergreen or oil of citronella might cover the odour of the brandy, but why not use rectified spirit? It is as good for the purpose of allaying swellings, and has not the cognac odour.

68/11. *Borax*.—A number of formulæ for Liquid Dentifrices were given in last volume, pages 293 and 801. You may use strong tincture of orris (8 oz. to 1 pint), oil of orris, or essence of violets to impart a violet odour. Use spinach, grass, or aniline green for producing the colour.

69/7. *C. H. S.*—White Hyacinth.—THE CHEMIST AND DRUGGIST, January 9, 1892, page 55.

66/9. *Puzzled*.—To Ebonise Wood first brush with a decoction of galls, 2 oz. to 1 pint. When that is dry, brush with dilute solution of perchloride of iron.

70/65. *J. H.*—(1) A mixture containing glycerines of borax, alum, and tannin is likely to become solid from the deposition of aluminium hydroxide. (2) One and a fifth ounce of opium, containing $12\frac{1}{2}$ per cent. of morphia, is equal in morphia-power to $1\frac{1}{2}$ oz. of 10-per-cent. opium.

72/13. *Boots*.—The best colouring for egg-powder is saffron. A fluid extract of this should be made and then

mixed with ground rice and dried. It is more expensive than turmeric, but the colour and flavour are worth the extra money.

71/48. *Leonard & Co.*—See page 31 of the current volume. We presume that that is what you want.

34/71. *J. H. B.*—Walnut Stain.—A solution of permanganate of potash. Mahogany Stain.—To a quart of a strong solution of maroon lake add $\frac{1}{2}$ oz. of caustic potash and shake until dissolved.

61/19. *R. D. F.*—(1) Horehound Beer:—

Horehound	16 oz.
Bruised ginger	4 "
Boiling water	2 gallons

Infuse for an hour, and strain. Repeat the infusion with other 2 gallons of water, and in the liquor dissolve—

	Lbs.
Sugar	7
Solazzi	1

Make up to 12 gallons with water, and add the following:—

Oil of lemon	3ij.
Essence of jargonelle pear	3iv.
Tincture of capsicum	3iv.
Rectified spirit	3j.

Float a slice or two of toast on the liquor, add a teacupful of brewers' yeast, and ferment for six hours; then strain through flannel, and bottle.

(2) Dandelion Stout:—

Extract of taraxacum	2 oz.
Sugar	1 lb.
Solazzi	4 oz.
Gingerine	10 drops
Spirit, a sufficiency to dissolve	
Water to	2 gallons

Dissolve the sugar, solazzi, and extract in the water, add the solution of gingerine, and having floated a piece of toast on the liquor, pour two tablespoonfuls of yeast upon it, and ferment for six hours. Proceed as with horehound beer.

(3) Hop-bitter Beer.—The flavour for this is:—

Tincture of hops	3v.
Concentrated infusion of quassia	3ij.

Mix.

Add 1 oz. of this to 2 gallons of saccharine liquor for brewing (1 lb. of sugar to 2 gallons), and proceed as with the foregoing.

62/74. *W. D. (Greenock)*.—The sample which you send, and which is called Lutrich in Lanarkshire, is native litharge.

44/3. *Wec*.—The sample of Smelling-salts is not a very satisfactory thing to examine, but something very like it you can make in the following manner:—

Carbonate of ammonia	3iv.
Gypsum	3ss.

Coarsely powder these, put into a strong wide-mouthed bottle, and add the following mixture:—

Strong solution of ammonia	3iss.
Glycerine	3ss.
Oil of lavender	10 drops
" bergamot	10 "
Spirit	5j.

Stir up every day for ten days, when the mixture will be ready for putting into bottles. The brown colour we take to be the result of age.

27/2. *J. E.*—We have come to the conclusion that the annatto which you have worked with is inferior. Probably

the Dublin colouring is made from the seed. The gelatinous appearance of your own sample is due to the presence of starch.

65/72. *G. D. Co.*—Linseed Oil is generally obtainable free from adulteration. Its specific gravity is 0.935–0.936 at 60° F., and a drachm of it dissolves in a drachm and a half of ether. Ten drops of the oil with the same of sulphuric acid give a reddish-brown colour. Cotton-seed oil (the only seed oil likely to be present) is coloured violet.

Mr. C. S. Ashton (Brighton) writes to correct his translation of the Spanish prescription which we published last week. He now makes the last line (which he then gave as "Prender de fluido, 30 gr.") as "Percloruro de Hierro, 30 gr." (perchloride of iron [solution], 30 gr.), or "Percloruro de mercurio." The former is apparently the one indicated, but, says Mr. Ashton, "the prescription cannot have been so dispensed, or the result (presuming the first three ingredients are correct) would have been a sort of Heberden's Ink; whereas your correspondent says the mixture was of a reddish colour. So we must fall back upon Liquor Hydrarg. Perchlor. The first ingredient cannot be 'Esencia,' as at first suggested, for that term is the Spanish equivalent for essential oil."

69/55. *East Anglia* says a customer of his has had eleven cows slip their calves this year. He has occupied the farm ten years, and has never lost one before. Can you suggest any cause or remedy for the same? His experience is unfortunate, but by no means unique. The best cattle-men in the veterinary profession have made the most searching investigation into the subject of abortion without making any great discoveries, unless they consist in the confirmation of a long accepted belief in the contagious or infectious nature of this great cause of loss to stock-owners. Of course, a bacillus must be held responsible for this as all other complaints in the present day, and a remedy has been prescribed which might answer if anyone could be induced to use it long enough. It consists in sponging the labia and under surface of the tail twice daily with Condy's fluid for several months. We mention this only because it is the latest suggestion of science; but what we should really advise is to sell off all the empty cows to a grazier, and remove any pregnant ones to a different building. Disinfect the empty premises with chlorine or sulphurous gas, and afterwards use it for fattening bullocks, or other kind of stock. Don't put calves in the building again for at least six months, or if it be a beaten or earth floor only, make twelve months the period of rest from the date of disinfection. Bring no new cows in contact with the old herd.

GOODALL, BACKHOUSE & Co. v. BIRMINGHAM VINEGAR COMPANY (LIMITED).—In the Chancery Division of the High Court of Justice on Thursday, July 14, Mr. Justice Romer granted an application made by Mr. Ralph Neville, Q.C., for an order, by consent, that this action should not be taken before Tuesday next, and then after anything part heard. The learned counsel stated that the case was one in which a great deal of trade evidence had to be given, and Saturday would be an almost impossible day.

MARKET-PLACE ANATOMY.—A quack doctor stood on his wagon at the street-corner, selling his cure-all. A group of people gathered about him, and he undertook to explain to them the anatomy of the throat. "My dear friends," he began, "perhaps you don't know it, but there are two passages that go from the back of the mouth to the stomach. One is called the œsophagus and the other œsophagi. Now, the solid victuals go down the œsophagus and the liquids down the œsophagi. Over the top of the holes is a cover with a hinge in the middle, and when you swallow beefsteak the little door over the œsophagus flies open, and the little door over the œsophagi drops down, and *vice-versa* when you take a drink of coffee." This description proved too much for a farmer who stood on the edge of the crowd. Shaking with laughter, he remarked in a loud tone, "Gosh! but those doors must go flipper-flopper when a fellow eats bread-and-milk!"—*Youth's Companion*.

WILLS OF DECEASED CHEMISTS.

The will of the late Mr. Martin Mohun, of Herne Bay, pharmaceutical chemist, who died on December 28, 1891, was proved at Canterbury on January 18, 1892, by Mrs. E. H. Mohun, the widow and sole executrix. The gross personalty amounted to 325*l*. The testator makes his wife his sole legatee.

The will of the late Mr. J. M. Price, formerly of 41 Darley Road, Gravesend, chemist and druggist, who died at 10 Woodville Terrace, Gravesend, on February 15, 1892, was proved at Somerset House, on March 15, by Miss Sarah Ann Stears, of 10 Woodville Terrace, the niece of the testator's late wife, and the sole executrix, by whom the personal estate was sworn to amount to 362*l*. 9*s*. 4*d*.; the net value amounted to 316*l*. 13*s*. 7*d*. The testator bequeaths and devises the whole of his estate, real and personal (with the exception of a legacy of 20*l*. to his late wife's niece, Eliza Jane, wife of John McDonald, of 290 Brixton Road), to the aforesaid Miss Sarah Ann Stears.

The will of the late Mr. John Aickman Cocher, of King's Lynn, Norfolk, chemist and druggist, who died on March 6, 1892, was proved at Norwich on April 4, 1892, by Misses Ann Harrison and Emma Cocher, the deceased's sisters and executrices. The personalty was sworn under 2,100*l*. The testator leaves the whole of his property to his said two sisters equally.

The will of the late Mr. William Harvey, chemist and druggist, of Derby, who died on September 7, 1891, was proved on October 13, 1891, at Derby, by Messrs. John and Samuel Harvey, the sons, and Mrs. Elizabeth Harvey, the widow. The gross personalty amounted to 4,339*l*. 15*s*. 7*d*. The testator bequeaths his household furniture, plate, linen, &c., to his widow absolutely. To his son, Mr. William W. Harvey, he leaves the goodwill, stock-in-trade, and book debts of his business. His real estate and the residue of his personalty he leaves to his executrix in trust, for the benefit of his wife during widowhood, with remainder to the children, in equal shares. By a codicil, the testator provides that certain advances he has made to his children shall be taken into account at the distribution of his estate.

The will of the late Mr. William Jervis, chemist, of Sheffield, who died on May 10, 1889, was proved at Wakefield on July 4, 1889, by Mrs. Harriet Eleanor Jervis, the widow, and Mr. Job Preston, chemist, of Sheffield, the executors. The personalty amounted to 1,160*l*. 17*s*. 5*d*. The testator left all his property in trust for his wife to his executors, directing them not to carry on his business except for the purpose of selling it as a going concern. He also directs his wife to provide for the children.

The will of the late Mr. Samuel Glover, of Red Rock Street, Liverpool, chemist and druggist, who died on February 23, 1892, has been proved at Liverpool by the widow and by Mr. John Glover, the brother, and Mr. William Glover Moore, the nephew. The gross personalty amounted to 3,509*l*. 17*s*. 5*d*., and the net to 3,491*l*. 18*s*. 5*d*. The testator bequeaths 200*l*. to his wife, with the use of the household furniture, plate, linen, &c., for life. He directs that, after paying a few small legacies, his estate shall be held in trust for the benefit of his widow and son, with remainder to his nephews and nieces.

The will of the late Mr. Thomas Thatcher, of Ashton-under-Lyne, chemist and druggist, who died on February 25, 1892, has been proved at Manchester by Miss Maria Jane Thatcher, the deceased's daughter and executrix, to whom the testator devises and bequeaths the whole of his property, real and personal, for her absolute use, according to the terms thereof. The gross personalty amounted to 137*l*.

DRUG-STORES AS DRINK-SHOPS.—The police made a search of a drug-store in New England recently, and found in it between 20 and 30 barrels of rum, gin, and whisky, 2 barrels of imperial export lager beer, 4½ barrels Bass's ale, and 8½ barrels Guinness's stout.



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The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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THE SUMMER NUMBER

Of THE CHEMIST AND DRUGGIST will be published next week, and will be delivered to subscribers as nearly as possible at the usual time. It will be an unusually attractive number, and will certainly command as much favourable attention as has been bestowed on its predecessors.

The printing of the issue will occupy nearly the whole of this week, and the very latest date on which we can receive advertisements is Tuesday next. This applies to all advertisements bound up with the journal, including the Exchange Column; but advertisements for the Supplement—that is to say, advertisements of businesses for sale, of situations wanted and open—will be received until the first post on Thursday morning next.

Any advertiser who has delayed until now making arrangements for inserting something in the Summer Issue is requested to favour us with instructions promptly.

Summary.

WE give brief reports of the principal papers read at the Photographic Convention last week.

WE are informed by cablegram of the death of Professor P. W. Bedford, of New York, while attending the meeting of the American Pharmaceutical Association.

THE High Court of Edinburgh has reversed the decision of the Court of Session finding the Caledonian Railway Company liable for damage resulting from sugar being poisoned with weed-killer carried by them to Crieff.

THE annual meeting of the Society of Chemical Industry was held in the Drapers' Hall, London, on Wednesday. The Society is prospering. Professor Emerson-Reynolds delivered an address on coal, pea, and petroleum. We print this pretty fully, with a portrait of the Professor, and comments on his address.

LEGAL cases are unusually numerous and important this week. We refer to several of them in an Editorial note. Cases under the Medicine-stamp Act, Sale of Food and Drugs Act, Trade-marks Act, Apothecaries Act, and others are reported. The incidence of these reports crowds out some Correspondence and Editorial comments.

Gazette.

PARTNERSHIPS DISSOLVED.

Allen, G., Henckel, F. W., & Leek, S. J., under the style of C. W. Lucas & Co., New North Road, N., soap and perfume manufacturers; as far as regards S. J. Leek.

Dyson, W. B., & Arkinstall, W., under the style of Dyson & Arkinstall, Gloucester Road Kensington, chemists.

Foley & Fawcett, Forest Hill and elsewhere, physicians, surgeons, and general medical practitioners.

Hardwicke, W. W., & Gurney, Harold, under the style of Hardwicke & Gurney, Harwich and Dovercourt, Essex, physicians and surgeons.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Anderton, Josiah Edward, Halifax, homoeopathic chemist.

Donovan, Daniel Wycherley, Hornsey Road, Holloway, surgeon.

Rogers, George P., late New Cross, S.E., surgeon.

ADJUDICATION.

Anderton, Josiah Edward, Halifax, homoeopathic chemist.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Wright, Henry, Cinderford, copperas-maker—discharge suspended for one month ending July 22, 1892.

THE WORLD'S ANNUAL OUTPUT OF COAL is about 485 million tons, obtained as follows, in 1890:—

	Million Tons
British Islands	182
America, U.S. (estimated for 1891)	141
Germany	90
France	28
Belgium	20
Austria	9
Russia (1889)	6
Others	9
	<hr/> 485

ADULTERATED RUBBER.—Amazon rubber-gatherers have discovered a process of mixing dry mandioca flour with the milk of the rubber-tree, after which it is smoked and dried by the usual process.

English News.

Prescribing by Chemists.

At an inquest held at Westminster on Thursday, July 14 regarding the death of Oreste Rinaldi, aged 7 months, the mother deposed that the baby was taken ill, and she went to a chemist, who prescribed for it.

The Coroner (Mr. Troutbeck): Without seeing it?—Witness: Yes.

The Coroner: A most improper thing.

The witness further said that as the baby got worse she went again to the chemist, and subsequently for a doctor; but death took place before a medical man saw the child. In reply to the Coroner witness stated that she was 24, and had had eight children, only two of whom are now alive.

Dr. Clark, of 23 Gerrard Street, stated that death was due to convulsions from chronic meningitis.

The Coroner strongly condemned the practice of chemists prescribing for people at all, to say nothing of those whom they did not see.

A verdict of natural death was returned.

"Waiting for Election Results."

Henry Straka, aged 28, an artist, residing at West Hampstead, committed suicide by taking cyanide of potassium last week. On Saturday, July 9, he was engaged in sketching the election crowds in Fleet Street. He finished the picture at home on the following day, and gave it the title of "Waiting for Election Results." On the Monday morning he took the picture to the office of an illustrated paper, and when he returned home in the evening expressed his disappointment that the picture was to appear a week later than he expected. Before supper-time he had taken the fatal dose, and Dr. J. Adam Watson said that death was due to the cyanide.

The Wrong Bottles.

At the Kingston-on-Thames County Bench on July 14, Mr. T. H. Hawkes, mineral-water manufacturer, of Thames Ditton, was fined 1*l.* 15*s.* (including costs) for selling a bottle of ginger-beer to which the false name of "Handel & Co. (Limited)" was affixed, and for selling a bottle of aerated water to which the trade-mark of "Nicholson & Sons" was falsely attached. The Mineral Water Bottle Exchange prosecuted.

Persuading the Long Hours' Men.

The proprietors of several establishments in Cardiff having broken faith with the Shop Assistants' Association by keeping open their places of business beyond the recognised hours, the matter has been brought before the Cardiff Trades Council, who have issued an appeal to all trade-unionists to show their strong disapproval of such "unjust and iniquitous opposition" by not purchasing any article from such establishments.

Police Cases.

George Clapshaw, in the employment of Messrs. Wood & Bedford, chemical-manufacturers, Leeds, has gone to prison for four months for stealing 30*l.* which he had fetched from the bank to pay wages with.

Martha King (36), wife of a fish-hawker at Huddersfield, has been committed for trial on a charge of attempting to poison her child, aged 11, by trying to make her drink carbolic acid for tea. The mother was said to be drunk at the time, but she denies the charge.

William Matthews, chemist, Siddall's Road, Derby, went to the shop of Robert Dixon, chemist, in the same road, and asked for three drops of a poisonous drug. Mr. Dixon said Matthews was drunk, and refused to supply the drug. Matthews then became very abusive, struck Mr. Dixon on the face and chest, and smashed a glass case. Damages, fines, and costs came to 2*l.* 8*s.* 6*d.* altogether.

Oldridge Tucker, chemist's assistant, was concerned in some election disturbances at Tiverton. He was charged with doing damage to the Boar's Head on July 8. A solicitor who appeared for the defence said the defendant had apologised

to the landlord for the damage done, and offered to pay all costs. A fine of 60*s.*, including costs, was inflicted.

At the Exeter Police Court on July 15, John Henry Bowskill, a chemist's assistant, of Mansfield, Nottingham, was charged with attempting to commit suicide by taking chloroform. He had been brought before the Magistrates on the previous day for a similar offence, and was then bound over in 5*l.* to be of good behaviour. The same evening he was found at the Castle Inn in a state of stupor. He had some time ago been a dispenser in Exeter, and went to Messrs. Evans & Gadd and procured a 1-lb. bottle of chloroform, on the representation that he was at the present time manager of a chemist's business at Torquay. He paid for the chloroform. Bowskill said he was a sufferer from asthma, and two eminent London medical men had recommended him to inhale chloroform. He put a small quantity of it on his handkerchief at times and inhaled it. He had continued this practice for two years, and it did not injure him. He was remanded till Monday last, when, on the promise of a friend to take him to Nottingham and pass him to the care of his relations, the Magistrates discharged him.

Alfred Tickle and his brother, both in the employment of Messrs. Stevenson & Howell, chemical-manufacturers, Southwark Street, have been remanded on bail, at the Southwark Police Court, on a charge of stealing goods from the firm named.

Maria Yeo, a servant, was charged at the Swansea Police Court, on July 16, with stealing certain clothes belonging to Mr. H. E. Williams, chemist; and her mother and brother were charged with receiving the articles, knowing that they had been stolen. Maria and her mother were fined 20*s.* each, or fourteen days with hard labour, and the lad was discharged.

British Medical Association.

This Association will meet in Nottingham next week, the University College being the headquarters. The section of pharmacology and therapeutics will be presided over by Dr. J. O. Brookhouse, of Nottingham, who will deliver an address on "Some Points in Pharmacology and Therapeutics." Amongst the subjects to be discussed are:—"Cardiac Tonics and the Indications for their Use," to be opened by Dr. W. H. Broadbent, Dr. Lauder Brunton, and others; "Dyspnoea and its Treatment by Drugs," to be opened by Professor Gairdner, Professor Leech, &c. There will also be a short discussion on "The Bearing of Recent Physiological and Chemical Research on the Question of Anæsthesia," Dr. Dudley Buxton introducing the subject. Professor Liebreich, Berlin, has deputed Dr. A. P. Chadbourne to make a communication on his behalf, the outcome of researches in his laboratory. Amongst other papers is one by Dr. A. P. Chadbourne on "The Local Anæsthetic Properties of a New Cocca Base." The annual museum will be opened on Tuesday, and this year a Sanitary Exhibition of a special character will be held in a building erected by the Corporation in the rear of the Guildhall.

Divorce Decree against a Chemist.

In the Divorce Court, on July 16, a petition was presented against William Henry Kerr, chemist, of 9 New Bond Street. There was no defence. Mr. Inderwick, Q.C., on behalf of the petitioner, Mrs. Kerr, said the parties were married in 1879, and there were three children. The respondent before marriage had been in the employ of Messrs. Marshall & Snelgrove, and at the time he was a chemist's manager, after which he set up in business on his own account. He was a very good man of business, and was ably assisted by his wife. The business had now been turned into a limited company, he being the managing director. He was a person of intemperate habits, and from time to time was exceedingly violent to his wife. He used language towards her of the most horrible character, and used to teach his child to say things against her. On one occasion he tried to push her over the bannisters, used strong language, and said he wished her dead. On another occasion he said he did not care for her, and told a friend of his, Mr. de Vere, that he had better take a lodging for her and keep her. When they got home he was very violent towards her, beat her, and tried to strangle her. As to the adultery, he continually associated with loose women from Regent Street, and had brought them to the house in his wife's absence. Evidence in support of the

cruelty and adultery was given, and the jury found for the petitioner, and a decree *nisi*, with costs, was granted, with custody of the three children to Mrs. Kerr.

"Old Tom" Poisoning-case.

On July 9 we reported the death of an old woman through drinking carbolic acid out of a bottle labelled "Old Tom." The matter was investigated on Monday by Mr. Collier, the Coroner, at Stepney. George Spollon, son of the poisoned woman, stated that he knew some carbolic acid was left by the sanitary people for disinfecting purposes. The man who brought the poison left the bottle just as it was on the day deceased found it. It was labelled "Superior Old Tom Gin," and there was no "poison" label on it. Charles Parrett, disinfecter to the Limehouse Board of Works, who took the carbolic acid to the house, denied this. The acid was in a claret bottle, and was labelled "Poison." Corroborative evidence was given, but the daughter-in-law of deceased maintained that the poison was given her in the "Old Tom" bottle. The Coroner remarked that the case was most unsatisfactory, and adjourned the inquiry for a fortnight.

A Dishonest Traveller.

Frank Jillings, late traveller in the employ of Messrs Bird & Sons, manufacturing chemists and baking-powder manufacturers, Birmingham, was indicted at the Bury St. Edmunds Assizes on July 15, before Mr. Justice Hawkins, for having feloniously forged an endorsement on a cheque for the payment of 1*l.* 1*s.* 2*d.*, with intent to defraud his employers, on December 4 last, at Lowestoft. The prisoner pleaded not guilty. Mr. Blofeld, who appeared for the prosecution, stated that in April, 1891, the defendant was engaged as traveller for the eastern counties by the prosecutors. It was prisoner's duty to obtain orders and collect accounts, remitting the latter to his employers. In December of the same year prosecutors found that a great many accounts had been paid to the prisoner which he had not accounted for. A Mr. Jefferies, of Lowestoft, it was alleged, paid the prisoner by cheque, which he cashed, endorsing the prosecutors' name for the purpose.

The prosecutor, in reply to the prisoner, said he had no authority to endorse a cheque. When the prisoner was apprehended at Lowestoft he said, in reply to the charge, "Ours is a curious business. I don't receive any salary." Upon the prisoner being taken before the Magistrate, he said he cashed the cheque to pay his travelling expenses, which was customary among travellers. The prisoner, in defence, denied that he had any intention to defraud, and said the whole question was one of account. The prisoner was found guilty. The prosecutor appealed to his Lordship to deal leniently with the prisoner. In reply to the Judge, prosecutor said the prisoner's defalcations amounted to 138*l.* His Lordship said he should have passed a much more severe sentence had it not been for the employer's appeal. The prisoner would be sent to prison for three months, with hard labour.

The Local Government Board and the Medical Officer.

As a rule the Local Government Board check the extravagance of those under their control; but they have proved by the following letter that they are not favourable to sacrificing efficiency to economy. The Local Government Board agreed with the Holborn Board of Guardians that a resident medical officer should be got for the City Road Workhouse (and that Dr. Yarrow, the present officer, should go, with a compensation); but they did not agree with the proposal of the Guardians, that 120*l.* a year would be sufficient salary for a resident medical officer. At the meeting of the Holborn Guardians on July 13 (Mr. B. Garrod in the chair), the Clerk read a letter from the Local Government Board, which said they were of opinion that the salary suggested by the Guardians was not sufficient to enable the Guardians to secure the services of a medical practitioner possessed of the experience which it is desirable such an officer should have. It appeared to the Local Government Board that the salary offered should be from 180*l.* to 200*l.*; and they would be glad if the Guardians would be good enough to reconsider the matter with a view to proposing such salary. This was referred to the Finance Committee for consideration and report.

The New Public Health Act.

The Holborn Board of Guardians, at their meeting on Wednesday, instructed the relieving officers of the union to report any nuisances coming under their notice during their visitation of the poor.

Doctors' Holidays.

At a meeting of the Holborn Board of Guardians, on Wednesday, the usual leave of absence was granted to the district medical officers, subject to their providing properly qualified gentlemen to act as their *locum-tenens*.

The Inhabitants of London Water.

The Royal Society are making investigations for the Water and Markets Committee of the London County Council as to the vitality of microscopic pathogenic organisms in water. Something near 1,000*l.* is being spent on these researches, and it is expected that the results of the actual investigations will have a very high scientific value, and be of great practical utility. The Government Grant Committee have furnished one-half of the money, and the London County Council the other.

Chemists in the County Court.

On Tuesday, in the Westminster County Court, his Honour Judge Bayley had before him, on a judgment summons, the case of *Deeds v. Stevenson*, in which it was sought to enforce payment of a debt due from the defendant, who carries on business as a chemist at Basinghall Street, City. The plaintiff's representative stated that the defendant, who did not appear, had a very good business in the City, and could well afford to pay. His Honour said the defendant had not taken the trouble to be present, and, therefore, he should assume that he could pay. The order would be for his committal for twelve days, but the warrant would be stayed for a month, in order to give him an opportunity of paying.

Claim against a Chemist.

In the Westminster County Court, on Tuesday, his Honour Judge Bayley had before him, on a judgment summons, the case of *Grimwade v. Fernando*, in which the plaintiff, trading as Hockin, Wilson & Co., chemical-manufacturers, sought to enforce payment of a judgment debt of 12*l.* for chemicals supplied to the defendant in the way of his business. The plaintiff's solicitor stated that the defendant had a very thriving-looking chemist's shop at Wilton Buildings, just outside Victoria Station, and when the summons was served upon him he promised to pay the amount due before the day of hearing, but he had taken no further notice of the matter. The defendant did not put in an appearance, and in his absence the learned Judge made an order for his committal for twelve days, unless the amount due was paid in fourteen days.

Festivities.

On Saturday last the staff of Messrs. C. R. Harker, Staggs & Morgan, wholesale druggists, journeyed to Theydon Bois for their annual excursion. A cricket-match, sports, drives through the forest, photographic groups by Messrs. F. D. Lacey and C. W. Harker, with other amusements, occupied the attention of the party, and lunch, dinner, and tea, provided by the firm, filled up the time. Forty-three sat down to dinner. Mr. H. E. Webster presided, and in an appropriate speech proposed "The Health of the Firm," at the same time alluding in a feeling manner to the more than cordial relations existing between themselves and the heads of the firm, and expressing his regret at their unavoidable absence that day. They all remembered with sentiments of the deepest respect the late Mr. C. R. Harker, and it gave him great pleasure to see his son, Mr. C. W. Harker, amongst them on this occasion. Mr. W. Ryman responded for "The Travelers," and, on behalf of the older employés, Mr. B. Boucher, remarked that he commenced his connection with the firm more than half a century back, and he noticed several around who had worked with him for more than forty years. A vote of thanks was passed to Mr. S. R. Collis, who had so successfully carried out all the arrangements.

On Thursday, July 14, the North and North-western Chemists' Association of London had their day's outing. They left Paddington in specially reserved carriages for Taplow at

10 A.M., and at Taplow embarked on a large steam-launch which had been chartered by the amalgamated Associations. The steamer passed the best scenery of the Thames, taking in Wivenden, Cookham, Great Marlow, Medmenham Abbey, and went nearly to Henley. An excellent luncheon was supplied on board, and after luncheon Mr. G. S. Parkes (Kilburn), the President, in reply to Mr. Ball, who, in the unavoidable absence of Mr. S. M. Burroughs (Burroughs, Wellcome & Co.), proposed the toast of "The Dual Association and Acting Committee," said the Associations had not missed the object they had in view when they started. Although their growth had been slow it was positive, and they hoped by continued exertions to further the trade interests of chemists in business, which could only be satisfactorily worked by the general union of chemists throughout the country; and he hoped that when others saw how easy it was for those competing legitimately in business to enjoy themselves together, there would be a greater incentive to trade-unity. On the return journey tea was supplied. Taplow was reached at 8 P.M. and Paddington at 9.40.

The staff employed by Messrs. Wright, Layman & Umney had their sixteenth annual excursion on Saturday last, July 16. Burnham-on-Crouch, near Southend, was the spot chosen for the festivity, and as it affords special opportunities for boating and yachting, as well as possessing other attractions, a most enjoyable day was spent. An excellent dinner was served at the Ship at 2 P.M., over which Mr. C. N. Layman presided. Messrs. C. Umney, C. F. Wright, and H. C. Wright were also participants in the day's revelry.

"A Great Shame."

An inquest was held at Wolverhampton, on Monday, respecting the death of a young man who had poisoned himself with oxalic acid.

Eliza Burnett, wife of C. C. Burnett, chemist, Horseley Fields, deposed that on Saturday morning a young man went into her shop, and asked for three-pennyworth of oxalic acid. He did not say what he wanted it for, and she did not ask him. She sold a packet to him. He spoke about nothing except the dull weather. The packet was properly labelled with the word "Poison," and was not entered in a book.

The jury returned a verdict that the deceased committed suicide whilst in a state of temporary insanity.

The Coroner remarked that it was a great shame a man should be able to go into a chemist's shop and purchase for 3d. sufficient poison to kill himself, without any questions being asked him, or without an entry being made of it. He thought that further restrictions should be placed on the sale of poison.

Carbolic-acid Poisoning.

Mary Watson, 50, an intemperate woman residing at Liverpool, drank from a bottle in the cupboard, which she thought contained rum. It was carbolic acid, and she died.

Charles Oliver, of Newcastle, had been drinking, and had become depressed. He concluded his bout with a draught of carbolic acid, with fatal results.

The Islington Medical Officer.

Dr. Wynn Westcott has not secured the position of Medical Officer for Islington, rendered vacant by the death of Dr. Tidy, after all. It will be remembered that he had been appointed temporarily, with a view of giving him the post permanently when his disqualification through having been a vestryman had expired. The Vestry had advertised for candidates, and from among the candidates the Health Committee had selected three. These were Dr. A. E. Harris, the Medical Officer of Sunderland; Dr. A. Wellesley Harris, Medical Officer of Southampton; and Dr. Wynn Westcott. After a rather acrimonious discussion, a poll was taken, the first result of which was that Dr. Harris, of Southampton, was struck out. The second competition was very close, but it resulted in 47 votes for Dr. Harris, of Sunderland, and 45 for Dr. Westcott.

Fire.

On Saturday night an outbreak of fire occurred at the premises of Mr. Griffiths, chemist, &c., Medical Hall, High Street, Canterbury. A member of the city fire-brigade was passing the premises when he noticed flames in the top bedroom, and with assistance succeeded in extinguishing the fire before much damage was done. The loss is estimated 20l.

Irish News.

Death of the Recorder of Cork.

His Honour J. P. Hamilton, Recorder of Cork, the judge who dismissed the action brought by the Pharmaceutical Society against Mr. Selkirk, of Cork, on a technical point, died on Friday, July 15, at Cork.

Pharmaceutical Assistants' Examination.

At the July examination held in Dublin for the "assistants' qualification, Mr. John Hughes, of Cork, was successful. Two other candidates were rejected.

An Old Apothecary Dead.

Mr. William Ashford, L.A.H., Bollsbridge, Dublin, who for the past half-century has enjoyed a large and lucrative practice among the working and middle classes in the south district of Dublin, has just passed away at the age of 80.

The Vacant Examinership.

The vacancy for examiner in "practical pharmacy" to the Pharmaceutical Society, caused by the completion of the term of office (five years) by Dr. John Evans, the late examiner, is much sought after both by pharmaceutical licentiates and those of the Apothecaries' Hall. The latter body have hitherto had almost a monopoly of these appointments.

Scotch News.

A New Departure

in branch meetings of the British Medical Association was made the other day, when the Edinburgh and Stirling, Kinross, and Clackmannan branches met at Rumbling Bridge. An unusually pleasant day was spent in reading papers and discussion, and in visiting the Devon Valley, the day concluding with a dinner at Rumbling Bridge Hotel. The president of the day was Dr. George Leslie, F.R.S.E., of Falkirk, who for many years was a chemist's assistant, and afterwards Edinburgh secretary of the *Challenger* Exhibition.

The Crieff Poisoning-case.

Judgment was given on Tuesday, in the First Division of the Court of Session, in an appeal against the decision of Lord Stormouth Darling in the Crieff poisoning-case. It will be remembered that this was an action brought by William Cramb, engine-driver, Sticks-by-Aberfeldy, and six others against the Caledonian Railway Company and William McEwen, jun., & Co., grocers, Crieff. Damages were claimed in respect of the death of the pursuer's father and mother after partaking of sugar purchased from the Messrs. McEwen, which had been contaminated by poisonous weed-killer which had leaked from a cask while in transit on the railway. The weed-killer had been sent out by the Boundary Chemical Company, Liverpool, who were originally defenders to the action, but who compromised the claim against them. Lord Stormouth Darling, before whom evidence was led, decided that the railway company were at fault, and gave decree against them for 210l. and expenses; but he found that the Messrs. McEwen were not in fault, and granted them absolvitor. Against this decision the railway company now appealed.

The Lord President said that the question in debate was whether the railway company were in fault in laying the case containing the weed-killer in contact with other stuffs, and in not warning the consignees of the sugar with which it was in contact of the contamination. It was quite plain that none of the railway company's servants knew that the stuff was poisonous. There was no duty on the part of a railway company to inform themselves of the contents of packages which they carried. This case was stencilled "Weed-killer," and the whole question turned upon that. The servants of the railway company did not seem to have noticed the stencilled words, and the question

was whether that was fault. He could not think it was fault of any kind. Even though it had been known that the substance was weed-killer, that was far from saying that it was poisonous. There were many non-poisonous weed-killers. The parties legally responsible were the chemical company, who, in dealing with a substance so terribly poisonous, were bound to take extraordinary precautions in its transit. He was of opinion that Lord Stormouth Darling's decision should be reversed. In this view the other judges concurred, and the interlocutor was recalled, expenses being given to the railway company.

A Chemist's Trust-deed.

An advertisement which appeared in the *Scotsman* last week announces that John Merson Grant, chemist, carrying on business at 87 Lothian Road, Edinburgh, has signed a trust-deed for behoof of his creditors. The business is for sale.

The Edinburgh Pharmacy Athletic Club.

The second monthly golf-competition for the Dick medal will be held on Friday and Saturday, July 29 and 30, on the Braids. Those who are to compete should send their names to the Secretary before Tuesday.

French Pharmaceutical News.

(From our Paris Correspondent.)

AN UNLUCKY APPEAL.—Triboulet, the pharmacist's assistant who got three months' imprisonment for selling poisonous lemonade, has appealed to the Rouen Higher Court, which, however, has not only confirmed the judgment, but has decided that the "Berenger law" is not applicable in so grave a case.

SCHOOL HYGIENE.—Dr. W. Douglas Hogg, of the well-known English pharmacy on the Champs Elysées, has just published an interesting work on "School Hygiene in Great Britain." His comparison between the state of things existing in England and France has aroused a certain interest here, one French journalist remarking, "After reading it I wanted to be a schoolboy again, but on the English side of the Channel this time."

DENSITY OF GASES.—At the Academy of Sciences M. Henri Moissan showed a small apparatus, invented by himself in collaboration with M. Henri Gautier, for determining rapidly and accurately the density of gases. Its results are two-fold. First, it measures the gaseous body and then weighs it in a small glass receptacle of about 100 c.c. capacity. The figures which M. Moissan has obtained with oxygen, nitrogen, hydrogen, and carbonic acid, tally almost exactly with Regnault's results.

CUTTING AT LILLE.—If English pharmacists at Paris, as we remarked in our last issue, refrain more or less from suicidal competition in prices, it is to be feared that the same is not the case with their French *confrères* at Lille. Our representative, having occasion last week to visit this centre of French industry, was struck, on leaving the station, by a pharmacy almost opposite. In the window was a framed placard, of the kind one sees at cheap wine-merchants' and enterprising grocers' who sell at "store prices," announcing the reduced tariff at which various drugs and articles of everyday use were to be there obtained. Continuing his route towards the Grande Place, another smaller placard in a pharmacy-window attracted his notice. This set forth, in two columns of plain type and equally plain language, that the drugs therein sold, being of the best quality, could not be purchased at the low prices at which they were sold by less scrupulous vendors. Possibly the numerous and efficient colleges of which Lille is the seat render instruction easy to obtain, and overstock the professions at that bustling and busy town.

RECENT OBSERVATIONS by Lord Rayleigh show that the atomic weight of oxygen has been decreasing for the last fifty years. This is supposed to be due to the wear and tear of the atoms.

Foreign and Colonial News.

BAHAMA SPONGES.—The value of the catch of sponges in the Bahamas fell from 63,090*l.* in 1890 to 49,696*l.* in 1891.

PENSIONS FOR PHARMACISTS.—Pharmaceutical pension funds are now being established by the chemists of Austria-Hungary and Russia. The Austrians have made a collection and held a bazaar, which together have realised about 4,000*l.*, to form a nucleus for the fund. The Russians are to contribute to their fund $\frac{1}{4}$ copeck (about 1-12*d.*) for every prescription dispensed.

SHORTER HOURS IN CAPE TOWN.—The Cape Town chemists and their assistants are still trying to come to some arrangement for the reduction of shop-hours. At present the rule in Cape Town appears to be to open at 7 A.M. and to close at 9.30 P.M. on weekdays, and also to keep open for some hours on Sundays. The *Cape Argus* urges the chemists to combine to put an end to this irksome bondage.

MEDICAL CERTIFICATES IN RUSSIA.—The assistant of Dr. Leo Mandelstamm, Medical Inspector for Pultawa, Russia, has been sentenced to dismissal from his office by the Charkoff Court of Justice, for having failed to control the operations of a pharmacist to whom the police authorities had entrusted the examination of certain parts of a corpse for judicial purposes, and for having signed an incorrect certificate of examination. But the Senate of the Empire, to which the defendant appealed, has quashed the verdict and substituted a reprimand for the dismissal.

THE ARGENTEUIL PRIZE FOR 1892.—The Grand Argenteuil Prize of 21,000*l.*, which is awarded every six years by the French Society for the Encouragement of Industry to the author of the discovery which has contributed most to the improvement of French industry, especially in a branch in which France, either as regards quantity or as regards quality of output, has not yet attained the level of foreign nations, has been awarded, for 1892, to M. Berthelot, perpetual secretary of the Academy of Sciences, for his chemical investigation. The prize, which was instituted by the Marquis d'Argenteuil, is the highest award at the disposal of the Society.

ALLEGED ADULTERATION OF COCAINE.—A case has just been decided before the Criminal Court at Elberfeld which has caused a good deal of excitement in German pharmaceutical circles. The defendant was a druggist, and the accusation against him was that he had maliciously sold to a medical practitioner, as cocaine, and at the price of 80m. per gramme, a substance which was not cocaine at all. As long ago as August of last year, the physician thought that he noticed that the cocaine supplied by the defendant did not act as it ought and was deficient in weight. He therefore, one day, took a small quantity he had just purchased to an apotheker and asked him to examine it. The apotheker ascertained the deficiency in weight beyond doubt, and expressed his belief that the powder was antipyrin, and not cocaine, but declined to go into the matter further on account of the bad feeling already existing between "druggists" and "chemists" as a class, and because he did not want to have the name for setting his customers against the druggists. Another chemist, however, immediately recognised the sample as antipyrin pure and simple. The doctor gave several subsequent orders for the cocaine, but mostly received antipyrin (labelled "Cocain. Hydrochl. puriss. Merck."), twice a mixture of phenacetin and common salt, and twice salicylate of soda, in discharge of his order. This the physician thought was proof positive of the druggist's malice, and he accordingly dragged him into court. On behalf of the druggist it was alleged that he had acted perfectly *bona-fide*. The druggist's staff swore that no attempt at substitution or falsification had ever been made to their knowledge, and the Court gave the accused the benefit of the doubt and acquitted him.

SANTONIN is referred to in the *Journal of the Chemical Society* for May (page 667) as an alkaloid, and is spelled with a final *e*. We are entitled to more exact knowledge than this in such a quarter.

SOCIETY OF CHEMICAL INDUSTRY.

ANNUAL MEETING IN LONDON.

THE members of the Society of Chemical Industry, to the number of about 200, met in the gorgeous hall of the Drapers' Company, Throgmorton Street, E.C., on Wednesday afternoon, to transact the annual business, and hear the address of the President, Professor Emerson Reynolds, M.D., D.Sc., F.R.S., of Dublin.

The minutes of the last annual meeting were read and signed, scrutators were appointed, and the ballot closed.

THE REPORT OF COUNCIL

was then read by Mr. Cresswell, the Secretary, and it showed that the number of members on the register is 2,772, an increase of 75. During the year 245 members were elected, and the names of 170 were removed by death, resignation, and other causes. During the past session 74 original papers were published in the *Journal*, as against 77 the year before.



J. EMERSON REYNOLDS, M.D., D.Sc., F.R.S.,
University Professor of Chemistry, Trinity College, Dublin.

The revenue exceeded the expenditure by 530*l.* 18*s.* 8*d.* Subscriptions yielded 3,137*l.*, interest 137*l.*, and advertisements for and sale of the *Journal* 859*l.* The production of the *Journal* cost 2,577*l.*, and salaries, with other working expenses of the Society, came to 925*l.* The Society has nearly 5,000*l.* invested and in cash. It appeared from the report that in 1891 there was greater economy in the production of the *Journal*, and this was responsible for improvement in the account. Reference was made to the satisfactory working of the sections and the co-operation with the Society of Arts in regard to the Chicago Exhibition. It had been suggested that the annual meeting next year should be held in the United States, but the general sense of the meeting declared against a meeting there in an exhibition year. The Council had, in regard to the Alkali Works, &c., Regulation Act, ineffectually protested against the legislation not being comprehensive enough.

Mr. RIDER COOK, treasurer, submitted his report, the sub-

stance of which we have incorporated in the foregoing paragraph. These reports were on motion adopted, Sir FREDERICK ABEL specially referring to Mr. Cook's services to the Society as being largely instrumental in making the Society one of the most successful in the country.

THE PRESIDENTIAL ADDRESS.

The members gave Professor Reynolds a hearty cheer when he rose again, this time to read his address. He referred to the satisfactory condition of the Society, the growing membership, full income, and prosperous Journals. Delicately also, he touched the darker part of the year's picture. The loss, by death, of Dittmar, Heisch, Tidy, Richard Smith, F. C. Hills, Makins, Mumford, Schorlemmer, the venerable Dr. Redwood, and the illustrious August Wilhelm von Hofmann, "a teacher of teachers; the source of the primary impulses from which great industries have sprung; the brilliant investigator of some of the most difficult problems in the philosophy of chemistry; the wise counsellor of princes, and the sincere friend of every lover of nature—truly a noble man!"

The Presidents of the Society have, in their addresses, avoided being chroniclers, rather preferring to devote themselves to the subjects of their life-work. Therein was Professor Reynolds' difficulty. He thought he would ill requite the confidence of the Society if he devoted his address to the abstract and philosophical side of chemistry by giving an account of his old thio-organic work, or even the studies of later years in the silico-organic department of the science, as few of the products of either line of investigation are within measurable distance of practical application. He therefore proposed to take as his theme the modern developments in regard to

FUELS AND THEIR USE,

as the subject is one which has occupied much of his time and attention for many years, and links in practical interest chemical and other industries with the still wider considerations of social economy. The fuels which have to be considered are coal, peat, and petroleum. It is erroneous to suppose, as some do, that the supply of coal is inexhaustible or that the price will not become prohibitive. The President pointed out how labour-combinations and increased difficulty in "winning" it affect coal on the latter point.

During the last twenty years there has been a very marked increase in the consumption of coal, in European countries alone the average annual output for the period 1881-90 being upwards of 62,000,000 tons greater than during the previous decade. This rate of increase bids fair to be maintained, so that the world's consumption of coal will soon reach 500,000,000 tons per annum, if it has not already done so. How long can this supply be maintained? To answer that question, Professor Reynolds referred to the Royal Commission on Coal Supply, which investigated the matter in 1861-71, and reported the existence in Great Britain, at a depth within 4,000 feet of the surface, of 146,480,000,000 tons, or enough for 230 years, but 170 years is reckoned a safer figure, and long before we came to the end of the supply the coal would be brought to the surface with such difficulty and at such a cost that it would be cheaper to import it. That may be the condition in fifty years, according to Mr. T. Foster Brown, and then it is North America to which we shall look for our supply, as there the coal strata are seventy times greater than ours.

ECONOMY IS NECESSARY.

But the difficulty is where to begin. Professor Reynolds was not sanguine of ordinary consumers being so interested in posterity as to prevent waste, so as to leave more for those who will come after us. The fog-demon may terrify us sufficiently, so that that method of burning coal which avoids the formation of smoke at any time, and is both more convenient and economical, must ultimately "hold the field." The Professor did not think that alteration of grates would effect this end, but that we must look to "gasification" of the fuel for a solution of the problem. He proceeded to describe several proposals which have been made. Thus Sir William Siemens showed that from a ton of coal he could get gas equal to 1.7 ton. That gas contained, however, 65 per cent. of useless nitrogen. The Wilson method of gasifying coal gives a richer gas—or, strictly speaking, two

gases—viz., a certain proportion of “producer” gas in raising the temperature of the coal up to the point at which it can decompose steam, and then a mixture of carbon monoxide and hydrogen, or so-called “water-gas.” The former can be used for steam-raising or furnace-work in the immediate vicinity of the producer, while the water-gas can be transmitted through mains as readily as ordinary town-gas, and loses nothing by carriage save its initial heat.

But the difficulty comes in in application, for a gas which is good for illuminating purposes is a dear fuel, and Professor Reynolds pointed out that steam is introduced into common gas to increase the yield, whereby the illuminating power is decreased, and has to be compounded by the introduction of some rock-oil gas. Professor Reynolds considered that since the supply of the richer bituminous coals is steadily diminishing, the practice must grow of supplying a modified water-gas instead of coal-gas as we have hitherto known it, and it would be better far that this change should be carried out with the full knowledge and assent of the public after due parliamentary inquiry, and in such a manner as to secure the maximum advantage without undue interference with the great monopolies enjoyed by the gas companies. There are many ways of ensuring efficient light, and this consideration should not stand in the way of the supply of a cheap heating-gas, which would prove a great boon to small manufacturers as well as to the domestic consumer. In the near future electricity will be the general illuminating agent, and with a cheap heating-gas as a fuel, the fog-problem will be solved, and we shall have largely done our duty to posterity by the introduction of more economical methods. The President then turned from coal to

PEAT,

a subject in which he has a large native interest, for, as he explained, one-seventh part of Ireland is bog. About 1,250,000 acres are mountain bog, and 1,575,000 acres are occupied by flat bogs. This store of peat is an asset which may become valuable when our coal-beds are exhausted 170 years hence. Ireland gets her coal from Britain. In this fact we have some explanation of the depressed industrial condition of the country, as manufactures involving the use of much fuel can only flourish in Ireland if the margin of profit be considerable; where the margin is small and competition keen (as in the greater industries) they must go under in the struggle with manufacturers having cheaper fuel at command. Peat alone, however well prepared, compares very unfavourably with coal in several particulars: First, it is very bulky; second, it contains from 15 to 25 per cent. of water, and seldom less than 10 per cent. of ash; and third, at least $2\frac{1}{2}$ tons of average peat are required to perform the same work as 1 ton of average Staffordshire coal, or in other words, we require of peat more than thirteen times the bulk of coal to produce the same thermal effect. Various means have been suggested for overcoming these disadvantages, and those which have involved artificial drying as well as mechanical compression have cost so much that the product could not compete with coal at the ordinary level of prices. During the coal-famine of 1872 serious efforts were made in Ireland for the utilisation of peat. Professor Reynolds saw then that the best chance for economically applying peat for most manufacturing purposes lay in gasifying the material in a Siemens furnace, as two special and important advantages would obviously be gained thereby:—(1) The use of peat in the rough state without artificial drying; (2) the avoidance of the injurious effects of abundant ash by burning the peat-gas at some distance from its source, and under such conditions that the comparative value of coal and peat should be nearly in the proportion of their percentages of carbon. He moved the Royal Dublin Society in the matter, and the Great Southern and Western Railway of Ireland took it up, using a complete Siemens regenerative gas-furnace for working up scrap iron, with the result that the average consumption of fuel was 5.09 tons of peat for each ton of iron forged from scrap to finished work, where 4.96 tons of coal were required. This work remains the sole practical outcome of efforts in the direction of peat-utilisation. Yet the fact remains that, as in the case of coal, peat could be made economically to provide light and heat energy as well for domestic use as

for manufacturing purposes. “Would that we could apply even a small portion of the energy stored up in peat to stimulate those who should be most active in utilising in the best and most economical way the abundant material almost at their doors!” With this dig at his compatriots the President passed on to

PETROLEUM.

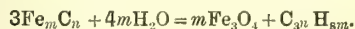
Sketching in broad outline the main points of public interest which relate to this, the most important of our liquid fuels, he referred to the work done by Mr. Boverton Redwood, Dr. Armstrong, Sir Lyon Playfair, and many others whose names are indissolubly connected with petroleum. Then proceeding to the production statistics, he showed that the United States furnished in 1890 45,000,000 barrels, Russia 25,000,000 barrels, and Galicia 770,000 barrels. To-day the world's production of crude petroleum may be estimated at fully 75,000,000 barrels per annum, or upwards of

TEN MILLION TONS.

This amount does not include asphalts (which are probably petroleum residues from which the volatile liquids have evaporated), nor does it include earth-wax or ozokerite. The surprising extent to which the oil-industry has grown in little more than thirty-three years naturally suggests the question whether the supply will continue. We cannot make an approximate estimate of this as in the case of coal. It is a fact that the existing large oil-producing districts do not, taken as a whole, afford material indications of diminished productiveness, notwithstanding the enormous drain upon them. Particular wells become exhausted, but new ones are bored and the output is maintained. This, however, is a process which must have its limits. Of rather greater significance is the fact that rock oils and petroleum residues have been discovered in almost every country, and it would appear that stores of the material exist at points hitherto almost untouched. Two conclusions may be drawn from this fact—viz., that there is ample provision for the near future, and that these mixtures of liquid compounds of carbon and hydrogen result from some process which is general in its operation, and which is or has been most active near to those great crumpled of the earth's crust we call mountain-ranges. As the United States Geological Survey puts it:—“Petroleum is derived from organic matter by a process of slow distillation at comparatively low temperatures; that the organic matter was not in all cases of vegetable origin, but was in some instances derived from animal substances in contact with limestone; and, finally, that the stock of petroleum in the rocks is practically complete. It follows, of course, that the supply is exhaustible, but geologists do not even guess at its duration.” In contrast with all this is

MENDELÉEFF'S VIEW

that petroleum is not a product from organic material, but is chiefly formed by the action of water at high temperatures on carbide of iron, which he supposes to exist in abundance within or below the earth's crust. The cracks and fissures caused by the upheaval of mountain-chains permit water to reach the heated carbide at great depths, and carbides of hydrogen result in accordance with the general equation—



The hydrocarbides then distil up and condense within the cooler sedimentary strata. The occurrence of petroleum in active volcanic areas, as in Sicily and Japan is held to accord with this hypothesis, which latter is also consistent with the remarkable fact that rock oil is usually found in the vicinity of mountains. Professor Reynolds' chief reason for referring to this attractive hypothesis was that it permits us to suppose the hydrocarbides are still being formed within the earth's shell, especially beneath the geologically modern mountain-chains, and that the supply of petroleum is practically inexhaustible. Whether that view can be sustained we must leave further evidence to decide.

NATURAL GAS.

The President's next topic was the gas-wells which exist in the American petroleum-fields, and which are the cause of so many explosions or eruptions when lucky borers strike oil. Some of the wells afford from 10 to 14 million cubic feet

of gas per day, delivered at a pressure of as much as 400 lbs. to the inch. The gas is a fuel of high value, and has been largely utilised for industrial and domestic purposes at such industrial centres as Pittsburg. One million cubic feet of the natural gas obtained from the Trenton limestone at Findlay, Ohio, are said to do the same amount of work in heating as about 60 tons of Pittsburg coal. Some of these gas-wells have been exhausted; others have continued in full productiveness for several years, but they remain of almost exclusively local value. Not so liquid petroleum, which is the most portable of all fuels obtainable in nature.

GASIFIED PETROLEUM.

The hydrocarbides of American petroleum belong to the saturated group C_nH_{2n+2} , whereas those of Russian petroleum are mainly benzenoid hydrocarbides of the general formula C_nH_{2n} , isomeric with the olefines, but really hydrogenised aromatic compounds of the naphthene series. Petroleum from both sources affords some of the lower homologues of marsh-gas—hence in the process of refining crude petroleum by distillation the first products consist largely of butane, pentane, and hexane, which are separated and condensed by pressure, the product being used for refrigerating purposes owing to its high volatility. Between 80° and 120° American petroleum affords a spirit of specific gravity about 0.75, and above 130° the illuminating-oils are obtained whose gravities vary about 0.8, while the residue which is not vaporised at 300° includes the heavier lubricating-oils, which are also admirably suited for use as fuel, and are cheaper than those generally used for lighting purposes. During this process of refining by simple distillation there is always more or less decomposition in progress, hydrocarbides of high molecular weight being resolved into simpler ones at a comparatively high temperature; and when crude petroleum or its constituents are rapidly heated, this resolution can be carried so far as to convert a large proportion of the oil into permanent gas, valuable alike for illuminating and heating purposes. The President proceeded to discuss at some length the investigations which have been made during recent years into the production and properties of this permanent gas. He maintained that the results justify his statement that petroleum is a liquefied gas, which differs, therefore, very greatly from coal and peat, for petroleum can be used as an illuminant as well as a fuel, whereas coal and peat can only be used as illuminants in so far as they can afford carburetted gas. Further, he asserted that petroleum is

THE MOST CONCENTRATED AND PORTABLE FUEL.

In proof of this he advanced statements deduced from experiments. First—weight for weight petroleum evaporates twice as much water as coal does. The particulars are:—Refined petroleum 1 lb. evaporated 12.02 lbs. of water; 1 lb. poor steam-coal evaporated 6.5 lbs. of water. Crude petroleum and Pittsburg coal gave respectively 15 and 7.2 lbs. of water per lb. of fuel. Professor Unwin compared petroleum with Welsh coal, and found that 12.16 lbs. of water were evaporated per lb. of petroleum, or about 25 per cent. better than that afforded by the steam-coal.

Petroleum has an advantage over coal in the matter of storage, as one ton of the liquid occupies only four-fifths of the space of the same weight of coal, so that a steamer constructed to carry 1,000 tons of coal could, if provided with suitable tanks, carry 1,200 tons of petroleum, equal in fuel value to about 1,900 tons of coal. As to the matter of cost, although at present petroleum is the dearer, a comparatively small advance in the price of coal would at once render heavy petroleum economical for industrial use as fuel, while the present prices of the lighter petroleum indicate that they are the cheaper fuel as well as illuminant when gasified. Therein is the point of the whole address. If we desire to use each fuel (coal, peat, or petroleum) in such a way as to develop most economically and conveniently its store of heat-energy, we must first partially or perfectly gasify it, and petroleum is the one which lends itself most easily and completely to such treatment.

Sir JOHN EVANS, in moving a vote of thanks to the President for his address, congratulated him on the selection of a subject so closely connected with the comfort and purses of everybody. He agreed and urged that the question of the continuance of our coal-supply should be kept more in mind

by manufacturers; and he felt that it was to chemists that the public must look for aid in this matter. Sir John also touched upon the question of peat and petroleum.

Mr. WILLIAM THORP, B.Sc., seconded the motion, remarking that in those times, when the Irish question is so much in every one's mind, he regretted that the Society had not an Irish question of its own, but they had an Irishman as President—(applause)—and they desired to give him a very hearty welcome. (Renewed applause.)

Sir JOHN EVANS put the motion to the meeting, and it was heartily responded to, Professor REYNOLDS replying.

Some administrative business was then disposed of. The scrutators submitted their report, Sir John Evans being appointed President. Mr. E. Kider Cook was reappointed to represent the Society on the Council of the Imperial Institute.

Mr. THOMAS TYRER explained all about the excursions, &c.

Mr. BOVERTON REDWOOD moved that the next annual meeting should be held in Liverpool. This was seconded by Professor MELDOLA, and Mr. H. BRUNNER, Chairman of the Liverpool section, heartily supported the resolution, which was, of course, accepted; and after the PRESIDENT had thanked the Drapers' Company for the use of the hall, the meeting adjourned.

THE SOCIAL FEATURES.

On Wednesday evening the President held a reception at the Hall of the Society of Painters in Water-colours, Piccadilly, this being followed by a smoking-concert, the arrangements of which had been largely made by Mr. J. C. Butterfield, and they turned out very successfully. Miss Ethel Winn, Miss Emily Fleming, Mr. Butterfield, Mr. Barney, Mr. Edwin Bryant, Mr. Kirkley Campbell, and Mr. Lovett King were the singers; and the instrumentalists were Miss Adelaide Thomas (pianoforte), Mr. Percy Ould (violin), and Mr. C. Zimmerman (cello). The vocalists in duets, glees, and part-songs, and also individually, did brilliant service; and the same has to be said of the instrumentalists. The concert was altogether an excellent feature, and provided a most enjoyable evening.

On Thursday there was an excursion down the river. First, the Lindé British Refrigeration Company's works at Lower Shadwell were visited. The works were built five years ago. The system of cold-production followed is a well-known one, devised by Professor Lindé, of Munich, seventeen years ago, and which has been described in this journal on several occasions. The company has machinery capable of producing 150 tons of ice per twenty-four hours. The party visited in succession the boiler, engine and compressor, and condenser rooms, and then the ice-tank rooms and the cold stores, in which, by-the-way, there are at present stored 8,000 Gorgonzola cheeses. There were two parties of sixty each taken over the great electric-lighting station at Deptford by Dr. J. A. Fleming, F.R.S., the consulting electrician. While these parties were thus engaged the rest had done the ice-works; then there was an amalgamation to inspect the Union Oil-mills, after which Erith was the point steamed to. The party lunched at the wharf at 1.30, on the invitation of Mr. Charles Beadle. Thereafter Messrs. Easton & Anderson's Engineering-works and the Maxim Nordenfolt Gun and Ammunition Works were visited. Returning, about 190 of the party were dropped off at Greenwich, where they were to dine at the Ship while we are going to press. The chairman of the dinner-party was the President, Professor J. E. Reynolds.

The toast-list was as follows:—

	"The Queen and Royal Family."	
	"The Society of Chemical Industry."	
By Sir F. A. Abel.	Response, The President.	
	"Trade and Commerce."	
By E. K. Musprat.	Response, Sir A. K. Rollit, Chairman of the London Chamber of Commerce.	
	"The Visitors."	
By Ludwig Mond.	Response, Professor J. A. Fleming, F.R.S., Consulting Electrician to the Electric Supply Corporation.	
	"The London Section and Committee."	
By the President.	Response, Mr. Thomas Tyrer, retiring Chairman of Section.	

Legal Reports.

QUININE BITTERS COMPANY (LIMITED) v. DAVIES.

IN the Chancery Division of the High Court of Justice, London, on July 15, a motion in the action at the instance of the Quinine Bitters Company (Limited) against John Davies, chemist and druggist, Swansea, came on for hearing before Mr. Justice Stirling. Mr. Graham Hastings, Q.C., and Mr. Hodge appeared for the company, and Mr. Buckley, Q.C., and Mr. Ashton Cross for the defendant.

Mr. Graham Hastings said his motion was for an injunction to restrain the defendant, his servants and agents, until trial of the action or until further order, from infringing the plaintiffs' registered trade-mark, No. 15,101, and from selling, offering for sale, passing off, or attempting to pass off, any goods other than those supplied by the plaintiffs as or for the goods of the plaintiffs, or under labels so resembling the plaintiffs' registered trade-mark, as to be calculated to deceive. The trade-mark in question was registered by Mr. William Evans on August 1, 1878, and had been used three and a half years before July 26, 1878, so that it was an old mark. It bore upon it the maker's name before the words "Quinine Bitters—a vegetable tonic," and then there followed a description of the benefits to be derived from its use. It also bore the words "The great Welsh remedy." That mark had been acquired by the plaintiff company, and the assignment by Evans to them was registered April 14, 1892. They had now ascertained that the defendant was selling a "quinine bitters" under a label which had at the top "Quinine Bitters," and then, not "a vegetable tonic" but "a pure vegetable tonic." The plaintiffs' label bore the words "These bitters assist digestion." The defendant's said, "By facilitating digestion, these bitters," and so on. Curiously too, Davies' name never appeared once on his own label; but at the bottom of the plaintiffs' he found "Prepared only by the Quinine Bitters Manufacturing Company (Limited)," and at the bottom of the defendant's label there appeared "Prepared only at the Quinine Bitters Manufactory, Swansea." It was not often, he submitted, that one had so clear an instance of passing off. The defendant had made some explanation about having found some old prescription, which he did not produce, which he thought would be very good to sell as quinine bitters, and that he copied it, and got a printer, and between them they concocted the label which the plaintiffs complained of. The defendant did not say he had not the plaintiffs' label before him; he did not account for the words "vegetable tonic," and with regard to the words "the great Welsh remedy," which appeared on both, he explained that these words were of common occurrence in Wales, and were applied to blisters and other things. He (Mr. Hastings) did not, however, see that they were commonly used for quinine bitters. He then proceeded to read the affidavits in support of the plaintiffs' application. The first was made by

Mr. Barclay, chairman of the Quinine Bitters Company, who deposed that the company carried on business at Llanelly, and were registered owners of the patent medicine "Quinine Bitters." Mr. William Evans had for many years carried on business as the manufacturer of those bitters; and on August 15, 1888, he sold his business and his trade-mark to the company, in which he retained a considerable interest. The company had a valuable trade reputation with respect to their labels, and no other persons had hitherto used the words "quinine bitters" in connection with any drug. Since August, 1888, the company had issued not fewer than ten million circulars in which they used the words "the great Welsh remedy" in conjunction with "quinine bitters," and those words, or their Welsh equivalents, had been extensively used by them in advertisements throughout Wales. The company had a large sale for their quinine bitters in Swansea. The defendant was a customer of the company and of its predecessor, Evans, and he considered that the resemblance of the defendant's label to that of the company was calculated to deceive.

Mr. William Evans, in his affidavit, said that from 1874 until August, 1888, he carried on the business of making and selling bitters at Llanelly, and there was then no similar preparation on the market.

His Lordship, interposing, asked if this motion sought to establish an exclusive title to the use of the words "quinine bitters."

Mr. Hastings: Oh, I do not think so.

Mr. Buckley said it would appear so upon the evidence.

Mr. Hastings resumed the reading of the affidavit, which went on to state that the defendant wrote to the company, stating that he was going to manufacture a quinine bitters himself unless the company reduced their price to him, which they refused to do. The company sold a large quantity of their bitters, and the defendant had been a customer from 1880 until May, 1892. The make and appearance of defendant's bottle approximated to that used by the deponent first, and now by the company. Defendant's preparation contained no quinine, whereas his did. Defendant put 2s. 9d. as the price on his bottle, but he sold it for 2s., and its real price was 2s. The reason for printing 2s. 9d. on the bottle was to deceive. The plaintiffs spent thousands of pounds a year on advertising.

Mr. J. R. Escott made an affidavit, in which he stated that he went to the defendant's shop, and asked for a bottle of "the great Welsh remedy, quinine bitters," and was supplied with a bottle of the defendant's preparation.

Mr. Victor Lazarus, an expert in trade-marks, gave it as his opinion, from his knowledge of trade-marks, that the defendant's label was calculated to deceive. He pointed out that the public did not carry in their minds matters of detail, but only a general idea of the get-up; and here there was a general similarity, the same "catching words" being used.

Mr. Frank Rendall, wholesale and retail grocer, Llanelly, deposed that he was well acquainted with "Quinine Bitters" and the label, which, to him, identified the plaintiffs' goods. Until he heard of what the defendant was doing, he had never heard of any use of "the great Welsh remedy" being applied to bitters.

Mr. John Wesley Jones, chemist, Stepney Street, Llanelly, said he had been well acquainted with the plaintiffs' patent medicine since its introduction as "Quinine Bitters." Orders for "Quinine Bitters," he understood to mean the plaintiff company's bitters, and he supplied them accordingly. He never saw any quotation in a price-list for "Quinine Bitters" other than Evans's.

Mr. Christopher Urie, chemist and druggist, Swansea, stated that he had for thirteen years sold the plaintiffs' bitters. It had a large sale in the district. "Quinine Bitters" was generally understood in the trade as denoting the plaintiff company's and no other.

Mr. John Morris, of Morris & Jones, wholesale grocers and patent-medicine vendors, Liverpool, deposed that by "the great Welsh remedy" and "vegetable bitters" he always understood the plaintiffs' "Quinine Bitters," and executed his orders accordingly.

Professor John Attfield, analytical chemist for forty years, London, in his affidavit said he had received, on May 30, a bottle of the defendant's "Quinine Bitters" from Mr. Evans, with instructions to test it for quinine or anything analogous to quinine. The so-called "Quinine Bitters" fluid did not contain quinine. There was a slight sediment, which he also tested, and it did not contain quinine or any alkaloid resembling quinine.

Several other affidavits for the plaintiff having been read,

Mr. Buckley read the evidence given upon affidavit by the defendant and his witnesses.

Mr. John Davies, the defendant, deposed that it was not true to say that no other preparation except the plaintiffs' bitters had been known as "Quinine Bitters," or as "the great Welsh remedy." The name "Quinine Bitters" had been known to chemists and grocers for many years. They had known "Quinine Tonic Bitters" and "Quinine and Iron Bitters" for a long time. He put in bottles, with labels upon them, containing preparations made by various chemists in Wales, and bearing the words "Quinine Bitters," "the great Welsh remedy," and other phrases, the use of which by him was objected to by the plaintiffs.

Mr. Hastings pointed out that all these bottles were now exhibited without the outside wrapper.

Mr. Buckley said one was prepared and sold by Messrs. Peglar, South Wales and Monmouthshire; another by Francis & Co., Wrexham; another by William Davies; and another was Dr. Jenner's "Quinine Bitters," sold by Messrs.

Lorimer & Co. He thought he was right in saying that all these were either "Quinine Bitters," or "Quinine Tonic," or "Quinine and Iron Bitters." He then resumed the reading of the deposition, in which defendant stated that he had always sold the plaintiffs' preparation as "William Evans's Quinine Bitters"; never as "Quinine Bitters" alone, nor as "the great Welsh remedy" alone. The plaintiffs gave it different names in their circulars and advertisements—"the best remedy of the age," "English workman's friend," "guide to health," "unrivalled tonic bitters," "successful and permanent remedy," "great blood-purifier," and so on, but in no instance as "the great Welsh remedy" alone. That name had been for many years past commonly used by Welsh manufacturing chemists for articles manufactured by them. It had been used by Isaac Jones for many years in connection with proprietary medicines. Hughes had used "the great Welsh remedy" for nearly twenty years, defendant himself for twenty-one years, and his predecessors for twenty years before him had used words equivalent thereto in connection with "worm-lozenges," manufactured by him—"the celebrated Cambrian remedy"—and he used the phrase "the great Welsh drink" in connection with another preparation. Those names had led him to adopt "the great Welsh remedy" in connection with his quinine bitters, and not any desire to injure his neighbours. "The great Welsh drink" was "Davies' Extract of Herbs."

Mr. Hastings: But the name "Davies" is there.

Mr. Buckley continued to read the affidavit, in which defendant pointed out that the plaintiffs cautioned the public against taking any preparation called quinine bitters unless the name "William Evans" was upon it. He had learned that Quinine Bitters could be had cheaper by a certain firm than he was getting it at, and he wrote to the plaintiffs, asking to be supplied at a reduced price. Receiving no reply, he looked through his prescription-book, and adopted a prescription of a local physician. In October last he commenced to manufacture quinine bitters, and had sold it ever since. That was known to William Evans, the manager of the plaintiff company, as deponent's letter of July had informed that gentleman of his intention, and Evans complained of his using the words "quinine bitters," but not of his having copied the company's labels or bottles. The bottles he used were not peculiar, but were common to the trade as 8-oz. panel bottles, and were used by chemists all over the kingdom. The plaintiff company's labels also were pink, and his were blue. The plaintiffs wrapped their bottles in grey paper, and the wrapper he used was blue. He entirely denied that he had passed off, or tried to pass off, his quinine bitters as that of the plaintiffs. On the contrary, when anyone applied for "William Evans's Quinine Bitters," he supplied him with that of the plaintiffs. It was common to make a 30-per-cent. reduction on the printed price of such medicines. Peglar's price-list showed the prices charged for proprietary medicines. Hugh Davies's cough-mixture was there described as "the great Welsh remedy," and the plaintiffs' preparation was described in the same list as "William Evans's Quinine Bitters," and not as "the great Welsh remedy, or vegetable tonic." His (defendant's) preparation of quinine bitters originally contained a large proportion of quinine; but, having received complaints that several people had had headache, he, in November, prepared a small quantity without quinine, and substituted other tonics, which added 50 or 60 per cent. to the cost. Some of this remained unsold, and one of these bottles must have been bought for Mr. Attfield. All the allegations made by the plaintiffs as to his seeking to copy, or seeking to pass off his goods as theirs, were quite false and unfounded.

Mr. E. M. Daniel, advertising agent in the employment of the *Cambrian Daily Leader*, stated that he had searched the advertisements in that paper, and also in the *South Wales Daily News*, and could not find that Evans's Quinine Bitters was advertised as "the great Welsh remedy."

Mr. William Morgan, doctor of medicine, deposed that he had received and analysed samples of the defendant's and of the plaintiffs' preparations. The plaintiffs' contained a small quantity of quinine. The defendant's contained a large quantity—about 2 grains to the ounce, or double the quantity in the plaintiffs'.

Mr. Wm. J. McMurray, commercial traveller, deposed that he had half-a-dozen times bought a bottle of the defendant's mixture. He sometimes found it much more bitter than at

others, and spoke about it to the defendant, who told him that he was varying the quantity.

Mr. Luxton, traveller with samples of labels, stated that he had taken orders for the labels from the defendant. Such words as "vegetable tonic," "vegetable remedy," "great blood-tonic," did not belong exclusively to any person.

Mr. Wm. T. Olive, chemist and druggist, and in business for thirty years, deposed that he had known the plaintiffs' preparation for the last thirteen years. It had always been known in the trade, and by the public, as "William Evans's Quinine Bitters," the name Evans being used in the same distinctive way as the names Holloway and Beecham for pills. He had never heard of it being sold as "the great Welsh remedy."

Mr. John K. Roberts, chemist and druggist, Swansea, made an affidavit to a similar effect.

Mr. Robert I. Jones, in business for fifty years as a chemist and druggist, said in his evidence that he had applied the term "the great Welsh remedy," to pills which he had prepared for many years.

Mr. Hugh Davies gave testimony that he had used the phrases "the great Welsh remedy," and "vegetable remedy," for his cough-mixture and pills.

Mr. E. Marshall, St. John's Road, London, and also of Sussex, chemist and druggist, said he never knew the plaintiffs' bitters by any other name than "William Evans's Quinine Bitters." The plaintiffs called particular attention to that as a preventive of imitation. Unless "Evans's" was asked for, he would not supply the plaintiffs' quinine tonic. He would supply quinine wine.

Mr. Hastings read a short rebutting affidavit by Mr. William Evans, and another by Mr. Carteighe, President of the Pharmaceutical Society, who deposed that he had always associated Quinine Bitters with Mr. Evans's name. The learned counsel then said he thought he need not trouble his Lordship any further. The case, he submitted, was clearly made out.

His Lordship: You have known of this since September last.

Mr. Hastings: But I understand this is to be treated as the trial.

Mr. Buckley: This is the first suggestion of it that I have heard.

Mr. Hastings: Oh, I thought it was. But I submit that that is no reason why an injunction should not be granted, if your Lordship is satisfied as to the fraudulent intention of the defendant, and I submit that that is plain. He proceeded to urge that the prescription from which the defendant said he made his preparation was not produced, and the defendant's name did not appear on the label at all.

Mr. Buckley, for the defendant, then addressed the Court. He said this was "infringement of trade-mark" gone mad.

His Lordship, interposing: I do not think it is infringement of mark, but I don't like your label.

Mr. Buckley said he would pass on to that, remarking only that the plaintiffs' first claim was absurd; that they next claimed exclusive use of the words "quinine bitters," which was just as absurd; and with regard to "the great Welsh remedy," and "vegetable tonic," those words were not always used by the plaintiffs.

His Lordship: They used them in advertisements.

Mr. Buckley said there were cases in which the words "the great Welsh remedy" did not appear. The point was to prove that in a great many cases they did not use them. That was proved by the fact that numbers of other people had used the words, not for quinine bitters, but for other preparations. The words seemed to be attractive to the Welsh people.

His Lordship said that the words appeared to be used for other preparations.

Mr. Buckley said that therefore the use of the words was neither exclusively the plaintiffs', nor was their use by the defendant any proof of dishonesty at all, nor of any attempt to identify his preparations with those of the plaintiffs. The mark had not been infringed; and the words "the great Welsh remedy" had not been used to mislead, because the plaintiffs' preparations were not known by those words. The words "pure vegetable tonic" were merely a descriptive expression; and, therefore, the one thing that remained for him to deal with was the statement on the defendant's label

that his quinine bitters were "prepared only at the Quinine Bitters Manufactory, Swansea."

His Lordship: I think, Mr. Buckley, that the least you can do is to alter that part.

Mr. Buckley said that immediately the writ was issued his client wrote to the plaintiffs saying he was quite willing to do what was reasonable. On June 24 he wrote denying that he had infringed, but adding that "with the view of avoiding litigation they would make any reasonable alteration on the labels." The difficulty which his client was in, in respect to putting his own name on the labels, was this. The preparation was sold by other chemists besides himself, and chemists very frequently objected to having the name of the makers on an article if they were themselves chemists. It was, therefore, a common mode to make up these preparations with only the name of the manufactory.

His Lordship: He displayed remarkably little power of invention when he selected this one.

Mr. Buckley replied that Mr. Davies did that which was generally done—he described the manufactory as distinguished from the name of the manufacturer. But even on that point the plaintiffs had no exclusive right to the words "quinine bitters manufactory." He submitted, upon the whole case, that the plaintiffs had failed as regarded infringement of mark; that they had failed on their exclusive right to the words "quinine bitters"; that they had failed in their attempt to prove fraud in the preparation of the label; and that they had no exclusive right to the other expressions referred to, but that the defendant was equally entitled with them to get what profit he could out of the trade in quinine bitters, and to describe the place where he made it as the "Quinine Bitters Manufactory, Swansea." He accordingly submitted that the motion should be dismissed.

His Lordship: Are you willing to alter your label?

Mr. Buckley: As regards what is at the foot? ["Prepared at the Quinine Bitters Manufactory, Swansea."]

His Lordship was understood to reply in the affirmative.

Mr. Buckley said he would not go back on what they had already offered. His client wanted to deal fairly in the matter.

His Lordship: I wish carefully to guard myself against being supposed to entertain the view that the plaintiffs have exclusive right to the words "quinine bitters."

Mr. Buckley: Certainly not.

His Lordship: But I do not approve the use of the words "quinine bitters manufactory" at the foot of the defendant's label.

Mr. Buckley said that whatever his Lordship thought fair he would do. His Lordship, however, would remember the objection to putting the maker's own name upon the label.

His Lordship: There are numerous other ways.

Mr. Buckley said it occurred to him to substitute for the present form the words "the manufactory, Swansea," leaving out the words "quinine bitters."

His Lordship: I do not desire to settle your label for you. It may be right to let it stand over for a week, and then submit your alterations to the plaintiffs, and see what they say; but that certainly seems to me to be a very faulty point.

Mr. Buckley: Yes, of course; the defendant had better have an opportunity of considering it for himself.

His Lordship: Very well, then; let it stand over for a week.

The motion "stood over" accordingly.

ADULTERATED TINCTURE OF RHUBARB.

THE cases briefly reported last week as having been tried at North Holland (Lincolnshire) Petty Sessions, were brought against shopkeepers, not chemists. Mr. C. H. Southwell, of Boston, county analyst, certified in one case that the preparation was adulterated with caramel (burnt sugar), which was not an ingredient of the official preparation. The analyst stated that in his opinion the sample was not of the nature, substance, and quality of the official tincture of rhubarb, inasmuch as not more than 25 per cent. of the quantity of saffron ordered had been used in the preparation. Defendant stated that the preparation had been used on the premises for several years, and only a very small quantity had ever been sold—in fact, the superintendent had been his

best customer. (Laughter.) Superintendent Crawford said he quite believed that the preparation had been in stock for some time. The case was withdrawn on payment of costs.

In the other case, the certificate from Mr. Southwell showed that the preparation was adulterated with caramel, and had not more than 20 per cent. of saffron. It was badly prepared, turbid, and quite unlike the official preparation. Fined 2s. 6d. and costs.

MEDICINE-STAMP ACT PROSECUTION.

AT the Clerkenwell Police Court, before Mr. Kennedy, on Friday, July 15, Mr. F. C. Heron, chemist and druggist, of 10 Hatton Garden, E.C., answered to five summonses charging him with having, on February 29 and March 1 and 4 last respectively, infringed the provisions of the Medicine-stamp Act by selling, without duly stamping the same, the following articles, liable to stamp-duty:—Heron's "Anti-catarrh Smelling-salts" (eucalyptus menthol inhalant), "Cascara Elixir," "Compound Mixture of Quinine and Nux Vomica," "Hypnolio Powders," and "Nasalon" snuff.

Mr. Hawkins prosecuted on behalf of the Inland Revenue authorities, and Mr. Heron undertook his own defence.

Mr. Hawkins said that by section 2 of the Act 52 George III., chap. 150 (generally known as the Medicine-stamp Act), a penalty was imposed on any person who sold certain medicines specified in the schedule to the Act, with out such medicines, being properly stamped. In this case five medicines were purchased which came under the general description, and he proposed to give evidence to the effect.

Mr. A. Woodward, assistant in the laboratory at Somerset House, said that on February 29 last he visited the defendant's shop at 10 Hatton Garden, and purchased a bottle of "Heron's Anti-catarrh Smelling-salts," labelled "Eucalyptus Menthol Inhalant." He now produced the label of the bottle.

Mr. Hawkins: The label, he contended, held out the medicine as being "beneficial to or for the cure or relief of maladies, distempers, &c., affecting the human body."

Mr. Kennedy: In popular language, it is a patent medicine, and a person selling that has to have it stamped?

Mr. Hawkins: Each bottle containing it has to be stamped.

The witness, in answer to Mr. Heron, said he asked for "Anti-catarrh Smelling-salts," as advertised in defendant's list, and the preparation mentioned was introduced to him.

Mr. Heron said it was not Anti-catarrh Smelling-salts at all, and had nothing to do with the remedy put forth in his list.

Witness: It was introduced to him by the assistant.

Mr. Hawkins: We charge him with what we did obtain. We allege that the Eucalyptus Menthol Inhalant requires a stamp.

Mr. Heron objected. If he had said "Heron's Eucalyptus Inhalant," it would render it liable to stamp-duty; but he did not use the possessive case. It was simply getting round the Act. The whole Act was simply a farce, and was looked at by chemists as being so. As far as the Patent-medicine Act was concerned, there was no such thing as a patent medicine. They were merely proprietary remedies, and anyone could sell a proprietary remedy. He had always made it a rule to stamp his remedies when they were liable to duty. He was out at the time these things were sold, and in his absence his assistant may have let a package or two go. In that particular case it was held out by the advertisement as being curative, but there was no possessive case made use of, and the label itself did not imply liability.

Mr. Kennedy: Is it not beneficial, or for the prevention of a malady?

Mr. Heron: It is, sir; but it is not so stated on the label.

Mr. Hawkins: It is held out as antiseptic, antispasmodic, and stimulant, and we say that is clearly holding it out as beneficial.

The witness then proved the purchase of a bottle of "Heron's Cascara Elixir" on March 1, and a package of "Hypnolio Powders."

Mr. Heron admitted that the label on this bottle rendered it liable to duty, and that it had been supplied by his assistant. The powders which had been supplied were not

the Hypnolio Powders as advertised in his list; they were simply sulphonal powders.

Mr. Kennedy: Then you did not supply him with what he wanted; he asked for Hypnolio Powders.

The witness, continuing, said that on March 4 he purchased a bottle of "Heron's Compound Mixture of Quinine and Nux Vomica."

Mr. Heron said that was usually stamped, and was, no doubt, liable under the Act. It was procured during his absence.

Mr. Kennedy: It seems that this assistant has been very commonly neglecting to put the stamp on.

Mr. Heatley, another assistant at the Somerset House Laboratory, was then called and proved the purchase of a package of "Heron's Nasalon" on March 4 from the defendant personally. He received a list of remedies with it.

Mr. Heron said on that package there was merely a written label. It did not say "Heron's Nasalon."

Mr. Kennedy: Nasalon itself is rather a stiff word—a proprietary word.

Mr. Heron, continuing, said these cases were most difficult for chemists to defend. The Inland Revenue authorities called round behind their backs and pressed assistants. There were a number of cases of the kind. He had always done his best to stamp the articles, but they would have to look up a tremendous lot of money if they wished to keep everything stamped that they sold.

Mr. Kennedy said it was no use quarreling with the Act of Parliament. Defendant seemed to have been selling a lot of patent medicines without any stamp at all. He would impose a fine of 1*l.* each in the case of the Smelling-salts, Cascara Elixir, Compound Mixture of Quinine and Nux Vomica, and Nasalon—in every case except the Hypnolio Powders—and 12*s.* costs. The fines were paid.

At the Stratford County Magistrates' Court, before Sir T. F. Buxton, on Saturday, July 16, Arthur Saunders, chemist and druggist, of Orford Road, 4 Market Terrace, Walthamstow, and Lea Bridge Road, Leyton, was summoned in seventeen instances, under the Medicine-stamp Act, with having sold the following remedies without stamps:—"Saunders's Aniseed Cough-balsam" (two summonses); "Neuralgia Nerve- tonic" (three); "Saunders's Family Embrocation" (two); "Arnicated Chilblain-liniment" (three); "Liquid Taraxacum, Podophyllin, and Ginger" (three); "Saunders's Chlorodyne" (two); "Tussine Cough-cure" (two).

Mr. Denniss prosecuted for the Inland Revenue, and Mr. E. C. Kilsby defended Mr. Saunders. After some preliminary conversation between the two solicitors and the Magistrate,

Mr. Denniss said they might take it that all the medicines which had been purchased were liable to stamp-duty. Mr. Saunders had three shops, at each of which he sold and advertised these medicines. At the Lea Bridge Road shop six articles, all liable to duty, had been purchased. As regards one article (chlorodyne), at one shop there was a stamp on it and at another shop there was not. It was the duty of the seller to see that the stamp was affixed before selling it, and of course, although the amount of duty on each bottle might be small, when large quantities were sold there was a great loss of duty.

Sir T. F. Buxton: I presume it will turn rather upon the statements of that handbill. There is nothing in your statement to show there is any claim that these are secret medicines.

Mr. Denniss said he should show in each case that, either by the handbill or label on the bottle, the medicines were held out as being beneficial. He was proceeding to specify the different articles, when

Mr. Kilsby, on behalf of the defendant, admitted that there should have been stamps on every one of them except the "Taraxacum, Podophyllin, and Ginger" and the "Arnicated Chilblain-liniment." Indeed, regarding the latter, they had a letter from the Commissioners of Inland Revenue saying it was not liable.

Mr. Denniss: But Mr. Saunders has not confined himself to the label; he has, in addition, delivered handbills which contained the particulars of the words that had been struck out on the label. In the case of the liquid taraxacum, &c.,

there was also a handbill. At the top of the handbill there was the word "Saunders's" although on the label there was no claim to any proprietorship.

Mr. Kilsby: We do not claim any right. There is nothing to prevent any other person selling the same thing.

Mr. Denniss: By calling it Saunders's it is no doubt made a proprietary medicine.

The Magistrate: I think that would be an open question rather.

Mr. Denniss: If you sell a thing as Saunders's surely that is claiming it as proprietary.

Sir T. F. Buxton: Not as exclusive property. The Act says, "exclusive right or title." Proprietary medicine means exclusive right.

Mr. Denniss: We do not say he claims to have any exclusive right or title.

Sir T. F. Buxton: But he claims to be the proprietor.

Mr. Denniss: That it is held out to be a proprietary medicine—it is called Saunders's.

Sir T. F. Buxton: I think I should like to hear you on this point: Whether, if another chemist used the words "liquid taraxacum," &c., that he would be liable to be attacked by Mr. Saunders.

Mr. Denniss: That is not the point. If we charged the defendant with having claimed an exclusive right or title, he might say, "I have not claimed any exclusive right." We admit that, but he does hold it out as a proprietary medicine because he calls it Saunders's.

Sir T. F. Buxton: Suppose you say Allen & Hanburys' cod-liver oil—I am only asking for information. Is that a proprietary medicine?

Mr. Denniss: No, sir, because that would come under the exemption of a pure drug.

Sir T. F. Buxton: Are not taraxacum and ginger pure drugs?

Mr. Denniss: They are mixed together in combination.

Sir T. F. Buxton: Take another case. Supposing it were Allen & Hanburys' sulphate of quinine. That is more than one chemical substance.

Mr. Denniss: It is a single drug, sir.

Sir T. F. Buxton: I do not see where you bring in a pure drug when many drugs are combinations.

Mr. Denniss: Podophyllin is not a mere element; it consists of various elements—carbon, hydrogen and so on in chemical combination; but it forms a single drug.

Sir T. F. Buxton: Why do you say this preparation is not a single drug?

Mr. Denniss: The bottle itself shows it is taraxacum and podophyllin.

Sir T. F. Buxton: I think your theory will land you in some inconsistency.

Mr. Denniss: I think not. Here it cannot be said that taraxacum is not a drug, or podophyllin is not a drug. These are sold in combination, and therefore it does not come within that exemption. By holding it out as "Saunders's" it might be that there was a greater market value. The proceedings were simply taken to protect the Revenue.

Sir T. F. Buxton: There are others in which "Saunders's" is put at the head.

Mr. Denniss: Yes, there are.

Mr. Kilsby: We admit all the others are liable, but as regards the chilblain-liniment we do not think it comes under the words in the Act, "beneficial to the prevention, cure, or relief of any distemper, malady, ailment, disorder, or complaint incident to or in anywise affecting the human body." Do chilblains come under that? We submit not.

Sir T. F. Buxton: I think so. Have you ever had them, Mr. Kilsby? (Laughter.)

Mr. Kilsby: No, sir. That, however, was the reason the label was not put on that. This Act of Parliament was passed in the year 1812, when none of these nostrums were thought of. The goods in question were mostly put up at one of Mr. Saunders's shops in Orford Road, and if any were required at the other shops, stamps were supplied to the assistants. It appeared that owing to the removal of an assistant in November last the stamping of the remedies had been neglected without Mr. Saunders being aware of the fact. He thought the stamps were being put upon the articles, and had no wish to avoid the stamping. He (Mr. Kilsby) had personally known the defendant sixteen years, and could speak as to his client's character and ability as a chemist.

Sir T. F. Buxton: How many cases are there?

Mr. Denniss: There are seventeen, sir; but we should be quite willing to elect, say, three of them for you to deal with.

Sir T. F. Buxton: What are the maximum and the minimum penalties?

Mr. Denniss: The maximum is 10*l*., and there is no fixed minimum.

Sir T. F. Buxton: We will take the first three cases, then. I understand you withdraw all but three?

Mr. Denniss: I withdraw all but three.

Sir T. F. Buxton: The defendant must pay a fine of 1*l*. on one of the cases—say on the sale of "Tussine"—and he must pay 6*s*. 6*d*. costs, and also 2*l*., the costs of the remaining summonses. The amount was paid.

THE ELECTRIC-BELT BUSINESS.

At the Bloomsbury County Court, on Tuesday, before his Honour Judge Bacon, a claim and counter-claim in the action of the Medical Bittery Company *v*. Jeffry was heard. The claim was for 3*l*. 5*s*., balance of 5*l*. 5*s*., the price of an electric belt (Harness's patent) supplied by the plaintiff company to the defendant; and the defendant, by way of counter-claim, sought to have an I.O.U. for 3*l*. 5*s*. delivered up to him, and the sum of 2*l*. cash returned to him, on the following grounds—that he was induced to buy the electric belt through misrepresentation, and, secondly, that there was no good consideration for the contract into which he had entered with the plaintiff company.

Mr. De Witt appeared for the plaintiffs, and Mr. Lickfold for the defendant.

Mr. Frederick Thomas Simmonds said he had been in the employ of the plaintiff company for nearly seven years. During that period 16,900 cases had passed through his hands. The defendant came to the Electropathic and Zander Institute, 52 Oxford Street, on May 9, and was shown to witness's consulting-room. He had a sprain which he said he thought might develop into rupture. Examined the defendant and told him the hernia was incomplete. Recommended him an electric belt, which had been fitted on him. The belt was intended to reduce the pressure and give tone to the muscles. The price of the belt was 5*l*. 5*s*. The defendant said he had only 2*l*., and the cashier offered to take his I.O.U. for the balance. Witness did not represent himself as a qualified medical man.

In cross-examination the witness said he began treating hernia cases after having been with the company about three months. Before he was employed at Harness's he was employed in commercial pursuits. Asked if he had any qualification for treating hernia, he said he had studied it ever since he was nine years of age.

What was your "commercial pursuit" before you were employed by the plaintiffs?—I was a salesman in the West-end of London in Oriental furniture.

You do not require much knowledge of the treatment of hernia in selling Oriental furniture?—No. I am now one of the consulting officers at the plaintiffs'. There are two qualified medical men on the premises from 10 to 6 daily. I do not think it necessary to consult them in cases of hernia. In the first or incipient form of hernia electricity is a good thing. I cannot say what the effect of electricity is, but the belt would give support. The belt sold to the defendant is a proper one for the purpose.

Do you pledge your oath that the patient would get a serviceable amount of electricity from this belt?—Yes, certainly. The moisture from the body would complete the circuit. When the defendant called on me he did not ask for a truss. A truss would cost from 2*s*. 6*d*. to 12*s*. 6*d*. I do not know the intrinsic value of this electric belt.

This was the plaintiffs' case.

Mr. Lickfold said he should prove that there had been misrepresentation, and submitted that the contract ought to be avoided on that ground.

The defendant, Mr. D. Jeffry, said he was in the employ of the Union Bank, and had been for twenty-nine years. In consequence of what he read in an advertisement, he called at the plaintiffs' establishment, 52 Oxford Street, saw the porter, and said he wanted to see a qualified gentleman to inform him if he was ruptured or not. Was introduced to the last witness, who examined him and told him he was not suffering from hernia, and if he used one of Harness's belts

he would soon be all right. He gave 2*l*. on account and an I.O.U. for 3*l*. 5*s*. for balance. He had worn the belt for some time, and it gave him great pain. There was downward pressure, and a lump formed in the groin; an external sore also formed. He consulted Dr. Rowntree on May 23, who advised him that he was and had been ruptured for some time. He wore a truss, and was now much better.

Cross-examined: The misrepresentations he complained of were that Mr. Simmonds was not a qualified medical man; that Mr. Simmonds told him he was not ruptured, and that he wanted an electric belt and not a truss. On these misrepresentations he was induced to try the belt.

Mr. William George Rowntree, L.R.C.P., said he examined Mr. Jeffry on May 23, and found him suffering from rupture, which had probably existed for the previous three months.

Mr. T. E. Gatehouse, electrical and consulting engineer, said he had examined the belt produced.

What do you say of its electrical powers?—I say it has not any, and that it is utterly useless.

Why do you say so?—Because I have tested it.

There is zinc and copper in it, and why do you say it is useless as an electrical appliance?—Because, as the belt stands, it cannot generate any electricity at all.

His Honour: You have heard the witness (Mr. Simmonds) say that the moisture of the body, acting on these bits of zinc and copper, would complete the circuit. Have you tried it in this way?

Witness: Yes; the moisture of the body is supposed to act chemically on these metals. Your Honour is acquainted with the schoolboy experiment of putting half-a-crown under and a penny above the tongue, and on bringing the two metals into contact little flashes of light appear before the eye.

His Honour: I did not know about the light, only the taste.

Witness (continuing): The moisture of the body would be sufficient to set up a current between two dissimilar metals, but you must have a circuit. If I place one half of this belt on my stomach and the other half on my back, I have the elements for a galvanic battery, but there is no completion of the current.

His Honour: The witness says the circuit is completed by the action of the moisture.

Witness: That is the internal and not the external circuit.

His Honour: Why would not a body touched back and front and all round complete a circuit?

Witness: As this belt was worn, it never produced a trace of electricity. This morning I made an experiment with this belt so as to produce a small quantity of electricity. I took salt water and saturated the two parts. I saturated the web, and then I connected the copper and zinc with a galvanometer, and so I got a slight deflection of the needle of about fourteen degrees. I then put on my leg and my arm, and the deflection was not in the slightest degree altered. That shows that when these belts are worn by any patient no electricity passes through the body in any way whatever. Electrically these belts are absolutely useless.

Cross-examined by Mr. De Witt: This belt, as the defendant wore it, would produce no current at all. The circuit was not completed. I saturated this belt with salt water, and then I got a small electrical current. I say there is a current, but the current will not go through the body—it is the webbing, and not the body, which forms the internal current.

This concluded the evidence.

Mr. De Witt contended that though Mr. Simmonds might have been guilty of an error of judgment, he had not made such misrepresentations as entitled the defendant to avoid the contract which he had entered into.

His Honour, in the course of his judgment, said the defendant had been taken in in the sense that he had been persuaded to buy something utterly useless. It is not every such case which will entitle the purchaser to avoid his purchase, and have back the purchase-money; but there are cases in which the purchaser is entitled to avoid his contract. He thought it clear on the evidence that the defendant went to the plaintiffs' establishment and asked to see a qualified doctor. That was uncontradicted. The defendant had shown that the gentleman whom he saw, and whom he asked for a truss, recommended him something which he said was better. The defendant had shown that this gentleman told

him he was not suffering from rupture, but only from the beginning of rupture. He had no doubt from the evidence Mr. Simmonds said to the defendant, "I am happy to tell you you are not ruptured." But that was not the fact: the defendant was ruptured, as he (the Judge) could not help believing from the evidence of Dr. Rowntree. Then was the thing which the defendant received the thing which he asked for? He would not enter into the merits of the electrical appliance, which he did not understand. Mr. Gatehouse's evidence as to the electrical volume might be right or wrong. He did not know; but this belt was the thing put on the man when he was ruptured, and the man was persuaded to buy it upon the representation that he was not ruptured. He went for a truss. He was told, "You do not want a truss." This was a representation made by a man who had not taken the trouble to qualify himself, and who ought not to have made any representation at all. That was the representation which led to the contract—a contract without any good of any sort to the defendant—and it must be avoided. There must be judgment for the defendant on his counter-claim, and his 2*l.* must be returned to him.

Mr. Lickfold applied for costs on the higher scale. His Honour refused the application. Judgment accordingly.

ACTION BY THE SOCIETY OF APOTHECARIES.

In the Derby County Court, on Tuesday, before Judge Kenelm Digby, the Society of Apothecaries sought to recover the penalty of 20*l.* against Mr. Christopher Jones, of London Road, Derby, for practising as an apothecary by attending, advising, furnishing, and supplying medicine without having proper qualification. Mr. Rogers appeared on behalf of the plaintiffs, and Mr. W. B. Hextall represented the defendant.

Mr. Rogers explained that the action was brought by the Society of Apothecaries in conjunction with the Medical Defence Union. It had been found necessary to send sham patients to the defendant, against whom many complaints had been received, on account of the difficulty in getting patients who had been "treated" by him, or his principal, Mr. David Wilkinson, who was also the defendant's father-in-law, to come forward. A "patient" was accordingly sent to the house occupied by the defendant, who treated him for liver-complaint, and seemed to think that the liver was the source of all the complaints in the world. With regard to the letters "M.B." after the defendant's name on the cards circulated by him, he understood that this did not mean Bachelor of Medicine, but "Medical Botanist."

Joseph Edward Newman, clerk in the employ of the plaintiffs' solicitor, said he called on defendant, who, after examining his throat, said, "It's there," and, "It's your liver." Witness inquired if his liver being bad would affect his throat, and defendant replied, "Yes; your liver affects your whole body." He further told witness that he suffered from indigestion, and added, "I will guarantee to say that your liver, instead of doing its proper work, is like a piece of indiarubber." (Laughter.) Witness was in perfect health at the time. Defendant gave him some medicine and pills, but witness had not taken any.

For the defence, Mr. Hextall admitted that the defendant had no proper medical qualification, and contended that, in order to make out that the defendant had acted as an apothecary, there must be evidence that he had mixed up medicine prepared for the specific use of a particular person. He submitted that the defendant had not acted as an apothecary, and would prove that the medicine he sold was already made up. The defendant was the son-in-law of Mr. David Wilkinson, who had carried on business as a herbalist for forty years at Ripley, and made every drop of medicine and every pill he sold before he came to Derby. He did not prescribe in the sense in which physicians prescribed, and the evidence did not show there had been any mixing up.

Defendant was sworn and subjected to a searching cross-examination, but stoutly denied that he had ever prepared any medicines in his life, and had no means of doing so in Derby.

There were two other cases of a similar character against the defendant, the principal witnesses being Frank Denny Eaton and Miss Ellen Page, clerks in the employ of the Medical Defence Union, both of whom visited the defendant

on the pretext of imaginary ailments, and were sold medicine and pills for "liver-complaints."

Mr. Hextall intimated that the defence he set up in the first case would apply to the others.

His Honour said he would reserve his judgment until the next Court.

CASTOR-OIL PILLS.

ALBERT BERRY, herbalist, Shipley, was summoned on Monday, at the Bradford West Riding Court, at the instance of Alexander Quinlan, inspector of food and drugs to the West Riding County Council, for selling a commodity which was not of the nature and quality demanded.

The Inspector said he visited the shop of the defendant on June 10, and bought two-pennyworth of castor-oil pills. These were sent to the county analyst at Sheffield, who found no castor oil whatever, and only "gamboge."

The defence was that the defendant did not himself make the pills; but they were made up by his father, and he did know anything further about their composition.

Fined 2*s.* and costs.

COPPER IN PEAS.

THE Liverpool Stipendiary Magistrate some time since dismissed a summons under the Sale of Food and Drugs Act, in which it was alleged that certain preserved peas had been bought which contained $1\frac{1}{2}$ grain of sulphate of copper to the bottle.

Another case was brought before the Magistrate on July 13, and this time the certificate asserted that the proportion of sulphate of copper was 2*½* grains to the pound.

In the course of his evidence, Dr. Campbell Brown, the city analyst, said that since the previous case he had examined numbers of tins and bottles of preserved peas, and though their colour was green and fresh, they were absolutely free from any injurious colouring-matter. It was evident they were kept green-looking by some new process of which he knew nothing at present. He considered that the effect of the use of sulphate of copper was to injure the digestive power of the stomach. Of course, it depended entirely on the strength or the weakness of the stomach; but he himself had frequently at public banquets tasted sulphate of copper in the peas which were served at table, and he invariably put them on one side of his plate.

Dr. Hope, assistant medical officer of health, corroborated Dr. Campbell Brown as to the effects of sulphate of copper on the stomach. Peas, when preserved in their natural state, were more yellowish and less attractive than when they were treated with sulphate of copper. He found that, in order to give a natural greening or pigment to peas, the minimum quantity of sulphate of copper ranged between $\frac{1}{2}$ grain and 1*½* grain.

The Magistrate remarked that in the former case the packers of preserved peas said that $1\frac{1}{2}$ grain of sulphate of copper was sufficient to retain the natural colour of a pound bottle of preserved peas. He imposed a fine of 20*s.* and costs.

A case of adulteration of preserved French beans was next investigated. The proportion of sulphate of copper was again $2\frac{1}{2}$ grains to the pound. A fine of 10*s.* and costs was imposed.

ADULTERATED TARTARIC ACID.

AT the Woolwich Police Court, before Mr. Kennedy, on Tuesday, July 19, George Mence Smith, oil and colour man, was summoned under the Sale of Food and Drugs Act by the Woolwich Local Board of Health for having, on May 17 last, sold some tartaric acid not of the nature, substance, and quality demanded by the purchaser. Colonel Hughes, M.P., appeared for the Local Board, and Mr. Blanchard Wontner defended.

There were other summonses dealing with tartaric and citric acids to be heard, and it was agreed that as far as possible the evidence given in this case should rule the others.

Mr. J. Cartey, inspector of the Local Board, said he purchased, on May 17, at Mr. Smith's shop in Beresford Square, Woolwich, $\frac{1}{2}$ lb. of tartaric acid. He told the manager of the shop at the time that he wished it for the

purpose of having it analysed by the public analyst. The acid was divided into three portions and labelled and sealed. One of the portions he delivered to the analyst, and now produced that gentleman's certificate which showed that the acid contained '0026 per cent. of lead, equivalent to '18 grain of lead per lb.

Cross-examined: He was directed by the analyst to purchase the sampler, but not directed by anyone where to get them. The manager of the shop, in reply to his question, said there was not much of the article called for. He asked for 6 oz. of the acid first, and $\frac{1}{2}$ lb. was made up. He was quite certain on that point.

Dr. W. R. Smith, public analyst for Woolwich, said he had written out the certificate produced by the last witness. The quantity of lead found in the sample of the acid submitted to him appeared a small quantity—namely, '18 grain of lead per lb.—but it was a poisonous quantity. It was well known that lead poison was conveyed through drinking-water, and $\frac{1}{24}$ part of a grain in a gallon of water would produce poisonous effects. The important point about the presence of lead in anything which was used for consumption was that it was a cumulative poison, and so far as tartaric acid was concerned it was in very common use in effervescing powders, baking-powders, powder for raising bread, and in making mineral waters. As public analyst, he had had to analyse mineral waters, and had found them to contain lead. The lead probably gained access to the acid by some defective method in the process of manufacture.

Cross-examined: He did not assert that if a man drank on one occasion a gallon of water containing $\frac{1}{24}$ part of a grain that it would injure him. The poison was cumulative, and if a person habitually drank water which was contaminated with lead to that extent it would produce lead-poisoning. The lead mentioned in the British Pharmacopœia was acetate of lead—a very different thing. It was present in the acid either as lead or tartrate of lead, not as acetate. The lead found in the sample was more powerful than the acetate. Acetate of lead was, practically, a harmless sort of lead. He could not tell the smallest quantity of lead known to have poisoned a person. He did not know how much tartaric acid was used in a bottle of lemonade. What he said was that this lead was a foreign ingredient. It might not in that quantity kill a man or produce immediately poisonous results upon him; but lead present in any substance in that proportion, if persevered with, became a very serious danger to health because of its cumulative nature. He could not tell how much lemonade containing tartaric acid a person would have to drink before he had taken '18 grain of lead.

Mr. Kennedy: It is a foreign ingredient not necessary for the tartaric acid.

Mr. Wontner: It is a question whether the defendant can avoid it there.

Mr. Kennedy: He personally cannot, but the question is whether the manufacturer cannot.

Dr. Smith said he had had no experience in the manufacture of tartaric acid, and would be surprised to hear that none but leaden vessels could be used in actual commerce and practice. He had analysed tartaric and citric acids without finding lead. In this particular case the quantity was not a large one.

This was the case for the prosecution.

Dr. John Muter, called for the defence, said he had received a sample of the tartaric acid in question, and on examination found it to be that usually sold as commercial tartaric acid. He agreed with the figures of Dr. Smith, but totally disagreed with the form of the certificate and with its conclusions. As an experienced public analyst he considered that to draw a certificate in that way, calculating so many parts of a grain per lb., was misleading. The article was one of which they did not take pounds. He took 30 grains of tartaric acid as the extreme dose at one time, and the extreme dose would only contain, roughly speaking, $\frac{1}{1500}$ part of a grain of lead—an absolutely ridiculous quantity to his mind. It was in his experience that 8 grains of tartaric acid were used in a half-pint bottle of lemonade. Taking the standard of $\frac{1}{20}$ part of a grain of lead to a gallon of water, spoken of by the previous witness, before they could get that by using this tartaric acid a person would have to drink something like 220 bottles of lemonade a day, or take about fifty seidlitz powders a day, and for the lead to

have a poisonous effect they would have to keep that up. If a person attempted to take the tartaric acid in question freely, the acid would kill him before the lead would. It was very hard to meet with a sample of commercial tartaric acid free from lead. Pure acid could be obtained for scientific purposes, but it was not the article of commerce. It was made in platinum vessels and consequently was very expensive. He had to give 4s. 8d. to 5s. per lb. for it. The article in commerce was never free from lead. Generally there was a minute trace like that in the present case. He did not consider that amount of lead injurious at all.

Cross-examined: It was possible to get pure tartaric acid for scientific purposes, but the plant was too expensive to be used for ordinary commercial purposes. He agreed that lead was a foreign ingredient in the acid, but a man could hardly live long enough to take a sufficient quantity to kill him.

Mr. Kennedy: What proportion of the lead is required to be present to be injurious over the least time?

Witness: You ought to have $\frac{1}{20}$ part of a grain of lead in each dose of tartaric acid—in every 30 grains.

By Mr. Wontner: Lead was used medicinally as acetate of lead, and in this case it was there as the tartrate. He could not see the difference between the one and the other, and considered the action would be the same.

Dr. J. H. Connor, of New Wandsworth, said he had treated many persons suffering from lead colic, in connection with a large white-lead works in Battersea. He considered the quantity of lead present in the tartaric acid in question so infinitesimal as to be quite inert. A person would have to take such an enormous quantity of the acid before any symptom of lead-poisoning would occur that he thought it not worth consideration. It was his opinion that the acid would poison a man before he could get sufficient lead to do any mischief. The dose of acetate of lead in the BP was 2 to 4 grains.

Cross-examined: If he found the quantity of lead mentioned in water, he would advise that something should be done to prevent it from getting there.

Mr. Wontner: I do not think we are going into water.

Mr. Kennedy: I think it is a fair illustration. (To witness.) Do you agree that the poison must be continually used?

Witness: You must not cease using it.

Mr. Wontner: Did you ever know of a case of poisoning by tartaric acid?

Witness: No, never. The same remarks would generally apply to citric acid.

Thomas Bennett (managing director of the firm of Sir J. B. Lawes & Co., Limited) described the manufacture of tartaric acid. Leaden vessels were necessary, as those made of other substances could not possibly stand the action of the acid and the application of heat. There was not enough platinum in the world to make vessels for the tartaric acid that they made in their own works. The acid in question had been supplied by his firm, and was what was known as commercial tartaric acid.

Cross-examined: They looked upon the lead as an unavoidable impurity. Experiments were now going on with a view of getting rid of the lead by a new process. The tartaric acid in question was the best that it had been possible to obtain hitherto.

Mr. Wontner: Then, sir, I have to call your attention to the fourth sub-section of section 6 in the Act. It is one of the provisions under which an offence shall not be deemed to be committed, and reads as follows:—"Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation." In the circumstances was it possible to say that an offence had been committed? The manufacturer of the article had sworn that it was impossible to have a better article; and after the evidence of Dr. Muter could anybody for one moment say this was a case which would come under the Act? The Legislature itself had tried to provide for it.

Mr. Kennedy: That exception which you have read is your strongest point.

Mr. Wontner: The defendant has bought in the best market from the best manufacturer in the world, and he had taken every possible precaution. I ask you, sir, to dismiss the case.

Mr. Kennedy: If I come to the conclusion that this was unavoidably mixed, I must go into the other cases. I shall

adjourn the case for the present to consider the meaning of sub section 4 of section 6.

The case was accordingly adjourned.

A PATENT BEETLE-KILLER.

In the Chancery Division of the High Court of Justice, on July 19, before Mr. Justice Romer, an action was brought by Mr. Vincent Laine to restrain a former employé from infringing a patent for the destruction of kitchen pests, and asking for an account of profits, or damages, and delivery up of all compounds in his possession. Mr. John Cutler appeared for the plaintiff; the defendant was represented by Mr. Abinger.

Mr. Cutler said the question was one of infringement. It was not a very romantic patent, being one for the destruction of blackbeetles, cockroaches, and other suchlike kitchen pests.

Mr. Justice Romer: What do you call "suchlike?" (Laughter.)

Mr. Cutler said that was the term used in the specification. The patent consisted of a compound the ingredients of which were set forth as water, phosphorus, rye flour, onion-juice, tartaric acid, and carrot-juice. The pith and marrow of the invention consisted in the use of phosphorus, rye-flour, and tartaric acid. The phosphorus became highly poisonous upon being turned into hypophosphorous acid, which was produced by the oxidation of the phosphorus. The phosphorus was combined with the flour, which was acted upon by the tartaric acid, the effect being to decompose the flour and turn it into a substance known as glucose, which was a sweet substance, and presumably had the power of attracting beetles and suchlike pests. The onion and carrot juice were put in also for the purpose of attracting the beetles, the one by the smell and the other by its sweetness. The patent was the invention of Leon Ledain, and was assigned to the plaintiff, who found it extremely valuable. The plaintiff manufactured the compound, but did not sell it, his mode of procedure being to obtain contracts for the extermination of these kitchen pests. When a contract was obtained plaintiff's workmen went to the place and put down the compound. In this way the plaintiff built up a large business. The defendant for two years was in the plaintiff's employ, his duty being to mix and apply the compound. In this way the defendant became familiar with the names and residences of the plaintiff's customers, and about April, 1891, plaintiff became aware that defendant was sending round a circular in which he undertook to rid any premises of mice, blackbeetles, and other pests. The plaintiff obtained some of the defendant's compound, which, on analysis, he found to be an infringement of his. Hence the action.

The plaintiff bore out counsel's opening statement.

Cross-examined: Do you know other persons selling paste for killing beetles?—I know of powders, but they are good for nothing—they won't succeed.

They never kill the beetles?—No.

Do you use sugar and red precipitate?—No, but very much onions and carrots. (Laughter.) I paid 140%, and I ought to be protected.

In answer to his Lordship, witness said he never told the defendant what the ingredients that he gave him to mix were.

Mr. Abinger admitted that the defendant carried on a similar business to that of the plaintiff, but denied that the material he used was colourably the same as the plaintiff's.

Mr. Alfred Gordon Salmon, F.I.C., said he had analysed both the compounds, and found them to all intents and purposes similar.

Cross-examined: In the defendant's compound he did not find any beef-tea—(laughter)—but he would not swear there was none. There was no red precipitate or oxide of mercury in it. The essential feature of the plaintiff's patent was the tartaric acid in conjunction with the flour, and the absence of these things from the recipes for the manufacture of phosphorus-paste distinguished them from the plaintiff's.

Mr. Abinger, for the defendant, submitted that the plaintiff had failed, because a person could not be restrained from producing a known result, if it was proved that the compound was not the same as the plaintiff's.

The defendant said in making his compound he used beef-

tea, carrots, turnips, onions, and cabbage, which he prepared like a French soup. (Laughter.) These things were mixed with phosphorus, flour, tartaric acid, and red precipitate.

Cross examined: He was not aware that there was tartaric acid in the plaintiff's compound. It was his own idea to use tartaric acid, to take away the smell of the phosphorus.

Mr. Heald, a chemist, deposed that he had supplied the defendant with ingredients for his compound, including red precipitate.

Mr. Justice Romer granted an injunction restraining the defendant from infringing the plaintiff's patent, and ordered the defendant to pay the costs of the action, holding that he had taken the plaintiff's ingredients (knowingly or not) and added to them something which did not substantially alter the character of the mixture.

THE "B. W. HAIR" LITIGATION.

In the Queen's Bench Division, on Wednesday, the case of *Geddes v. Stephens* came before Mr. Justice Collins and Mr. Justice Gainsford Bruce, sitting as a Divisional Court, upon appeal from the decision of the Master and Judge in Chambers striking out the counter-claim set up by the defendant upon the ground it was substantially the same as a claim set up in a former action and dismissed by Mr. Justice Kekewich with costs. The basis of the counter-claim was that Mr. Stephens was the proprietor of the business of B. W. Hair & Son, which was carried on in Holborn for the sale of catarrh pills and asthmatic-remedies, and that the plaintiff had been wrongfully attempting to get the benefit of the goodwill of that business. The defendant alleged that the plaintiff had used books which belonged to B. W. Hair & Son, and he counter-claimed for a libel said to have been circulated to the effect that Stephens was not the owner of the business of B. W. Hair & Son, and that there was no such business in existence. Their Lordships dismissed the appeal with costs.

TEMPORARY STRUCTURES.

THE proprietor of Parke's Drug Store, Rye Lane, Peckham, was summoned on Tuesday, at the instance of the London County Council, at the Lambeth Police Court, for having erected a movable or temporary wooden structure without having obtained the licence of the Council. Mr. Burton, who appeared for the Council, said the structure consisted of a wooden frame, with glass centre, fixed on the parapet of a shop, and supported by iron rods. One of the surveyors under the County Council produced a plan of the erection. In cross-examination, the witness said he could not say whether this was the first case of the kind brought before a Court. No inhabitant had, so far as he knew, complained of the erection. He believed it was first mentioned by the district surveyor. Mr. Gill, for the defendant, said what was complained of was nothing more than an ordinary sign-board, and contended that it did not come within the section of the Building Act under which these proceedings had been taken. Mr. Hopkins (the magistrate) said it appeared the complainants had found they could not get at the matter under the Signs Act and had fallen back on the Building Act. He dismissed the summons. Mr. Burton asked the Magistrate to grant a case. Mr. Hopkins said he could not do that. Mr. Burton could apply for a mandamus. Mr. Burton said he should decline to do that.

GOODALL, BACKHOUSE & CO. v. THE BIRMINGHAM BREWERY COMPANY (LIMITED).

In the Chancery Division of the High Court of Justice, on July 20, the trial of this action came before Mr. Justice Romer. The action was brought by Mr. W. Powell, the sole surviving partner in the firm of Goodall, Backhouse & Co., Leeds, for an injunction to restrain the defendant company, their servants and agents, from selling or offering for sale, and from passing off or attempting to pass off, and from enabling and inducing others to pass off, sauce, not of the plaintiff's manufacture, as and for the goods of the plaintiff, by the use of labels only colourably differing from the plaintiff's; an injunction to restrain the infringement of plaintiff's

registered trade-mark; an account of profits, or damages; and costs of the action.

The counsel for the plaintiff were Mr. Aston, Q.C., Mr. Lockwood, Q.C., Mr. R. Neville, Q.C., and Mr. J. Cutler; Mr. Fletcher Moulton, Q.C., and Mr. Vernon Smith represented the defendants.

Mr. Aston, Q.C., in opening the case, said that the plaintiffs were a very old firm of wholesale manufacturers of druggists' articles. They employed upwards of 500 people. Mr. Powell had been connected with the firm since 1864. The question for the Court was with reference to one of the chief articles of their manufacture, "Yorkshire Relish." The defendants had put upon the market bottles containing "London Relish," and the question was whether these were dressed up in characters so nearly resembling the plaintiffs' as to be calculated to deceive. This applied to the plaintiffs' "advanced" label. Since 1864 the plaintiff had sold "Yorkshire Relish" to the extent of millions per annum. Numerous attempts had been made to pass off various sauces like "Yorkshire Relish" as and for that article. The label, which was now the plaintiff's trade-mark, was designed in 1864. Between 1864 and 1875 there was a difficulty with reference to the proprietorship of labels and so forth, and Mr. Powell took the precaution to have the design registered at Stationers' Hall, and thus acquired the undisputed right of using the label in question. He afterwards obtained registration. At that time the label was registered in black and white, but by a later Act the mark could be registered in all colours. The purchasers were very largely the working-classes, and the persons sent for it were servants and children, who were not in the habit of paying attention to the printing on the labels, but to its general appearance. Mr. Powell had, consequently, been yearly called upon to defend his rights. From 1877 to 1881 the labels used by the defendants were sombre, from 1881 to 1885 they were a dark blue, but from that date a lighter shade of blue had been used. The plaintiff had offered not to interfere if the defendants would go back to the original colour, but that had not been accepted, and the defendants had gradually approached the plaintiff's label until it got so like the plaintiff's as to be calculated to deceive. Hence the action.

Evidence having been given by the plaintiff,

Mr. Justice Romer asked counsel for the defendants if they insisted on using the light blue?

Mr. Moulton said his clients had no objection to returning to the dark blue label.

Mr. Justice Romer suggested that the defendants should give an undertaking to that effect.

Mr. Moulton said that his case was that they had a very large sale, which had been perfectly open all these years.

Mr. Aston pressed for costs in the event of a settlement.

Mr. Justice Romer could not see his way to that.

Mr. Moulton was willing to give an undertaking not to use any blue—only black or green; but he could not agree to pay the costs.

Mr. Aston hoped his Lordship would not ask the plaintiff to accept terms which would not give him the costs of his being brought into Court, as it had been previously thrown in his teeth that he had entered into arrangements without costs.

Mr. Justice Romer pointed out that the plaintiff could not be prejudiced in any way by not pressing for costs.

Ultimately counsel for the plaintiff agreed to the settlement shadowed forth, leaving the amount of costs with the Court.

Mr. Moulton said he had an exceedingly strong case as to the user of the labels. He did not believe the plaintiff could succeed either upon the trade-mark or the azure form of the label, but he was prepared to give up all rights to the blue because he thought it was better for two large firms not to clash—not because he had not a good case.

By consent, it was then agreed that the defendants should submit to an injunction (without costs) not to use any label with blue upon it, that the plaintiff was not to advertise, but was to be at liberty to refer to these proceedings in any case where the user of the blue was challenged.

A WOMAN'S CHRISTIAN TEMPERANCE UNION at Ware, Mass., have resolved to fight the drug-stores, which in some places, they assert, are more injurious than drink-saloons.

BANKRUPTCY REPORTS.

Re ROBERT SPENCER, late of Gooch Street, Birmingham, Chemist and Druggist.

THIS bankrupt applied, on July 14, to Judge Chalmers, in the Birmingham Bankruptcy Court for his order of discharge. He had had a business at West Bromwich and another at Nottingham. The latter he sold to his assistant Nelson for 600*l*. Nelson traded in Spencer's name, and ultimately left, owing Spencer 150*l*. Then followed claims on Spencer for debts incurred by Nelson. A test-case was tried, and judgment was given against the bankrupt. Bankrupt had also lost by a fire at West Bromwich, when his goods were so damaged that they had to be sold for a small sum. He afterwards took a situation, and subsequently traded in Gooch Street, with money borrowed from his mother on a bill of sale.

The Official Receiver said he had successfully resisted the proofs of certain creditors of Nelson made against the bankrupt's estate. If he succeeded with regard to all of them there might be a dividend of 10*s* in the pound.

His Honour ordered the application to stand over until that matter was finally settled. If he were to deal with the application at that time he should suspend the order of discharge for two years, because it was a very serious matter to allow one person to trade in the name of another.

The application was accordingly adjourned until October.

Re THE SAYDI'S CHALLENGE REMEDIES CO., Liverpool.

At the Liverpool County Court, on Friday last, before His Honour Judge Collier, a motion was heard at the instance of the trustee of the estate of Kate and Edith Mary Sinclair, trading as the Saydi's Challenge Remedies Co., in Byrom Street, Liverpool, to determine whether, at the time of the failure, Edwin Morris, lately practising as a solicitor in Liverpool, was a partner in the concern.

After the case had been argued, his Honour decided that Morris was not a partner in the concern.

Re ALFRED EGBERT WORFOLK, 15 Beauchamp Road, late 23 Galveston Road, Wandsworth, Chemist and Druggist.

THE Official Receiver for the Wandsworth district has issued particulars under the above bankruptcy. The gross liabilities amount to 865*l*. 16*s*. 5*d*., of which 849*l*. 14*s*. 9*d*. is due to unsecured creditors, and 16*l*. 1*s*. 8*d*. to preferential creditors. The assets are:—Cash deposited with solicitor for costs of petition, 13*l*.; stock in trade, cost 18*l*., estimated to produce 4*l*.; trade fixtures, fittings, &c., estimated to produce 1*l*.; furniture valued at 8*l*.; book debts, good, 7*l*. 11*s*., doubtful and bad, 33*l*. 4*s*. 9*d*., estimated to produce 1*l*. 10*s*. Total, 35*l*. 1*s*. The bankrupt states that he commenced business in September 1885, as a chemist and druggist at 193 Brixton Road, S.W., without any capital. In March, 1890, he removed to 87 Ferrier Street, North Street, Wandsworth, where he has traded up to the bankruptcy. He states that in March, 1890, he had 100*l*. capital; that he has personally superintended his business except between June, 1890, to June, 1891, during which period he was prevented by the very serious illness of his wife. Twelve months prior to the receiving order his deficiency was 699*l*. 9*s*. 1*d*. As he was 100*l*. to the good in March, 1890, it would appear that he lost about 700*l*. in that twelve months, while in the last twelve months he has only lost about 130*l*. He attributes his insolvency to bad trade and the long illness of his wife.

THE raisin industry is being gradually developed in Victoria, and promises shortly to be sufficient to supply the requirements of the colony. Extensive planting is going on in various parts of the colony, from the extreme west at Mildura along to the east as far as Wangaratta, the largest plantation being in the well-known Goulburn Valley. In this locality not only has the manufacture of raisins received attention during the last six years, but the products of the current vintage also are now being placed on the market.

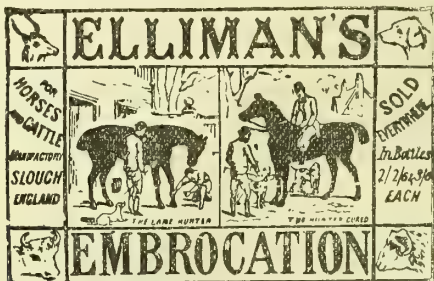
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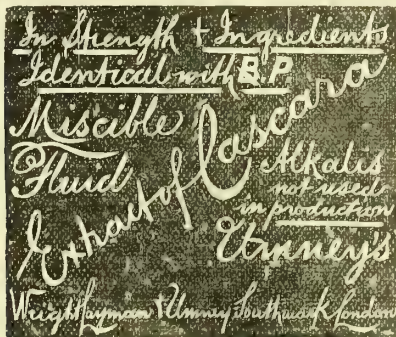


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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LESSONS FROM THE LAW-COURTS.

THE famous author of the *Esprit des Lois* has said something to the effect that there are good laws in every country, but

that the difference between a good Government and a bad one is the way in which those laws are executed. If he had said the converse, that there are bad laws in every country, but that there is nothing much the matter if these are administered discreetly, he would perhaps have been nearer the mark. No political economist can fully justify the congeries of Acts which constitute what are known as the Medicine-stamp Acts. They are relics of old-time legislation, and it is very easy to urge logical arguments against their essence; but if they are administered with something like even-handed justice, there is nothing much to complain of in regard to them. There is, as is well known, a difference of opinion among chemists as to their effects on their business, but it is at least correct to point out that not a few agree with our own view, that on the whole they are rather a protection than an injury to the chemists' trade. A case reported last week offered a good illustration of this argument. It showed the difficulties thrown in the way of a market sweet stuff seller by the operation of the Medicine-stamp Acts when he ventured into the medicated-lozenge business. That, and the remarkable cases we report this week, are evidence of the new system which, as we recently foreshadowed, the Board of Inland Revenue is likely to pursue in the future. We stated that, the medicine-stamp business having been transferred from the Stamp to the Excise Department, prosecutions before magistrates might be expected to replace the familiar foiblescap "invitations to explain" which chemists have complained of so often. Some will regard this alteration as the substitution of scorpions for whips, while others will not be sorry to have the chance of airing their grievances before paying their penalties. In the cases we report this week the chemists do not seem to have particularly suffered from the new system. One gentleman, against whom five summonses were taken out, had to pay 4*l.* 8*s.*, and another who was called upon to answer seventeen summonses, got off for 3*l.* 6*s.* 6*d.*, though, as he employed a solicitor, this was not the total in his case.

The Sale of Food and Drugs Act is an instance of an extremely valuable law which needs the utmost discretion in execution. From the cases disposed of we learn that, in the opinion of the Liverpool magistrate, the proportion of sulphate of copper which may be added to green peas must not exceed 1½ grain per lb. The prosecution of unqualified dealers for selling inferior medicines must be to the benefit of legitimate chemists and druggists if—and only if—the latter are invariably able to prove that their medicines are up to standard. The castor-oil pills containing no castor oil—in respect to which a Yorkshire herbalist has been fined—are very old friends. Several chemists were prosecuted on a similar charge some dozen years ago, and, we believe, were in all cases fined. The effect of those prosecutions was to pretty well stamp out the misnomer.

Much interest is being taken by the London wholesale trade in the prosecution respecting lead in tartaric and citric acids. The case on which the magistrates' decision is pending involves an adulteration of rather less than one-fifth of a grain of metallic lead per lb. of the acid.

Caveat venditor is the moral of the important case reported from the Bloomsbury County Court. According to the decision of Judge Bacon, it is quite possible for a salesman to be too smart. When his advocacy of the goods he has to sell reaches the point of misrepresentation of a sufficiently serious character, it appears that a contract between him and his customer can be avoided.

The litigation between the rival makers of "The Great Welsh Remedy" has provided another illustration of the necessity of adopting a perfectly distinctive name or design in order to get the full benefit of trade-mark registration.

The registration of a label generally furnishes protection to only a vague and undefined extent. Common English phrases, or, for that matter, Welsh phrases either, will not be protected by the courts, no matter how much has been spent in familiarising them in connection with a particular article.

The decision in the beetle-poison case strikes us as rather important. We gather from it that it is possible to get a valid patent for a medicinal or chemical compound, and that the law will regard as an infringement such slight modifications of that mixture as do not interfere substantially with the nature of the compound in question, even though the new maker may complacently dub his alterations "improvements."

THE FUEL OF THE FUTURE.

COAL, peat, and petroleum. Upon these three things the comfort and progress of the civilised world mainly depend. Without one or other of them industry would be at a standstill or we should revert to the days when windmills, running waters, and hand labour ground or wove in slow measure the food and clothing of the people. Chemical industry without coal or its equivalent would almost disappear; so would most of the metallurgical industries, or it would be necessary to devise new methods for the production, by other chemical means, of the materials of which the wheels of civilisation are constructed. There was, therefore, a certain appropriateness in Professor Emerson Reynolds's selection of coal, peat, and petroleum as the subject of his presidential address to the annual meeting of the Society of Chemical Industry on Wednesday. The position of our coal-supply is not critical. Whether the seams available in Britain will hold out for 50 or 250 years, the future only can tell, but that there are limits to the supply is admitted. It is not for the present generations to consider what our successors will do when the limit is reached, and coal becomes a thing of the past. That point, happily, is far off, and we may leave the solution of the problem to posterity. But Professor Reynolds considers that we owe posterity the duty to economise on what coal we have, and not be so prodigal in its use as we have been for a generation or two back. The whole address, therefore, resolved itself into a sermon on economy, which, with the President, means "gasification" of the coal. In the near future he anticipates that the consumption of coal will be adequately controlled. There must be total combustion, consequently abolition of smoke and fogs. Open grates must go, and their place be taken in houses by gas and steam heating. The extension of electric lighting will facilitate this, for it is the present necessity for an illuminating coal-gas which hinders the introduction of a powerful heating-gas. Moreover, the production of illuminating coal-gas becomes increasingly difficult owing to the scarcity of highly bituminous coal. There is a good substitute for the latter in petroleum, which is already used for increasing the illuminating power of the coal and water gas mixture which is partly used in the metropolis. That very fact is an indication of our approaching the limit, and now chemists are anxiously studying petroleum with the view of getting more out of it than has hitherto been taken. Peat, in spite of Professor Reynolds's patriotic mention of it, cannot be regarded as a competitor with petroleum, although it is interesting to know that when burned under certain conditions, it is as good as coal for steam-raising and iron-smelting. But in comparison with coal and peat, petroleum is a quintessence of fuel (liquefied gas, Professor Reynolds calls it), and instead of regarding its liquid form as an objection, we must now consider it to be an advantage. If Professor Reynolds is right in saying that we get the best

out of petroleum by gasifying it, obviously all attempts at solidification of petroleum are temporary expedients which are only necessary to adapt the fuel to existing boilers. Ere long mechanical changes will be made to admit of the petroleum being gasified on the spot, and burned as such for steam-raising and other purposes. That there are great possibilities for petroleum may be admitted, but will the supply last as long as our coal-supply? Professor Reynolds did not definitely reply to that question, and until the various theories regarding the formation of petroleum are reconciled, it is difficult to see how an answer is possible. Coal is a fixed quantity, a product of natural phenomena extending over millions of years in ages past. We cannot put petroleum in the same category, for there is a probability that it is being produced in the bowels of the earth now, and if now, then as long as the earth is habitable. Were we certain of that, the fuel problem would be solved, but it is the uncertainty that is the teasing thing; and if Professor Reynolds' address serves to concentrate attention on petroleum-research, his choice of a somewhat commonplace subject for his presidential address will be amply justified.

AMERICAN PHARMACEUTICAL NEWS.

DEATH OF PROFESSOR BEDFORD.—We have received a cablegram from our American correspondent, dated Crawford House, New Hampshire, July 20, to the following effect:—

Professor P. W. Bedford died to-day while attending the American Pharmaceutical Association meeting at White Mountains.

The gentleman who has thus so suddenly passed away was one of the best-known leaders of American pharmacy, and one with whom *THE CHEMIST AND DRUGGIST* has had many pleasant relations. Mr. Bedford was the editor of the *Pharmaceutical Record* of New York, and for many years he was professor of pharmacy at the New York College of Pharmacy, which position he resigned only a year ago. He was a very active and enthusiastic worker in the American Pharmaceutical Association, of which he has held the Presidency, and was well known to leaders of pharmacy in this country—indeed, few Americans are so well informed as Mr. Bedford was regarding the conditions of English pharmacy, and he showed his interest some years ago by offering, through this journal, prizes for competition amongst English students. We receive the intelligence of our colleague's death with much sorrow. He was a good man, a conscientious pharmacist, and an able journalist.

A CHICAGO "ECONOMICAL" DRUG-STORE has a column ad. in the *Daily Tribune* of that city. These are some gems from it:—

For the overwhelming public patronage of the last four days since our opening we are profoundly grateful. The rush has been so enormous as to run us short on some popular sellers, but our arrangements for procuring stock are such that delays are only temporary, and will not occur in future.

EVERYBODY EXCITED

About the opening of the Economical—especially the retail druggists. Their latest slander is to tell that we are not a real "cut-price drug-store"—that we only cut on a few specialties. In answer here is our second instalment of prices, and the list will be continued until we have gone through our entire stock.

Then follows a short list, from which it may be interesting to quote a few lines:—"Holloway's Ointment (English), 40c.; Jewsbury & Brown's Oriental Tooth-paste, 43c.; Lactopeptine, 1 oz., 70c.; Seidlitz Powders, full weight, 12 in box, 20c.; Quinine pills, 20c. for 100 1-gr. pills, 30c. for 100 2-gr. pills," and so on. Our Prescription Department (says the cutter)

Is the most complete in Chicago, is in charge of five competent registered pharmacists, and is stocked with the standard productions of every noted

firm of manufacturing chemists, foreign and American. No robbery in our Prescription Department. "Popular Prices."

"Our friends the enemy" said we "couldn't get the goods" because we proposed to "cut prices." Well, just look at our overloaded shelves, and see a stock ten times larger than carried by any of the gentlemen who have been making such kind and charitable remarks about us in the daily papers during the past three months. Thanks, fellow-druggists, for all your free advertising. Keep it up, please.

SCIENTIFIC LABELLING.—The New York Legislature is getting very particular about the way things are labelled. A Western chemist offers the following suggestions:—

Pork and Beans.

The contents of this can is as follows:—

Muscular and fatty tissue of <i>Sus scrofa</i>	15 parts
Seeds of <i>Faba vulgaris</i>	60 "
Sodium chloride	2 "
Water (Croton) q.s. to make	100 "

Biogen Tridigitata, the Eradicator of Tired Feelings.

Essentially "a mild distillation" of a fermented infusion of the seeds of *Secale cereale*. Contains—

Ethylic hydrate	55 parts (volume)
Hydrogen oxide	45 "
Tannin, ethers, extractive	Traces.

Dose: From two to six tablespoonfuls in sweetened water, to which the juice of a lemon has been added. Take every two hours or oftener. A powerful adjunct to this remedy is our "Bichloride of Jag."

INDIAN NEWS.

Mr. J. MORGAN PAULL, who has been for twelve years with Messrs. Smith, Stanistreet & Co., has commenced business as a chemist on his own account, under the style of J. Morgan Paull & Co., and has taken a shop at 171 Dhurrumtollah Street, Calcutta.

TREACHER & COMPANY, LIMITED (BOMBAY).—The directors, reporting for the year ending March 31, 1892, regret that, owing to the unfortunate combination of heavy falls in sterling exchange, and the severe and continued local competition, the amount available for distribution is below the average of past years. During the past year, Mr. Tucker having been obliged to leave the country owing to ill health, Mr. William Carter, an old servant of the company, has been entrusted with the management. From the balance available the directors propose to pay a dividend of Rs. 60 per share, applying Rs. 6,122-5-4 to depreciation, leaving a balance of Rs. 3,629-7-10 to be carried forward.

The balance-sheet is as under:—

Liabilities.			Assets.		
	Rs.			Rs.	
Capital	10,00,000		Block	4,76,000	
Reserve funds	6,54,188		Plant	44,767	
Debts	1,18,020		Stock in Trade	7,16,234	
Profit and loss	1,23,629		Book debts	3,04,809	
			Cash, &c.	3,53,977	
Total .. Rs.	18,95,837		Total .. Rs.	18,95,837	

PHOTOGRAPHIC NOTES.

THE PHOTOGRAPHIC CONVENTION.

THE highly successful meeting at Edinburgh has been concluded and it has been decided, on the invitation of the Devon and Cornwall Camera Club, to hold next year's convention at Plymouth. Amongst the papers read was one by Mr. H. P. Robinson, Tunbridge Wells, on

INDIVIDUALITY IN PHOTOGRAPHY.

He said it was a favourite reproach with the opponents of photography as a picture-maker that its results were all alike; it was one of the triumphant proofs of those who would not admit that photography was an art that the unthinking machine made all its products to the same

pattern. He admitted that up to a certain point, and in the hands of the 90 per cent. of the followers of the art who were not artists, the photograph was in the process; but with the others the process took a very subordinate place, and was dominated by the taste, thought, and feeling of an artist when an artist used it with what might fairly be called emotional results. One of the earliest photographers to show genuine art feeling was Rijlander. He died sixteen or seventeen years ago; yet among many thousands of photographs it did not require much experience to recognise a Rijlander. There was nothing in the manipulation to distinguish them, except, perhaps, carelessness; it was the mind of the man that was visible, and they recognised the man beyond the process. The difference between the works of the best photographers and those of the moderately successful could scarcely be due to a scientific cause, for if the truth were known it would be found that the producers of the indifferent pictures had much more scientific knowledge than those who produced the most artistic.

Mr. Arthur Burchett, London, was the contributor of a paper on

PHOTOGRAPHY IN RELATION TO PAINTING.

He said that photography was severely handicapped by the inability of the sensitive plate to render the true tone value of all colours. But even with this defect the result in photography was very close to the true rendering of nature, and would be even more so as photography advanced. Many pictures and photographs were spoiled simply by the artist failing to keep his attention fixed on his principal figure or object, and to keep all his "focus" on it. Many pictures, too, were spoiled by want of contrast of light and shade, for it was a well-known rule in art that, unless in exceptional circumstances, there should be no accessory of it lighter or darker, as the case might be, than the principal object of the picture. He afterwards treated of what he said was the great strength of photography—namely, its imitation of form.

In Miss C. W. Barnes's paper on

AMATEUR PHOTOGRAPHY IN AMERICA

the authoress said that the English had the advantage over Americans at exhibitions of a higher average of work, especially as far better atmospheric effects are gained than in the clearer air of America. She had been often asked if photography was not dying out. She could most positively declare that in America it was constantly growing, and it rested with their great army of amateurs to make their own place in the world.

THE TRAINING OF PHOTOGRAPHERS.

Mr. E. A. Howard Farmer, of the London Polytechnic, in a paper on this matter advocated continuity of study and urged the necessity of technical and art training, pointing out that more care was required in "specialising," and maintaining that evidence of the insufficiency of the present system of photographic training was everywhere present. He believed it was in the spread of a sound and largely extended intermediate or supplementary training to that of the school and the studio that the photographer would not only occupy an impregnable position as a specialist, but would also learn how to utilise to the uttermost advantage the factors and processes at his disposal.

THE COLOUR-SCREEN IN LANDSCAPE PHOTOGRAPHY.

Dr. Mitchell, of Philadelphia, discoursing on the colour-screen, mentioned that during the past two years he had made extended trials for landscape purposes of orthochromatised emulsions, coated on both glass and celluloid films, and during those experiments made frequent use of the colour-screen. The success attending the use of the screen was so marked, and the quality of the work so far superior to the portion in which the screen was omitted, that he was convinced that the colour-screen was an indispensable adjunct for any extended or comprehensive landscape work. For landscape photography the colour-screen employed should generally be of a light yellow shade, except in some special instances when, to obtain particular effects in a landscape, red or reddish-orange screens might be found to be desirable. For ordinary landscape work in close proximity to the subject the use of the colour-screen is unnecessary, unless some special conditions of colour exist.

APPARATUS AT THE PHOTOGRAPHIC CONVENTION.

EVERY year the show of apparatus improves. Edinburgh has quite "cut the record"; there are so many firms in the city and in Glasgow who are manufacturers of photographic apparatus, and dealers in photographic materials, that they of themselves made a good show. Mr. William Hume, of Edinburgh, had a general exhibit, and a particularly fine collection of "Cantilever" and "Nimrod" lanterns, for which he has such a world-wide reputation. Mr. Andrew H. Baird exhibited many novelties, and Messrs. George Mason & Co., of Glasgow, had a large exhibit of their goods; in fact, the firm opened a temporary showroom in Waterloo Place because sufficient space could not be allotted to them in the hall. Messrs. Eastman & Co. had a splendid show, and two of their representatives were busy demonstrating the good qualities of the new gelatino-chloride paper, of which there were on show some splendid finished prints. The company's various pattern "Kodaks" attracted much attention, and the display of enlargements was an exhibition in itself. Messrs. Morgan & Kidd showed some very fine enlargements from small negatives. Messrs. Watson & Sons, George Houghton & Sons, and others had on view a general collection of cameras, lenses, stands, &c. Much interest was taken in the exhibition as a whole.

NEW COMPANIES.

WANGA (LIMITED).—Capital, 2,000*l.*, in 5*l.* shares. Objects: To purchase or acquire the sole right to use the name and trade-mark of Wanga, together with trade-utensils, formulae, &c., belonging to the firm who have had the development of the Wanga remedies for the cure of rheumatisms, aural diseases, and nervous disorders, &c. The first subscribers (who take one share each) are:—E. L. Stevens, Lone Walk, Camberwell, masseuse; O. L. A. Taylor, 10 Mold Street, Oldham, medical agent; A. McHutcheon, 32 Mount Pleasant Street, Greenock, medical agent; J. D. McHutcheon, 32 Mount Pleasant, masseuse; R. Taylor, Market Avenue, Oldham, medicine dealer; J. Leinenweber, 20 Guildford Place, Camberwell, clerk; and A. McKenzie, 14 Lyle Street, Greenock, agent. Registered without articles of association.

PROPRIETARY MEDICINES COMPANY (LIMITED).—Capital, 5,000*l.*, in 1*l.* shares. Objects: To acquire the goodwill of the business of manufacturer and seller of the proprietary medicines known as "Cotna" and "Agncepton," now carried on by Edward Cottam. The first subscribers (who take one share each) are:—W. B. Kingsford, 12 Old Square, Lincoln's Inn, barrister; M. A. Fry, 7 Notting Hill Terrace, accountant; H. Worsley, 22 Leamington Road Villas, W., secretary; H. Worsley, 6 Kensington Mansions, S.W., colonel; R. G. Rawkins, Orchid House, Canonbury, gentleman; W. H. Frith, 29 Sisters Avenue, Clapham Common, S.W., gentleman; and C. E. Mitchell, 3 Copthall Court, E.C., secretary. There shall not be more than five nor less than two directors, and the first are E. Cottam, C. T. Kingsford, and Colonel Worsley. Qualification, 50*l.* Remuneration, 10 per cent. on the net profits, divisible.

ALBRIGHT & WILSON (LIMITED).—Capital, 400,000*l.*, in 100*l.* shares, of which 1,000 are original preference shares, and 3,000 ordinary shares. Objects: To acquire the business and undertaking of manufacturing chemists of Albright & Wilson, at Oldbury, Worcestershire, and to carry on the same. The first subscribers (who take one share each) are:—A. Albright, Oldbury, near Birmingham, chemical manufacturer; J. E. Wilson, Oldbury, chemical manufacturer (chairman); D. A. Albright, Oldbury, chemical manufacturer; George S. Albright, Oldbury, chemical manufacturer; J. W. Wilson, Oldbury, chemical manufacturer; H. L. Wilson, 13 Wheeley's Lane, Birmingham, manufacturing chemist; and J. F. Albright, Mansion House Buildings, London, civil engineer. There shall not be more than nine nor less than three directors, and the first are the above-named gentlemen and G. E. Wilson. Qualification, 2,000*l.* Remuneration, 500*l.*, divisible.

IT STICKETH CLOSER THAN A BROTHER.—Fair Customer: "I sent my maid here for some sticking-plaster, and you gave her a porous plaster!" New Boy: "Yes, 'm. That's the stickiest plaster I know of."

GENERAL ELECTION PORTRAITS.

THE portraits which we now give were received too late for inclusion in the group which we published last week. Mr. J. J. Colman, M.P. for Norwich, is known to



MR. H. C. STEPHENS, M.P.



SIR HENRY COCHRANE.

the trade from his connection with the famous mustard-house; and the name of Sir Henry Cochrane, if not his

features, is known the world over, on account of his connection with Cantrell & Cochrane, the manufacturers of the famous ginger-ale and other aerated waters. Sir Henry contested Dublin as a Unionist. Mr. Stephens is the member for Hornsey, and, in addition to his work as an ink-



MR. J. J. COLMAN, M.P.

maker, he is an ardent experimentalist in chemistry, and has a fine private laboratory at his house in East Finchley.

Our portrait of Mr. Colman is from a photograph by Messrs Russell & Sons. The portraits of Dr. Richardson and Sir John Lubbock, which we published last week, were from photographs by Messrs. Elliot & Fry. We should add to the record that Mr. J. T. Brunner has again been returned for Northwich, and that Mr. Gainsford Bruce has got the judgeship then referred to.

Trade Notes.

MR. HERBERT WADDINGTON has opened a new chemist's shop at 47 New Road, Thornton, Bradford.

MR. J. MONTAGUE CARTER, late senior dispenser at Corbyn's, New Bold Street, has purchased the business of Messrs. W. R. Baker & Co., Seaside Pharmacy, Eastbourne. Messrs. Orridge completed the transfer for both parties.

THE directors of W. B. Fordham & Sons (Limited) have declared an interim dividend for the first half of the current year at the rate of 7½ per cent. per annum, tax free, which has been the uniform rate of interim dividend since the incorporation of the company.

It will be observed that Messrs. Thomas Tyrer & Co., of the Stirling Chemical-works, make this week an opportune announcement, viz., that they have undertaken the manufacture of "Thiocamf," the remarkable disinfectant discovered by Professor Emerson Reynolds, F.R.S., President of the Society of Chemical Industry. "Thiocamf" was one of the disinfectants recommended by the House of Commons Disinfecting Committee for use in the House. It yields by simple exposure gaseous sulphurous anhydride.

Personalities.

MR. J. G. LYON, chemist, has been appointed a Justice of the Peace for the borough of Pontefract.

MR. EDWARD ANDREWS, M.P.S., F.C.S., dispenser to the North-West London Hospital, has been appointed dispenser to St. Mary's Hospital, Paddington, W.

MR. ARTHUR EDWARD EKINS, F.C.S., of St. Albans, has been appointed by the Herts County Council public analyst for Hertfordshire, exclusive of the city of St. Albans. The post was applied for by seventeen candidates.

THE HON. J. I. FELLOWS, Agent-General of New Brunswick Canada, and proprietor of Fellows's syrup of the hypophosphites, has been presented with the freedom of the Merchant Taylors' Company and invested by the Master with the livery of the guild.

PROFESSOR EDWARD SCHAEER, Director of the Pharmaceutical Department of the Confederate Polytechnicum, Zurich, has accepted the position of Director of the Pharmaceutical Institute of Strasburg, vacated by Professor Fückiger's retirement.

MRS. MILES, of the drug stores at Swindon, has been presented by the residents of Scarborough—at which town she had been residing—with a diamond and sapphire ring in recognition of her ability as a vocalist. The presentation was made on behalf of the subscribers by Lady Ida Sitwell, and an illuminate address accompanied the present.

MR. THOMAS HANBURY has presented to the Botanical Institute at Genoa the very rich collection of vascular plants made by the late Professor Willkomm, of Prague. It comprises as many as 14,472 species, the greater number being European or from the adjacent districts of Asia and Africa. It is especially rich in plants of the Spanish peninsula, and includes most of Willkomm's original type-specimens.

MR. WILLIAM SAUNDERS, M.P., will take the chair at the lecture on the "Single Tax," which Mr. S. M. Burroughs is to give at St. James's Hall this (Friday) evening at 8 P.M., under the auspices of the Balloon Society. Mr. Burroughs tells us he will be glad to see some trade friends on the occasion. Complimentary tickets can be had at the doors. On Wednesday evening Mr. Burroughs entertained a party of between thirty and forty of his Dartford political friends to dinner at the National Liberal Club. Mr. Jeremiah Lyor, the defeated Liberal candidate, was among the guests, and was warmly congratulated on his gallant though unsuccessful fight.

THERE was a good representation of pharmacy at St. George's, Bloomsbury, last Thursday, when Mr. John C. Umney was united in the bonds of matrimony to Miss Constance Ellen Carter. Mr. J. Bendal, the eminent organist of the Albert Hall, provided a rare treat for the assembly in the church by performing on the organ the Bridal March from "Lohengrin," Mendelssohn's Wedding March, and other well-selected music. Mr. W. F. Umney, M.B., of Bethlehem Hospital, eldest brother of the bridegroom, was "best man," and the married pair were greeted with a warm cheer from the students as their carriage rounded the North-Western cape of Bloom-bury Square on the way to the bride's home. Mrs. Carter's "At Home" at 31 Bedford Square that afternoon was very crowded. Among the guests were Mr. and Mrs. Cartwright, Mr. and Mrs. Martindale, and several of the bridegroom's contemporary students at Bloomsbury Square some years since. The presents were very numerous and valuable. Among them was a handsome and massive dining-room clock, the gift of the employés of Messrs. Wright, Layman & Umney, in which firm the bridegroom is a partner. Everyone in the firm's employment contributed to this gift, and joined in hearty good wishes for the prosperity and happiness of the young pharmacist, who, as we all know, has had the inestimable advantage of starting his career with a much-honoured name, but who has shown that he does not intend to rely on that exclusively.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BLACK—LEACH.—At St. Andrew's Church, Aberdeen, on July 19, by the Rev. J. Boyd, Robert Black, chemist, to Isabella McPherson, daughter of the late John Leach, Liverpool.

JENNINGS—COLCLOUGH.—On July 16, at St. Augustine's, Honor Oak, by the Rev. A. F. Ryder Bird, Thomas Jennings, jun., of Phantom House, Newmarket, to Ada Frances, daughter of Mr. William Colclough, of The Manor, Honor Oak Road, Kent, and of Messrs. Treacher & Co. (Limited).

KELLETT—BARCLAY.—On July 14, at Moseley, by the Rev. F. Kellett (father of the bridegroom), assisted by the Rev. W. Wilson, of Manchester, Alfred F. Kellett, M.B., B.S. (Cantab) of Lewisham Road, Lewisham, S.E., to Margaret Eleanor (Nellie), second daughter of Mr. Thomas Barclay, of Arclhife, Moseley, Birmingham.

LEMMON—CRIBB.—On July 13, at St. Paul's, Thornton Heath, by the Rev. J. Hunt, Eric Lemmon, pharmaceutical chemist, of Exeter, to Harriette Cribb, of Thornton Heath.

STENSON—STEVENS.—On July 9, at St. Martin's Church, Gospel Oak, Mr. G. R. Stenson, assistant surveyor of taxes in the Holborn district, to Miss Rosamond Josephine Stevens, second daughter of Mr. P. A. Stevens, chemist and druggist, Mansfield Road, London, N.W.

UMNEY—CARTER.—On July 14, at St. George's, Bloomsbury, by the Rev. Corrie Jackson, M.A., Chaplain of the Foundling Hospital, John Charles, second son of Charles Umney, of Eardley House, Sydenham, and Southwark, S.E., to Constance Ellen, fourth daughter of the late John Sloane Carter, of 31 Bedford Square, W.C., and Red Lion Buildings, Giltspur Street, E.C.

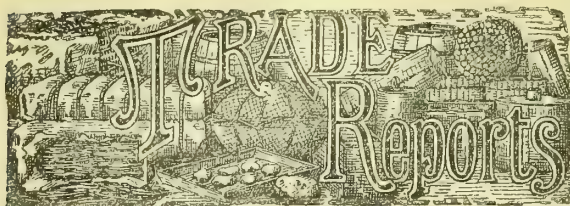
WILLIAMS—JOHNSON.—On July 16, at St. Andrew's, Wells Street, W., by the Rev. W. F. W. Torre, vicar of Northfleet, W. Lloyd Williams, A.I.C., pharmaceutical chemist, Dartford, to Alice, fifth daughter of the late Mr. Robert Johnson, of Fulham, S.W.

DEATHS.

BALL.—On July 1, William Ball, chemist and druggist, of Russell Street, Landport, Portsmouth. Aged 73.

FULLER.—The American drug-trade has lost one of its most prominent representatives in the person of Mr. Henry Weld Fuller, who died on June 23 last, at his home in New York State at the age of 61. Mr. Fuller came of an old Puritan family, and traced his descent in a direct line to one of the *Mayflower* immigrants. He was born in Augusta, in the State of Maine, on April 7, 1831, and educated at Bowdoin College, where he gave particular attention to chemistry. In 1852 he married Sarah R. Ladd, who had earned some reputation as an author, and shortly afterwards purchased the drug-business of her brother, George W. Ladd, at Bangor, Maine. Five years later he removed to Chicago, where he entered the drug firm of Fuller & Finch. At the time of the great fire the firm was changed to Fuller & Fuller, and he continued to take an active part in the management of its affairs until 1886, when ill-health compelled his retirement. Afterwards, however, Mr. Fuller's health improved so much that he again entered business, and became connected with the New York Quinine and Chemical Works. But ill-health again necessitated his retirement in 1888, when he went to live in the pretty suburban town of New Rochelle, in Westchester County, New York. Mr. Fuller was a member of a number of learned and scientific societies, and was President of the Illinois State Microscopical Society for several years. Although a successful business man, the greater part of his attention was devoted to literature. He was, in fact, the first of his family for over two hundred years to engage in mercantile business, his ancestors being lawyers, judges, and clergymen. Of his writings little is yet published. They are chiefly works on literature and on theology, and included in the latter class is a complete set of Bible studies.

GILL.—On Saturday, July 9, Charles K. Gill, chemist and druggist, of 56 Grayshott Road, Lavender Hill, Wandsworth.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., July 21.

The London Markets.

ACID (CARBOLIC).—Carbolic acid is almost the only article which has created any stir this week. A short time ago heavy orders for it were sent here from the Continent, where the output is quite insufficient to cope with even the ordinary demands, and where the consumption has increased enormously since the rumoured approach of the cholera. The demand is sudden, and is all for the summer months; and as the article had long been in an extremely neglected condition, and several manufacturers had stopped working their plant, a considerable rise has been the result. The business done has principally been in liquid acid. Liquid 90-per-cent., which a few weeks ago sold at 8½d., now costs 1s. 3d. per gallon at least; 50-per-cent. is quoted at 28s. 6d.; and 25-per-cent. at 12s. 3d. per 40-gallon barrel. Crystals are held at 4½d. to 5d. for 34-35° (perhaps 4½d. might still buy), and at about 1d. per lb. more for 39-40° in bulk.

ACID (CITRIC).—The market shows no improvement whatever—1s. 4½d. to 1s. 5d. per lb. is still the quotation, according to brand, and for juice 18½d. 15s. f.o.b., is talked of. The prospects of a turn in the position during the summer season appear to be lessening daily.

ACID (SALICYLIC).—Powder is now quoted at 4s. 9d. to 5s. per lb.; crystals are 6d. per lb. dearer.

ACID (TARTARIC).—Very sluggish and dull of sale. The present quotations run from 11½d. to 11¾d. per lb., according to brand, but there is next to no business doing.

ACONITE.—Twenty bags small Japanese root, which have been repeatedly offered, were again bought in to-day at 25s. per cwt., which is a good deal more than buyers would give.

ALCOHOL.—Still declining in value. Best German potato spirit may now be had at 9½d. per proof gallon, c.i.f. terms.

ALOES.—At to-day's auctions 201 packages *Curaçao* aloes were bought in. They were all of common quality, and the owners refused a bid of 10s. 6d. per cwt. for dark livery. Of 84 gourds 10 were sold at 40s. per cwt. for fair brown. Fourteen cases Cape aloes were mostly sold at 16s. to 17s. 6d. for drossy or soft, and 19s. per cwt. for fair seconds. Fifteen casks brown, rather soft, *Socotrine*, of fair flavour, were bought in, an offer of 97s. 6d. not being acceptable.

ANISE.—Twenty bags Russian anise were bought in at 19s. per cwt. to-day.

ANNATTO-SEEDS.—Of 35 bags West Indian offered at to-day's auctions, 3 sold comparatively cheaply, at 2½d. for fair, rather darkish, to 3d. per lb. for good bright seed.

ARECA NUTS.—Fifteen bags of fair quality were bought in at 32s. per cwt. at the auctions to-day. There is not much offering.

BALSAM (COPAIBA).—A few parcels of Maranham balsam were placed on sale, but all bought in, 1s. 8½d. per lb. being

asked for fair, somewhat cloudy, Maranham. A dark, thick balsam from the African West Coast was bought in at 9d. per lb.; there were no bids at 2d. or 4d. per lb. A parcel of 24 tins from Bahia sold with good competition at 1s. 7d. to 1s. 7½d. for fair pale and yellow, and from 1s. 3d. to 1s. 5d. for rather reddish and brown.

BUCHU.—In small supply to-day, but without any demand. Five bales small round, rather yellow, leaves were bought in at 4d., which is the price, whereas 3½d. was the highest limit offered.

CALABAR BEANS.—The few lots shown at auction are held at from 4d. to 5d. per lb., which is fully double the Liverpool price.

CALUMBA.—Stocks are rather small and holders are very firm, but the demand remains exceedingly slack. At to-day's auctions a bid of 25s. was refused for some good pale washed root, which the owner bought in at the somewhat extravagant price of 70s. per cwt.

CAMPHOR (CRUDE).—A few days ago some further sales of Japan camphor, May-June shipment, at 17s. 6d. per cwt. were reported. July-August shipment, which was offering at 115s., is not now obtainable under 120s., and the tone of the market seems a little firmer.

CAMPHOR (REFINED).—At auction to-day, 3 cases fair quality Japan refined squares were bought in at 1s. 6d. per lb.

CANNABIS INDICA.—The arrivals of this drug have been very heavy recently. Last week the *Balmoral Castle* brought 168 packages from Bombay. For twenty bags good small greenish but rather dusty tops a bid of 3d. per lb. was refused, 3½d. per lb. being the price. For seventy Robbins grey tops, very stalky, 3¾d. per lb. is asked.

CARDAMOMS.—In small supply. Very little sold, but for good quality rather high prices were paid. Altogether 113 packages were offered, of which about 34 sold as follows: *Ceylon Mysore*, medium size, long and round mixed, fair yellow colour, 2s. 5d.; medium to bold brown, 1s. 10d.; smaller, rather brown and shelly, 1s. 1d. to 1s. 2d. per lb. *Seeds:* Fair to good quality Ceylon and Indian, 1s. 4d. to 1s. 5d. per lb.; fair round bright Mangalore are held for 2s. 3d. to 2s. 4d. per lb.

CASCARA SAGRADA.—A parcel of 30 bags fair but rather small and quilly was bought in at 25s. 6d. per cwt.

CASCABILLA.—Of a new parcel of 50 bags offered to-day 42 sold at rather better prices; fair quilly and silvery, 35s.; rather ordinary thin to medium, 22s. to 28s.; dull and damaged from 14s. to 20s. 6d. per cwt.

CHAMOMILES.—The first samples of new Belgian chamomiles have now come to hand; they show a nice white colour but the flowers are smaller than they ever have been known before, and the crop appears to be of small extent. The first shipments are expected in the beginning of August, and the price asked now is 6l. per cwt.

CINCHONA.—Further particulars of the Amsterdam cinchona auctions, held on July 14, show that 4,730 kilos. quinine sulphate (in the bark) were sold on that occasion, while 7,903 kilos. remained unsold. A languid feeling prevailed. The demand for druggists' bark was exceedingly slack, and only a few lots sold at low prices. The next sales will be held on August 25. The richest parcel offered in sale was one of 171 bales Ledger stem chips (Government bark), analysing 834 per cent. quinine sulphate. It sold at 8½d. to 9½d. per lb. Tuesday's auctions are not likely to be heavy. Up to the present only 820 packages have been declared, mostly of East Indian growth.

CIVET.—Five horns fair quality and flavour were bought in to-day at 6s. 9d. per oz.

COCAINE.—*Hydrochlorate* is very firm at 17s. 6d. to 18s. per oz.

COCA-LEAVES.—Good South American leaves were on offer to-day; but there was a parcel of 4 bales small rather brown leaves of musty flavour of the variety which used to be common a few years ago, but is seldom seen now; they were bought in at 7d. per lb.

COCCULUS INDICUS.—A parcel of 159 bags was bought in at 9s. 6d. per cwt.; a bid of 8s. 6d. would probably be accepted.

COPPER (SULPHATE).—Prices are easier. Mint on the spot may now be had at 14l. 15s., and in Liverpool the quotation is 15l. to 15l. 5s. f.o.b. on the spot, and 15l. 10s. f.o.b. for future delivery.

CREAM OF TARTAR.—The market remains very dull; best white French crystals may be had at 85s. to 85s. 6d.; powder at 86s. 6d. per cwt.

CUBEBS.—This was one of the few articles which at to-day's auctions showed a considerable alteration in value, a parcel of 55 bags brown and dark-coloured berries, of mace odour, not stalky, just imported from Batavia, being sold at 6l. 10s. per cwt., which is a decline of fully 30s. For one bag of dust an offer of 70s. was refused.

CUMIN SEED.—*Malta* seed is held for 40s. per cwt., which is considerably dearer, but at to-day's auctions no demand was manifested for it, and 49 bags were bought in without even obtaining a bid. Another lot of *East Indian* was also bought in at 22s. per cwt.; 8 bags good *Malta* were also bought in at 36s. per cwt.

DILL SEED.—Of 40 bags of fair *East Indian* quality, rather mixed with straw, one-half sold at 11s. per cwt., subject to approval.

DRAGON'S BLOOD.—The rather large quantity of 25 boxes was shown at to-day's auctions; only 9 of them sold, at pretty steady prices, namely—6l. 5s. to 6l. 7s. 6d. for good bright fiery-coloured soft lump, and 90s. for dull-coloured ditto.

FENNEL SEED.—A small parcel from Bombay sold very cheaply at 12s. per cwt., subject to approval.

GALLS (TURKEY).—The following are the present quotations (all more or less nominal in the absence of business) for Bassorah galls:—Good to fine blue, 60s. to 65s.; green, 50s. to 55s.; and white, 42s. to 50s. per cwt.

GAMBOGE.—In spite of the larger quantity offered to-day—namely, 26 cases—the prices are well kept up, and with a fair demand. Fourteen packages sold at 12l. 15s. for partly blocky and run pipe of fair fracture, somewhat long mixed; 12l. 2s. 6d. for very small broken pipe of rather ricey fracture; and from 10l. 10s. to 11l. 5s. for pickings. For a parcel of good bright partly blocky pipe an offer of 13l. 7s. 6d. was declined.

GLYCERINE.—Prices have now fallen to an exceedingly low figure. Agents for German manufacturers are offering double distilled, s.g. 1.260, at 43s. per cwt. for quantities, and even that price could probably be shaded.

GUM ARABIC.—*Persian* gum, which has been exceedingly neglected and was practically nominal in price, is held for much higher rates now. The importers talk of 35s. per cwt. A few packages *Australian* gum in partly-frosted drop, were disposed of at 22s. to 26s. per cwt. There was a nice parcel of *Cape* gum shown to-day, consisting of 38 bags, of which 11 sold at good prices. For good pale soft sorts 6l. 5s. was paid; while yellow mixed, but rather small but pale sorts, ranged from 60s. to 85s.; for good pale soft siftings, 67s. 6d. was refused.

GUM BDILLIUM.—Five barrels blocky orange-coloured gum from Bombay were bought in at 30s. per cwt.

GUM BENZOIN.—In very small supply. *Siam* gum was altogether wanting. Of *Palembang*, 59 cases were shown; they are held for 40s. for good bright quality. Of 73 cases *Sumatra* 20 sold as follows:—Very fine seconds, small to bold white almonds, very little false-packed, 7l. to 7l. 2s. 6d.; fair seconds, almondy certes, partly old in fracture and more or less false-packed, from 5l. 12s. 6d. to 6l. per cwt.

GUM ELEMI.—A new parcel of 93 cases is expected, but was not landed in time to be offered to-day. Ten cases of ordinary *Manila*, of good flavour but very dirty, were bought in; there were no bids even at 5s. per cwt.

GUM KINO is very firmly held, and very little can be found. At auction to-day none was offered. The quotation for fair grain is 65s. to 70s. per cwt.

GUM MYRRH.—Very firmly held and in small supply; fair

picked was bought in at 8l. 10s. per cwt. Four barrels dull *Aden* picked sold at 97s. 6d. per cwt., subject to approval to-day.

HONEY.—*Jamaica* was represented to-day by 50 barrels, all of which sold with good competition at rather lower prices. A few lots of exceptionally fine bright orange liquid brought from 28s. to 33s.; good amber, but rather dark liquid, from 27s. 6d. down to 24s. 6d. per cwt. Several parcels of *Australian* honey were also shown, but no sales were effected. Sales of *Californian* honey are reported from Liverpool at 40s. to 42s. 6d. per cwt. The market keeps quiet.

IPÊCACUANHA.—Of 84 packages *Rio* 56 were sold to-day; the highest and the lowest prices are almost exactly those of the last sales, but medium qualities are generally from 2d. to 3d. per lb. cheaper. With only one or two exceptions, all the root offered was more or less woody and stalky. The following prices were paid: Good bright annulated sound, 7s. 2d.; thin and woody to fair, but sound, from 5s. 7d. to 6s. 2d.; damages, from 5s. 6d. to 6s. per lb. Of 21 packages *Carthagena*, only 4 sold at 4s. per lb.; these were all mouldy, woody, and generally undesirable.

JABORANDI-LEAVES are becoming exceedingly scarce. At auction to-day one bale of very stalky brown leaves was bought in. Two bales fair greenish, but somewhat broken leaves, were bought in at 1s. per lb.

JALAP.—Privately, good *Vera Cruz* is still held at 1s. 6d. per lb. and nothing is to be had for less than that. At the auctions a small lot of dull pale split bulb were bought in at 1s. 9d. nominally, an offer of 1s. being refused.

KAMALA.—Fair sifted *East Indian* kamala may now be had at 7d. per lb., but holders are unable to make progress at that figure.

LEAD (ACETATE).—Best foreign white is held for 26s. to 26s. 6d.; brown at 16s. 6d. to 17s. per cwt. c.i.f. U.K. ports.

MANDRAKE-ROOT.—One bale of 22 lbs. only very thin cut root sold at 20s. per cwt.

MUSK.—The market is exceedingly flat, and sales are difficult to effect. Of about 24 tins *Tonquin* pods, first pile, offered to-day, only 2 were sold at 75s. per oz. for very fine small to bold blue-skin pods well-trimmed, and at 47s. per oz. for old-fashioned well-trimmed but somewhat damp pods. Two caddies third-pile pods, fair appearance but damp and adulterated, brought 20s. 6d. to 21s. per oz.

NUX VOMICA.—A parcel of 273 bags small to medium brownish from Madras was bought in at 9s. 9d. per cwt. to-day.

OIL (CASTOR).—Heavy arrivals in Liverpool have somewhat demoralised the market there which, however, closes with more firmness, at 2 $\frac{11}{16}$ d. for first and 2 $\frac{3}{16}$ d. per lb. for second-pressure French. Calcutta seconds are selling at 2 $\frac{1}{2}$ d. per lb. In London fine Calcutta firsts are quoted at 3d. to 3 $\frac{1}{4}$ d. per lb. We hear from Calcutta, under date of June 21, that prices of oil have advanced because of the difficulty experienced in bleaching the oil during the rainy weather. Fine qualities especially are difficult to prepare, and higher prices are generally asked. Seed, on the other hand, is rather easier, as the oil-crushers are unable to work much of it under the circumstances described. At to-day's auctions 2 $\frac{3}{4}$ d. per lb. was refused for good Calcutta seconds, 100 cases of which are held at 2 $\frac{1}{8}$ d. per lb.

OIL (OLIVE).—The London stock of oil of most descriptions is small, but as there is scarcely any demand on the part of buyers prices remain nominal. In Liverpool also the market remains very dull, but full prices must be paid for any parcels purchased. In Italy prices of oil are generally dearer, and the reports of the growing crop are becoming less favourable. In Spain and Sicily prices have risen also, the fruit being reported damaged by hot weather.

OPIMUM.—"During the last few days," writes our *Smyrna* correspondent, under date of July 16, "15 cases of current talequale were sold from 6s. 2d. to 6s. 4d., according to quality. Old selected material of the crop of 1890 is held for 6s. 5d. per lb., f.o.b. Hitherto nothing has been done in the new drug. Buyers are offering 5s. 11d., but for the present holders refuse to sell talequale opium at this price. The arrivals to date of this year's crop amount to 567 baskets

against 634 at the same time last year. We understand that the Persian crop will be small this year, and this, if correct, may have some effect in maintaining the value of Turkey opium at about our present quotations for some time to come." There has been some demand in London for *Persian* opium, of which sales have been made at 8s. 6d. per lb. this week, but in *Turkey* opium no business has transpired.

ORRIS.—Twelve bags Florentine orris, good bright root, are held for 112s. 6d. per cwt., while 4 cwt. of "orris powder" was bought in at 75s. per cwt.

QUICKSILVER is quiet, but the price is well maintained. The importers want 7l. 2s. 6d. per bottle, but second-hand holders are offering at 6l. 18s. 6d. per bottle.

QUINCE-SEED.—Three barrels good seed from Lisbon sold to-day at 6½d. per lb. For 10 bags from the Cape 8½d. is asked.

QUININE has been a dead letter this week. There are said to be sellers of German in bulk at 8½d. per oz., but we hear that a broker trying to buy at that price found that nothing was to be had below 8¾d. per oz.

RHUBARB.—Ninety-two cases were offered to-day, of which about one-third sold at full prices for high-dried, but other kinds were rather dull of sale. *Shensi*: Medium to bold good coat, three-fourths pinky, one-fourth dull fracture, round, 2s. 9d.; small ditto, 1s. 8d. to 2s. per lb.; small good druggists' root, even fracture, sold at 2s.; rough ditto, 1s. 8d.; and small at 1s. 5d. per lb.; small flat root, three-fourths pinky fracture, one-fourth grey, rather spongy, brought 1s. 6d.; ordinary round and flat rough pickings, 1s. 1d. to 1s. per lb. *Canton*: Good coat, medium to bold, three-fourths pinky, one-fourth dark fracture, round, 1s. 3d. per lb. *High-dried*: Small to medium fair cut even, pinky fracture, flat 1s. 5d.; rather ordinary, and without colour, from 10½d. to 9¾d. per lb.

SARSAPARILLA.—There has been an arrival of 67 bales from Colon, Central America, by the *Medway* this week. The whole of this supply proved to be genuine grey Jamaica root, and, with our stock of this variety thus reinforced, it was scarcely expected that prices would be able to keep their level. They did so, nevertheless, and the 71 bales grey *Jamaica* placed on sale to-day were all sold, as follows:—Sound, 1s. 4d. to 1s. 5d.; damages, from 1s. 3d. down to 10d. per lb. Fair to good native *Jamaica* realised 1s. 1d. to 1s. 3d.; common and discoloured, 8d. per lb.

SENNA.—*Alexandrian* was not sold at the auctions; 1s. is wanted for fair pods, and from 8d. to 8½d. for small to medium green leaf. Of *Tinnevelly* senna only a few second-hand lots were offered, which excited no attention. Good senna is very scarce, and whenever a bale of it is offered it brings high prices. Fair medium, somewhat yellowish, leaf realised 3¾d. to 4d.; ordinary specky and dull, 1½d. to 1¾d. per lb.

SHELLAC.—Last week the market closed exceedingly firm, with sales of TN orange lac for October delivery at 83s. per cwt. At auction on Tuesday the small quantity of 224 cases was offered, of which the bulk sold at steady prices, with an occasional slight advance on orange—viz., 84s. to 85s. for good bright pale orange, unworked; 76s. to 78s. for blocky to rather ordinary reddish seconds; 78s. for fair curly bronze, unworked; and 74s. for ordinary livery seconds; ordinary resinous second unworked *button* lac sold at 72s. to 74s. per cwt. The speculative market keeps firm, with fairly large sales of orange TN at 83s. for August, 82s. 6d. to 83s. for October, and 82s. 6d. for November. The demand has emanated from continental as well as from British buyers. The speculative market closed dull and weaker, and August TN (which has sold at 83s.) is now being offered at 82s. per cwt. For November delivery 200 cases have been sold at 81s. per cwt.

SOY.—*China* soy is exceedingly dull of sale; small transactions are reported at the low price of 1s. 1½d. per gallon.

SUGAR OF MILK.—Good white powder or crystals are offering at 62s. 6d. to 61s. per cwt.

TAMARINDS showed some improvement in position at the auctions yesterday, when 50 barrels of new *Barbados* fruit sold at 10s. per cwt. That, however, is still a very low price.

THYMOL crystals are offering at 11s. 6d. per lb.

TURMERIC.—With smaller supplies the market continues to harden. For *Cochin* bulbs 8s. 6d. per cwt. has been paid, and fair *Bengal* cannot now be had under 20s. per cwt., while bright *Madras* finger, mixed with bulb, has realised from 26s. to 27s. per cwt. In Calcutta, on June 28, the price had advanced considerably owing to the smallness of the supply, coupled with the increased demand, both for home use and for export.

VANILLA.—The small quantity at auction to-day sold at very full to rather steadier prices, good chocolate, 7 to 8 inches, 13s. to 14s.; medium brownish, 5½ to 8½ inches, 6s. 3d. to 10s. 6d.; ordinary foxey and low, from 6s. 6d. downwards. It is stated on apparently good authority that the yield of vanilla in the islands of the Indian Ocean will this season be only about one-half of last year's. The figures are given as follows:—

	1892-93	1891-92
	Ko.	Ko.
Bourbon	68,000	87,000
Seychelles	8,000	45,000
Mauritius	7,000	16,000
	83,000	148,000

The planters expect to see a rise in price of from 25 to 30 per cent., and are confident that the low values of the early part of this year cannot recur for many seasons to come.

WAX (BEES).—*Jamaica* finds a steady sale, but without alteration in price. Good to fine bright orange realises 7l. 2s. 6d. to 7l. 5s.; rather grey and reddish mixed from 6l. 17s. 6d. to 7l. per cwt. Some fair bright *Australian* wax, of mixed colours, sold at 6l. 10s.; and for bleached *East Indian* (sold without reserve) 6l. 1s. 6d. was paid for white and 5l. 17s. 6d. for yellow.

WAX (CARNAUBA).—In Liverpool the market is firm for good kinds, and higher prices have been paid for ordinary grades. Business is reported at 35s. per cwt. for ordinary grey, and at 52s. 6d. per cwt. for good yellow wax.

THE LIVERPOOL MARKET.

ACID (CARBOLIC).—There are market inquiries for export, owing to the prevalence of cholera on the Continent.

BALSAM (COPAIBA).—*Maranham* is quoted at 1s. 8d. to 1s. 9d. per lb.

CANARY-SEED.—Considerable sales up to 49s. per cwt have been made. Some parcels are held at higher figures.

OIL (CASTOR).—All cheap parcels of East Indian oil offering ex quay have been cleared, and market value is firm at 2½d. per lb.

TONQUIN BEANS.—Sales of ordinary *Pará*, at 1s. 3d. to 1s. 4d. per lb. Nothing is now offering under 1s. 9d. to 2s. per lb.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, July 21.

THE arrivals of new-crop opium until this date amount to 700 baskets, against 750 baskets at the corresponding date of last year. Fifteen more cases of old current Talequale have been sold this week at steady prices—viz., 6s. 2d. to 6s. 4d. per lb. f.o.b. Smyrna.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Chemists' Assistants' Union.

SIR,—I believe the proposed Assistants' Union would be the best possible thing for the trade generally. If they work together, the assistants of the present day could do almost anything. As an apprentice and assistant I had to work terribly long hours, so now, as an employer, I shall be glad so subscribe a little annually to the proposed union.

Yours truly,

WILTS. (75/44.)

74/55. "Æneas" replies, "in haste," he says, and with some asperity to his critics. We have let this discussion proceed, in the hope that some practical good might result. If it is to be only an assistants' debate we are sorry, but as such the rule of only speaking once must be observed.

SIR,—Chemists' assistants are deeply indebted to Mr. R. Wright for his kind offer of assistance. Following his lead, I would say that I shall be very glad to co-operate with any of my fellow-assistants with a view to holding a meeting in London to discuss the desirability of forming a union.

I shall be pleased to hear from any who approve of the idea.

Yours sincerely,

22 Brook Street, London, W.,
July 17.

W. E. MORGAN.

A Trade Society.

SIR,—I hope the excellent suggestions in Mr. C. E. Pickering's letter will not have been made in vain, and that we may have once again a representative trade society. Let those who are able by position and experience take the first steps. There will be no lack of subscribers. It is evident that the Pharmaceutical Society's spasmodic actions against illegal trading will be very few and far between, and will be no check on the numerous parasites who live upon us.

Here, in the second city of the Empire, there are many branch shops in charge of unqualified men, and drug-stores have a happy time. No one troubles; even the representative of the Pharmaceutical Society is content to quietly sit still whilst a grocer sells poisons within twenty yards of his shop. What can we hope from such? Let us look to ourselves and help ourselves.

Would you kindly undertake to receive post-cards from those willing to join? By that means we could know the feeling of the trade.

Yours truly,

Liverpool.

NUNC AUT NUNQUAM. (77/23)

Chemists' Assistants and Long Hours.

SIR,—I note the excellent suggestion in your Editorial that the services of chemists' assistants should be "standardised" (like other crude products), and thus raised out of the indefinite "give-and-take" position of domestic and mental service.

From my experience of good "going" dispensing businesses, it seems to me that a system of "relays" would be the only possible and satisfactory one for reduction of hours.

Early closing (actual, not nominal) in large towns seems contrary to the *raison d'être* of the practice of pharmacy.

By inference, your correspondent "Æneas" pays chemists' assistants a high compliment—they must be (with the possible exception of tram-conductors) the best people alive—having no opportunity to be otherwise.

E. D. (76/14.)

The Indoor System.

SIR,—Let every assistant ask himself, "Why do chemists usually require assistants to live indoors? Would they have the trouble of our living indoors if it were not a direct gain to them?" Surely they are not acting solely for the assistants' benefit and are keeping them at a loss to themselves. I say refuse all indoor situations—then you will get a few hours of well-earned liberty. It is not liberty when the day's work is ended to go either upstairs or in another street, wherever your master may live, and then to feel yourself an interloper about the house, treated only as a paid servant. My lot was only fourteen hours a day, sixteen on Saturdays, and three on Sunday; that was all! But I never complained, and often wished the days were longer, so as to finish the work then in hand! Then, when out of shop, I forgot business altogether, whether reading, singing, or smoking till the early hours of the morning. I felt a free man till in the shop again next day.

Yours faithfully,

July 14.

PIL. FREEDOM. (73/56.)

English Assistants in Switzerland.

SIR,—I am not overfond of correspondence, but the letter from Mr. Hill in your last week's issue seems to give the impression that all we continental assistants dwell in the Utopia of good pay and short hours which he describes. Since I have been out I have met a lot of *confrères*, but never have I met with one earning 400*fr.* a month. Perhaps there may be one or two in Paris. As for myself, I have been slaving away for seventy-four hours every week for the last eighteen months, and have only now attained the minimum salary he quotes, and do not see much prospect of material advance. I know those who work for from 75*fr.* to 100*fr.* a month. We get eight days' holiday in the year, so that, as living and clothes are much dearer, an assistant is better off in England. As for Mr. Æneas, I think he must be a Scotchman; but, of course, he will take no notice of my criticisms, as I am no doubt a "low, degraded body" as I used to be in the stores. With respect to the moral tendency of long and short hours, I think the balance is rather in favour of the latter, for I have had experience of both, and find that after late hours—say, 9.30 or 10 P.M.—one is too fagged to go home and study or to enter into any healthy recreation.

With respect to the formation of an Association, I think it would be both practical and useful; but it must be on lines that will secure the co-operation of our masters, for ours is a business different to most, everyone expecting to be a master himself. What we must fight against is custom and habitude, and by degrees we, who ought to be more intelligent than the miners, will be sure to improve our position in the same ratio as they have done. Let a nucleus of such a trades-union be commenced in London and gradually extended through the land, in which case, if necessary, we can soon shut up the stores, but not as long as they offer, as they do now, advantages superior to the private firms.

Yours,

Geneva, July 18.

D. T. WILKIE.

SIR,—Allow me to inform your assistant readers that Mr. Hill's letter of last week is very misleading.

No doubt, he may be one of the exceptionally blessed, and his statements may be true as regards his own position; but I am perfectly certain that, with the majority of assistants, things are entirely different. We do not live out; have only one hour for dinner; business hours from 7 A.M. to 9 P.M., and, with the exception of two evenings a week, are not free even then.

As to salary, I know that the average is about 150*fr.*, and

in many cases only 100f., per month, with lodging only, no board.

The position of a chemist's assistant in Switzerland and other continental countries is in reality worse than in England, owing to the competition of German assistants, who, in most cases, speak two or three languages, have had good experience, and generally accept situations *comme volontaire*—that is to say, barter their services for board and lodging only.

I conclude, I may say that the average duty of an assistant, exclusive of time spent at meals, is ninety hours per week.

Pharmacie Internationale,
Lausanne, July 17.

Yours truly,
GEORGE CAVE.

Floating a Company.

SIR,—In case any of your readers should have shown to them, by interested persons, a vindictive article concerning the Chemists' Association (Limited) in any London so-called financial paper, it may be interesting to remind them of the methods of this class of journal as they have been illustrated in the reports of several law-cases. These methods are as follows:—Two notices of the company to be blackmailed are first drafted, one of which is favourable and the other as nearly slanderous as can safely be ventured. A representative of the journal then calls upon the company and asks for an advertisement. If the advertisement is given and paid for, the favourable article is inserted; if not, the slanderous article promptly makes its appearance.

With the knowledge how articles appearing in a journal of this class are produced, chemists will be able to assess them at their proper value. Having perfectly honest intentions toward their fraternity in the trade, for whom they have founded this co-operative Association, my directors have declined to buy a favourable notice in any newspaper.

Certain Road, London,
July 18.

Yours faithfully,
JOHN THOMPSON, Secretary

SIR,—Owing to the similarity of names, many chemists have assumed that the Chemists' Association (Limited) is in some way connected with the Chemists' Aerated and Mineral Waters Association (Limited) (C.A.M.W.A.L.), established in 1878.

Might I ask you to mention the fact in your widely-read journal that "C.A.M.W.A.L." has no connection whatever directly or indirectly, with the newly-advertised Chemists' Association?

45, Gifford Street, N.,
July 18.

Yours truly,
H. T. BUTLER, Secretary.

A Cattle-breeder's Difficulty.

SIR,—Some ten years ago the ensilage question was brought into prominent notice, and it was much recommended as a substitute for hay for feeding cattle. I had the pleasure about that time of hearing a paper upon the subject by Mr. Henry Woods, in which it was highly praised—the cows, it was stated, "making a grab at it." About three years ago I was talking to the foreman of a well-known breeder of Jersey cattle in Herefordshire; he said that cows, when fed on this substance, frequently lost their calves, and that they were obliged to abandon it for feeding breeding cattle.

I think, in some instances, where there is a plague of the kind of thing you mention in last week's CHEMIST AND DRUGGIST, that the cause is not unfrequently to be sought in the food. Supposing ensilage has not been employed, there are many varieties of grass which are attacked by a species of fungus, in some cases probably identical with ergot, and in others similar to it in properties. I may instance "Darnel grass" (*Lolium temulentum*), the properties of which are generally considered due to a fungus (for illustration of this plant see Bentley and Trimen's "Medicinal Plants"). It seems probable that the action of ensilage may be due to a fungus also, possibly caused by faulty preparation.

A solicitor whom I know was engaged in a case in which

a feeding-cake was accused of causing the death of some valuable horses, but the death was clearly shown to be due to mouldy hay or oats—other horses of less value, being fed for evidence on them, were killed also.

Certain trees, especially yew, are occasionally eaten by cattle; they appear not to relish them when growing, but if branches be broken off and placed in the field detached from the tree, they are not always left alone.

I must not give a long list of poisonous plants, and will only mention that colchicum is accountable for some of the ills to which cattle are subject.

Manchester, July 18.

I am, Sir, yours truly,
CHARLES TURNER.

Preparing for Next Election.

SIR,—Your heading to my letter of last week amused me very much. You are very keen. No, Sir, I did not ask my own candidate. I thought isolated action was useless, but I feel that we have lost a splendid opportunity. The results of the General Election are such, however, that we can reasonably expect another election at no distant date; and I think, if the trade will bestir themselves, the consent of the majority of the candidates throughout Great Britain can then be obtained, and their vote secured for a Bill having for its object "that all medicines intended for internal administration shall be vended by duly qualified medical men and chemists only."

Will you test the trade on the matter by inviting postcards giving opinions for or against the wisdom of promoting such a Bill? I feel that if chemists, in place of grumbling, would but adopt unitedly a simple Bill of this sort, backed up as it would now be by the coroners and medical men, there would be no opposition powerful enough to resist their efforts, whilst the effect of such a Bill would be of great and lasting benefit to both the general public and ourselves.

July 19.

Yours,
WALES. (76/69.)

The Stuff that Dreams are Made of.

Referring to our comments on Dr. B. W. Richardson's lecture on dreams last week, a professor of chemistry writes to express agreement with our criticism. "It is amusing," he remarks, "to notice how some of the lecturers at the Royal Institution, not content with the legitimate limits of their science or art, but puffed up with a little feeling of 'Royal' licence and a sense of being for the nonce law-givers, proceed to strain and then burst through those limits. 'Nothing more than the common vibrations of terrestrial media acting upon a corporeal vibratorium.' If this means anything at all it would indicate that such vibrations, acting through that intellectual part of the dog—viz, the tail—upon its corporeal vibratorium, give rise to ideas, or if asleep to dreams; in either case the tail wags the dog. In the case of the ass or mule we have both tail and ears in vibration; both of these terrestrial media are in evidence, wagging the animal, which must be a powerful corporeal vibratorium, or, in other words, a deep thinker and vivid dreamer! In the case of ass or mule an overwrought 'corporeal vibratorium' may give rise to ejections of force, corresponding to inner effusions of sentiment, dream, &c., the heels of the animal during its emotional strain being cast into the air with much vigour, that aerial vibratorium being meanwhile rent with inarticulate cries and bellowings. These are strivings after the infinite!"

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

74/48. B.P. pharmacy in rhyme: who publishes?

75/13. Who puts up a 2s. 6d. ccca wine?

COMPULSORY CLOSING.—The City Council of Rochester, New York, have passed an ordinance to close up drug-stores at 10 o'clock every night and all but two hours on Sundays. The citizens are protesting vigorously.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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RUSSIAN PLATINUM YIELD.—It is reported that the yield of crude platinum for the year 1891 from the Ural provinces will exceed 9,000 lbs., or above 3,000 lbs. more than in the previous year.

Summary.

RECORD BREAKING is the order of the day, and the characteristic of this Summer Number.

THE Quinine Bitters case has been before Mr. Justice Stirling again.

THE Woolwich magistrate has dismissed the summons in the tartaric-acid case.

MR. BELL's paper is about a very curious book written by the Dutch physician Dodoens.

PAGES 154 and 155 contain illustrated ideas about shop matters, which are worth carrying out.

OUR Town Traveller has had interviews with a few City firms, and sends in graphic accounts thereof.

MR. J. R. JACKSON writes about the peculiarities of the fruit of *Sterculia scaphigera*, and gives a drawing of it.

EIGHTEEN original formulæ for saleable articles on pages 156-7. Try some of them in the quiet of the Bank Holiday on Monday.

IN "Ink" we give an abstract of an important research on the scientific principles of the manufacture of writing-ink by Dr. Inglis Clark.

GENEVA, Beyrouth, Trieste, Zürich, and the Orange Free State furnish us with fresh material and pictures of English pharmacies there.

IN our correspondence will be found an important piece of information in regard to the reduction of fees payable on renewals of patents.

LABORATORY men will find some useful suggestions in an illustrated note, showing how to make an efficient filter through a tobacco-pipe.

THE market position of carbolic acid is discussed in an Editorial note, which shows that generally at this season the price of the disinfectant rises.

WE report at considerable length the Medical Exhibition which is held at Nottingham this week in connection with the British Medical Association meeting.

A WELL-INFORMED French correspondent gives some striking particulars of the open and fraudulent imitations of English medicinal specialities which are manufactured in Paris.

SOME young druggists are anxious to go into the Army Medical Staff Corps. They will find all about it in an article by one who has served. The corps is not a clover-bed.

IN such a bulky number as this a *soupcçon* of light reading is advantageous. There is some of that in "Nearly Caught," wherein an Irish chemist tells how the gold-chain trick was tried on him.

IN travelling "from Mid to West" a pen-and-ink sketcher of ours has made some pretty pictures of pharmacies in Bristol, Cheltenham, Malvern, Plymouth, and Worcester, which we reproduce.

WE give a good collection of photographic formulæ for preparations such as all enterprising chemists should keep in stock, and separately is a straightforward statement as to what may be expected from this business.

THE article on lady-pharmacists contains the reflections of Mrs. Sinclair, Miss Flora Mitten, Miss Stammwitz, Miss Margaret E. Buchanan, Miss A. Neve, Miss Florence Brittain, Miss Rose Minshall, and Miss M. E. Neve, on their practical experience of pharmacy as an occupation for women. We add portraits of a few of those pioneers in an honourable calling.

EDINBURGH, "mine own romantic town" of Scott, furnishes us with some interesting pharmaceutical reminiscences, which we give in anticipation of the Conference meeting. Portraits are given of Messrs. J. L. Ewing, J. R. Young, Thomas Smith, Peter Boa, and J. B. Stephenson, and of the late John Mackay. Our artist also provides sketches of some of the leading pharmacies.

English News.

The Food and Drugs Act in Clerkenwell.

At the meeting of the Clerkenwell Vestry on Thursday night, Mr. Churchwarden Robson presiding, Mr. J. K. Colwell, public analyst, presented his quarterly report, which showed that he had operated upon forty different articles—viz, 22 milk (2 adulterated), 4 butter (all adulterated), 7 gin, 6 whiskey, and 1 mustard (up to standard). Mr. Weston: The Vestry laughed when I suggested that the whisky and gin should be tested, and now I find to my surprise that the public analyst has adopted it. (Laughter.) I sincerely trust that some of the publicans who sell beastly liquors will be made to suffer. (Hear, hear, and laughter.) I know what they are. Mr. Kelly: And not a bad judge. The Chairman: Mr. Weston need not be alarmed; the analyst's report is that the whisky and gin are all right. Mr. Kelly: Yes, absolutely pure. Clerkenwell has the finest the world can produce. (Laughter.) Mr. Edenborough (a licensed victualler): Is it right for the inspector to send other people into your house to purchase the goods, and then come in afterwards to say he is going to have it analysed? The Chairman: The inspectors follow the orders under the Sale of Food and Drugs Act. Mr. Edenborough: But the whisky was purchased in my house, taken outside, and then brought back again. The Chairman: The usual custom is for a stranger to be sent to make the purchase, and then for the inspector to come upon the scene as the purchase is being completed. The analyst's report was received.

Henry Lamplough (Limited).

The seventh ordinary general meeting of the shareholders of Henry Lamplough (Limited) was held at the Cannon Street Hotel, E.C., on July 22, Mr. William H. Gibson, F.C.S., presiding. In moving the adoption of the report, the Chairman said the present board took office in 1888, the goodwill account stood at 32,500*l.*, and since then 2,500*l.* had been written off that account. The whole of the preliminary expenses had also been written off out of the profits. In 1889 they borrowed money on their freehold property, but that had since been paid off. They had now 3,000*l.* invested in Indian stock, from which they received 3½ per cent. If they could employ that in the business he believed their profits would considerably increase. During the year the board had opened new premises in Monkwell Street, which he believed would prove a profitable investment. The directors proposed to find other premises in order to increase their receipts. The net profits amounted to 3,944*l.*, and the board recommended a dividend of 8 per cent. per annum. The motion was seconded and carried. Mr. Myer Salaman was re-appointed a director, and Mr. Gribbon was re-elected an auditor.

A Saturday-night Customer.

A man named Legg was charged at the Gravesend Police Court with having attempted to commit suicide. Mr. Edward Millhouse, chemist, of New Road, said that on the previous Saturday evening the prisoner walked into his shop and went through into the yard. Witness called him back, and asked what was the matter with him, and he said he was stabbed. Failing to elicit any further information from the man, witness sent for the police. He saw the wound, which was a very small one—in fact, the skin was only just severed. Superintendent Berry stated that early on Saturday the prisoner came to the station and said he was being followed, and that he was wanted for an offence at Chatham. He was detained while the police at Chatham were communicated with, but it was ascertained that his story was not true. Prisoner was excited when he came to the station, but he soon quieted down. Prisoner had nothing to say. He did not recollect the whole of the circumstances. He had a similar attack fifteen months before, but he did not then attempt to do himself any harm. He was discharged on promising not to repeat the offence.

Company Dividends.

The directors of the Bovril Company have declared a dividend at the rate of 10 per cent. per annum for the half-

year ending June 30 last, making, with the interim dividend paid in January last, 7½ per cent. for the year.

The directors of Jeyes' Sanitary Compounds Company (Limited) have declared an interim dividend at the rate of 8 per cent. per annum for the six months ended June 30, payable forthwith.

The Institute of Chemistry.

At the examination in practical chemistry for admission to the Institute, held from Monday 11 to Friday July 15, thirty-seven candidates presented themselves, of whom the following nineteen were successful:—

Mr. E. C. C. Baly, Mr. F. J. Bloomer, Mr. A. C. Chapman, Mr. J. C. Chorley, Mr. F. Dent, Mr. F. E. Francis, Mr. A. F. Fryer, Mr. F. J. Hambly, Mr. E. E. Johnson, Mr. T. Kendrew, Mr. C. Leigh, Miss E. J. Lloyd, Mr. H. H. Mann, Mr. C. H. New, Mr. T. H. Norris, Mr. W. Orr, Mr. N. S. Rudolf, Mr. W. D. Sowers, Mr. A. E. Wareing.

Cricket.

A match was played on Saturday, July 23, at Newsham Park, Liverpool, between an eleven representing Messrs. R. Sumner & Co., of that city, and a team of cricketers from Messrs. James Woolley, Sons & Co., of Manchester. The visitors went in first and scored 109, towards which J. Franklin contributed 55. Sumner's team responded with 70, the top scorer on their side being H. Kruger, who made 24. The visitors were subsequently entertained to tea by the Liverpool players.

The "Vinolia" Girls.

The proprietors of "Vinolia" soap are sending over a hundred poor children for two weeks into the country, most of whom have never seen the green fields before. Next year Messrs. Blondeau et Cie. hope to send not less than a thousand. They are giving every employé in their soap-factory at Malden Crescent, London, and at their warehouse and offices at Ryland Road, London, a vacation of not less than two weeks. They employ a large number of young girls as piece-workers, all of whom are to have two weeks' vacation and wages. It may be observed incidentally that these girls work forty-six hours per week, and on the finishing-floor is a piano for their use during the noon hour and quarter-hour reserved for afternoon tea. The firm provide a library containing works of fiction, &c., and contemplate establishing a reading-room and gymnasium. There is a sick-club composed of all the employés, so that in case of illness each one is provided for.

Society of Chemical Industry.

The annual meeting of this Society was concluded last Friday by an excursion up the Thames as far as Cliveden, the seat of the Duke of Westminster. Train was taken from Paddington to Windsor, where the Castle and St. George's Chapel were visited, a special organ recital being one of the attractions in the latter place. After luncheon in the Town Hall, steam-launches were used to convey the party up the river. It was in all respects a delightful afternoon, everything being well-arranged, and no mishap marred the pleasure of the day. Tea was served at the summer-house of Cliveden, and the party returned to Taplow by launch as far as Boulter's Lock, then walking, and meeting the train at Taplow Station. More than four hundred joined the excursion.

Cheap Sulphate of Iron.

At Tuesday's meeting of the London County Council, the Main Drainage Committee reported that they had received a letter from Messrs. Krayer, Back & Co. offering to supply, at 26*s.* per ton, about 200 tons of proto-sulphate of iron, of the quality required by the Council's specification, which they now had on their hands at Swansea. This being a very advantageous proposal for the Council, the committee had instructed the Chemist to accept the same. The Council approved.

Festivities.

Messrs. Potter & Clarke's annual excursion and dinner took place on Saturday last at the Crown Hotel, Broxbourne. The company numbered between thirty and forty, and, besides an excellent dinner, a cricket-match, boating ex-

cursions, and a smoking-concert were in the day's programme.

The annual outing of the Sidcup tradesmen took place at Lillingstone Park and Westerham. At the dinner, Mr. W. Wade, chemist and druggist, of Clyde Terrace, Sidcup, presided.

An Unholy Alliance.

There is a good deal of soreness among the chemists and druggists of Cardiff on account of the action of Messrs. Hicks & Co (Limited). A few days ago an American quack, travelling under the name of De Winton, commenced lecturing from a two-horse brake in the Hayes. He sold no medicines; but, after descanting on the virtues of certain oils and pills for rheumatism, dyspepsia, &c., he informed his auditory that they might be obtained at Messrs. Hicks's druggist's shop, in Duke Street. What makes the conduct of this firm the more incomprehensible to the trade is the fact that two of the directors are well-known physicians—Dr. Sheen and Dr. Naunton Davies. To assist the sale of the medicines, a "black," in gold-braided livery, perambulates in front of Messrs. Hicks's shop distributing handbills.

The Welsh Lunacy Inquiry.

The question of how the costs of the inquiry into the alleged insanity of Mr. John Lloyd Davies, of Haverford-west (whose father formerly carried on business as a chemist and druggist in that town), should be defrayed, came on Monday before Lords Justices Lindley and Lopes. The lunacy proceedings were instituted by Mrs. Powis, sister of Mr. Davies, and after several days' inquiry, the jury found that Mr. Davies was quite sane, and capable of managing his own affairs. The Court has ordered that Mrs. Powis should pay all the costs of the inquiry.

Some Poisonings.

Mrs. Hopper, of the Shakespeare Hotel, Consett, was ill. Her sister was nursing her, and in the night gave her carbolic acid instead of medicine. The lady died.

An old man at Leicester bought $1\frac{1}{2}$ oz. of laudanum from Messrs. J. Butler & Son, chemists—"to quieten a young horse," he said. He committed suicide with it.

Mrs. Dockray, of South Shields, wife of a confectioner, bought some carbolic acid from Mr. J. T. Riddle, chemist, and poisoned herself with it. The bottle was duly labelled.

A child, 18 months old, the son of a shoemaker, at Littleport, Cambridgeshire, got into the garden and pulled some acorn-flowers, and sucked them. This caused his death.

A domestic servant has been before the Southport magistrates on a charge of attempting to commit suicide. She had swallowed $1\frac{1}{2}$ oz. of carbolic acid, and, after long treatment, had recovered. She was sent to the workhouse for fourteen days, that the state of her mind might be inquired into.

Mrs. Buddon, of the Castle Hotel, Liscard, poisoned herself with carbolic acid on Saturday last.

Irish News.

Healthy Dublin.

Sir Charles Cameron, Public Analyst, Dublin, states that owing to the favourable sanitary conditions of the city, as well as the copious supply of pure water—the pumps having fallen into disuse—the citizens may count on an immunity from cholera however near it approaches Ireland.

Contracts.

Messrs. Harrington & Sons, Cork, and Messrs. Corcoran, Dublin, have been appointed contractors to the New Ross Union for the supply of drugs and surgical appliances. The *Ennis Guardians* advertise for a year's supply of drugs, medicines, medical and surgical appliances.

Good Contractors.

In his quarterly report just submitted to the County Antrim Grand Jury, Professor John Hodges, F.I.C., states that out of a number of drugs, &c., analysed since the Spring Assizes, he has not found one to be impure.

The Way to Enforce the Pharmacy Act.

A Limerick chemist, writing in the columns of the *Dublin Independent*, proposes to "wipe out" the unqualified dispenser by reporting to the Medical Council those doctors who send their prescriptions to be made up by pharmaceutical "hangers on." The remedy, the writer says, would quickly put an end to the evil.

Scotch News.

The Chemist's Divorce Suit.

At the Outer House of the Court of Session, Edinburgh, on July 20, the action was further heard of James Ballantyne Hannay, manufacturing chemist in Glasgow, against his wife, Mrs. Caroline Johnston, or Hannay, residing at Cove Castle, Loch Long, Dumbartonshire, and others, the trustees under certain deeds, and concluded for reduction of a disposition by the pursuer in favour of Mrs. Hannay, by which he disposed to his wife Cove Castle and grounds; and a trust deed conveying to his wife the household furniture, &c., in Cove Castle, and the stocks alleged to belong to her—the trustees to hold the trust estate for behoof of Mrs. Hannay in life-ent, and on her death the pursuer to have the life-rent of the remaining trust estate. Reduction was also sought of gifts of 2,000*l.* shares of Hannay's Patents Company, made by the pursuer to his wife, and a gift of 24,500*l.* made by him to her in 1839. It was intimated that the action had been settled, and a joint minute was lodged, in terms of which defender is found entitled to absolver and expenses.

Accidental Poisoning and Insurance Policies.

An action was recently raised in the Court of Session by the trustees of the late John Baird, French-polisher, Howard Street, Glasgow, against the Scottish Accident Insurance Co. (Limited), for recovery of 1,000*l.*, the amount for which Mr. Baird's life was insured with the defendant company by general accident policy. The plaintiffs averred that the deceased, upon July 20, 1891, while staying at Ardnadam, Argyllshire, took from a cupboard a bottle which he believed to contain whisky, and under that impression swallowed some of the liquor it contained. The liquor really was solution of ammonia, which produced excoriation of the mouth, gullet, and stomach, from which he died three days afterwards. For the plaintiffs it was maintained that the death was the direct consequence of an accident within the meaning of the policy. The defendants, on the other hand, held that the death was not caused by a risk insured against, and they averred that it was impossible for Baird to have mistaken the ammonia for whisky if he had been in his proper senses. A settlement has now been arrived at under which the insurance company pay plaintiffs 500*l.*, each party paying their own expenses.

An Oban Guide.

Mr. Samuel Lawrence, chemist, Oban, sends us a copy of his *Oban Visitors' Guide*. He says he will be delighted to be of any service to those chemists who, when north at Edinburgh at Pharmaceutical Conference next month, may go on to Oban. He means in the way of finding hotel or lodging-house accommodation for them, and giving them particulars of the various tours from Oban—the Charing Cross of the holidays.

Sudden Death of a Chemist.

On Tuesday of last week, Mr. Robert Mason, chemist, Johnstone, was found in an unconscious state lying on the floor of a room at the back of his shop, and, in spite of medical assistance, he died the following morning, convulsive fits having preceded his death.

PLUMBAGO-MINES have been discovered along the south-west coast of India, and are apparently a continuation of the Ceylon veins. Their output is small compared with the latter, and Ceylon plumbago is of infinitely superior quality.

French Pharmaceutical News.

(From our Paris Correspondent.)

PROTOIODIDE OF CARBON.—M. Henri Moissan, in a paper on this novel compound, states that he has obtained it by exposing tetraiodide of carbon to the action of the sun's rays. It is of great stability, resisting boiling nitric acid, and melts at 185° C.

ROBINA NICOU.—M. Chatin states that this is a poison extracted from one of the lianas, or rope-like creepers, which festoon the virgin forests of Guiana. The aborigines, he says, throw this substance into the rivers, and the fish for yards around rise to the surface dead. The curious point is that these finny victims of savage science may be eaten without danger.

CHEMISTS IN IT.—M. Hilaire, pharmacist-in-chief of the French colonies, has been nominated Chevalier of the Legion of Honour. M. de Boissieu, of the Laboratory of Organic Chemistry at the Sorbonne, and Professor Béhal, of the Superior School of Pharmacy, have been appointed by the Minister of Commerce and Industry to study the petroleum deposits in Roumania. Another gentleman from the School of Pharmacy, M. Hunkiabeyendian, is to accompany M. Paul Berthod to Turkey, to examine the system of medical instruction there.

PRECAUTIONARY MEASURES AGAINST CHOLERA are the order of the day. The following mixture has been prepared for the employés of the Administration des Pompes Funèbres, which monopolises the funerals in the French metropolis:—

English pepper mint oil..	..	..	12 drops
Sydenham's laudanum ..	..	..	12 grammes.
Sugar ..	..	..	200 "

Dissolved in 1 litre of a mixture of 4 parts alcohol (36°) and 6 parts of water.

A liqueur-glassful of this is taken by each employé before going to the funeral of any person where cholera is proved or suspected. The fact, officially stated, that since 1852 not a single employé of this funeral agency has died of cholera, in spite of their enforced daily contact with corpses of all classes, indicates the efficacy of this preventive.

NEW BONE-FORMING PROCESS.—Professor Duplay, of the Paris Faculty of Medicine, and Dr. Cazin have discovered a new use for iodoform gauze. In a paper read at the last meeting of the Academy of Sciences, they stated that they had experimented on twenty-nine rabbits and thirty dogs with a view to discover a bone-forming process. It is well known that in certain tuberculous and syphilitic disorders the interior of the bones is eaten away by the malady, leaving cavities which are with difficulty refilled, especially if the patient be elderly or of weak stamina. Dr. Duplay's hecatomb of four-footed victims, sacrificed at stated periods, had shown him that this refilling process may be considerably hastened by filling the cavity with a spongy or aseptic substance, such as iodoform gauze. This is rapidly encrusted by the new osseous formation which clings to it. The gauze almost disappears when the new growth of bone is complete.

OLD TRICKS LIVE.—An individual entered a pharmacy in the Faubourg Montmartre a few days ago and asked for three bottles of a certain liqueur, which was not in stock. The pharmacist promised to obtain it, and did so, but his would-be customer never returned. The pharmacist accordingly went to the druggist and asked him to take back the liqueur, but met with a blank refusal. He was pressing the point, when two or three other pharmacists entered on the same errand. The warm discussion of the victimised persons and the druggist was interrupted by the entrance of the laboratory assistant, whom the pharmacists recognised as their bogus customer. An adjournment to the police commissary's was at once made, and M. Mouquin's inquiries proved that the druggist who had adopted this novel method of advertising his speciality also gave free consultations. But as he had omitted to go through the form of obtaining a medical degree or pharmacist's diploma, he will be summoned to appear before the authorities on a charge of illegal practice of medicine and pharmacy.

Foreign and Colonial News.

THE EXTERMINATION OF POISONOUS PLANTS.—The District Councillor of Lübben, Germany, has issued a proclamation calling attention to the frequency of cases of child-poisoning caused by the eating of toxic plants, such as henbane, deadly nightshade, hemlock, stramonium, &c., and instructing all local authorities to proceed at once to the extermination of all such dangerous forms of vegetation within their respective districts.

UNITED STATES TRADE-MARKS.—The following marks were registered at Washington on July 5:—"Cafbromalid," for antipyretics and sedatives, by Charles Truax, Greene & Co., Chicago; figure of a cow's horn, for a liniment, by A. Horn, Buffalo, N.Y.; figure of two heads (boy's and girl's) for a diphtheria-specific, by Hunt & Co., Salt Lake City; "F. & D. Racicot's Indian Remedies" and a shield with an Indian thereon, for medicinal remedies, by F. & D. Racicot, Sherbrooke, Canada; "Solid," over figure of a block, for medicine in tablets, &c., by Louis A. Matos, Philadelphia; figure of a sheep on an oval design, for a diphtheria-remedy, by D. Peraza, New York; "The Swiss Cure for Rheumatism" on a label, for the same, by the Swiss Medicine Company, San Francisco; "Opera Cream," for a cosmetic, by J. Greyer Cincinnati. The following marks were also registered at Washington on July 12:—Figure of a powder-horn, for a tooth-powder, by W. E. Burrows, Providence, R.I.; "Keystone," for gelatine capsules, by J. W. Gedney, New York; "Melol," for castor oil, by Indianapolis Drug Company; "Nada," for perfumes, &c., by Ladd & Coffin; "Globe," for hair-restorative and dandruff-cure, by H. D. Wagner & Co., Grinnell, Iowa; "A New Idea," for a disinfectant, by Emma R. Farren, Paterson, N.J.; "Herbal Tonic, or Flockmaster's Friend," for veterinary medicines and preparations, by Stephen Pettifer & Son, Creedwell, near Malmesbury, Eng.; "Odorless Deodorizer," the first "O" and first "D" of the words being enlarged and enclosing the remaining letters of the words, respectively, by Sanford G. Plumb, New York.

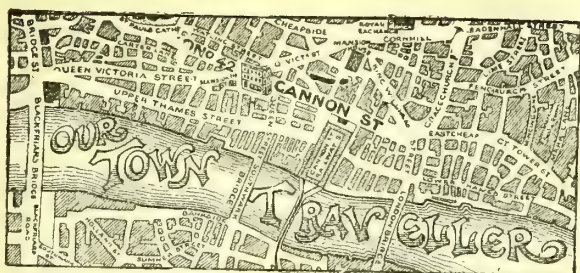
INDIAN PHARMACEUTICAL NEWS.

DIVIDENDS.—Badham, Pile & Co. (Limited), of Secunderabad, pay 10 per cent. dividend. The report says that their Secunderabad branch is improving under new management.

PHILLIPS & CO. (LIMITED), of Bombay and Poona, in their seventh annual report (dated May 31, 1892) show a net profit of 57,000r. on a capital of 500,000r. Their working expenses amounted to 80,000r. at Bombay, and 30,000r. at Poona; salaries were 36,600r. at Bombay, 20,800r. at Poona.

BUSINESS CHANGES.—Mr. V. Tepermall Chetty has opened a shop in Popham's Broadway, Madras, under the name of Barron & Co. Mrs. M. A. Pollard and Mr. G. W. Rose, trading as Symes & Co., of Simla and Meerut, have dissolved partnership; they have disposed of their Meerut shop to Howard & Co. As anticipated, the Army and Navy Stores have opened a chemist's branch in Bombay.

THE BRITISH MEDICAL MUSEUM exhibitors have organised a smoking concert, to be held at the Clarendon Hotel on Thursday evening, at which the Sheriff of Nottingham will take the chair, and the Chief Constable the vice-chair. The selection of presidents appears to be a trifle extraordinary, for we saw nothing about the conduct of the prospective smokers which calls for the presence of so eminent criminal authorities. We imagine, however, that the Sanitary Exhibition behind the Guildhall has something to do with the selection. Our reporter had a walk through that exhibition, which is to be open for two months; but drain-pipes, improved water-closets, and things like that were the principal items, and, as yet, the drug-trade has only a general interest in these.

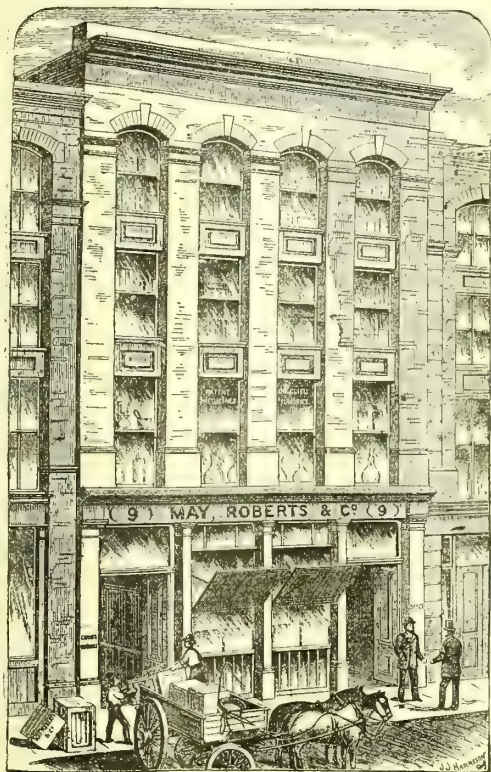


ADVERTISING v. TRAVELLING.

"No Travellers Employed" is one of the principles on which Messrs. May, Roberts & Co. conduct their business. Travellers among druggists are first-class men, esteemed by their employers and by their customers alike. No word against them may be printed in these pages, but we cannot help being aware that THE CHEMIST AND DRUGGIST is a traveller against which none of them can compete. It is calling every week on the chemists in Aberdeen, Buenos Ayres, Calcutta, and so right through the alphabet, *via* Jamaica and Madagascar, to Zermatt and New Zealand. But this paragraph is to be about May, Roberts & Co., not about THE CHEMIST AND DRUGGIST. So our own Traveller [there's a chance for the critic to scoff at our inconsistency], being in the Clerkenwell Road the other day, called on Mr. Roberts to see how was business with the firm which employs no travellers.

"You are going Nap in our Summer Number, Mr. Roberts!" ventured our man, referring to the extensive price-list which the firm are inserting. Mr. Roberts is a member of the Society of Friends, and we are not sure whether he understood the allusion. Anyhow, Nap. has no place in his thoughts during business hours, for no man in London attends to his business more closely than he.

"I was a good deal encouraged by the result of the shorter price-list I put in your Winter Issue," he said, "so I thought I would do it this time pretty thoroughly."



"Do you have no travellers in any form?" was asked next. "No travellers or agents of any kind whatever," said Mr.

Roberts. "Come through and see the way we do our business."

This was said in the showroom, a space in the front part of the ground floor, far too small to effectively exhibit samples of the multifarious stock of a druggist's sundriesman, and scarcely worthy, if we may say so, of the big warehouse above, below, and around. The goods shown are, however, arranged very neatly, and the specimens are more complete than one would expect from a first glance. There were no particular novelties on hand at the moment, so we passed through the offices, where between twenty and thirty clerks were busily engaged—an index to the flourishing condition of the business with "no travellers." Eight youths at one desk are occupied in dissecting the morning's orders and making out sheets for the various departments—sundries, P.M., drugs, or glass. Every order gets its registered number, and this number and the departments engaged on it are intimated on another sheet to the packing department. The packers call for the goods from the several departments as they are ready to pack, and the general sheet, which has been the round of the sections, after two checkings, becomes the day-book entry. The system seems elaborate, but is simple in working. The variety of articles ordered from a sundries house necessitates a careful attention to details. Every queer thing asked for over hundreds of counters throughout the United Kingdom during the day comes into these sundry orders. The result is that May, Roberts & Co. have to keep no fewer than eight messengers constantly employed in collecting from London houses the odd things required to fill every day's orders.

Messrs. May, Roberts & Co.'s warehouse consists of two floors below the ground floor, and three above it, six floors in all, each of 3,000 square feet of superficial area. At the very bottom are the empties and the original packages—as, for instance, a ton of vaseline, 10 or 20 gross of Eno, and so forth. On the upper basement are the glass and earthenware. The offices and packing departments are on the ground floor. The patent medicines and proprietary articles, including British, American, and French proprietary goods, are on the first floor, the sundries on the second, and the drugs are on the top. There also goods such as seidlitz powders, fuller's earth, &c., are packed, castor oil and glycerine are bottled, feeding bottles are put together and boxed, a staff of girls doing most of this work. All these floors are closely packed with stock, classified in nests which reach to the ceiling, with only narrow avenues between each row. Our Traveller returns to Cannon Street in a chastened frame of mind, for he has discovered that, however valuable he and his class may be, it is quite possible for large businesses to be built up and carried on without their aid.

F. DARTON & Co.

Our representative looked in at F. Darton & Co.'s new works in St. John Street, Clerkenwell, another day, and had an interesting chat with Mr. J. G. Phillips, one of the partners. It is now some months ago since the firm finally quitted their old quarters and installed themselves in the handsome, well-lighted premises where our representative called, but they have not even yet had time to put everything straight, so busy have they been with orders. The export trade is their strong point, the greater part of the goods they manufacture being sent out of the country. "We try to do as much manufacturing work ourselves as we can," said Mr. Phillips, as he showed us through the workshops, pointing out a bench at which several men were busy turning wood for barometer-cases. Our man, when he entered the shop, had been particularly attracted by some very handsome wood cases, and, being accustomed to look upon all turned woodwork as having been made in Germany, had wondered inwardly in what part of the Fatherland the Messrs. Darton contrived to get such good work done. The offices and workshops are fitted throughout with electric light. "Our own installation," said the head of the firm, as he showed the way down to a cellar where the storage-cells were kept. "We charge the cells every fortnight, and have sufficient power here to run two hundred lights if we needed them." "We are the only firm in our trade in London," he continued, "who have their workshops fitted with electric light. We find it an immense convenience, and well worth the outlay. This cellar, where we are now standing, we knew nothing of until we had been in the house for several

weeks, when its existence was revealed to us by the accident of one of our workmen falling through the trap-door. The cellar had, apparently, been forgotten by the vendor of the premises. They had been empty for eight years, and we spent about 1,600*l.* in fitting them up."

From the cellar we ascended to the mounting department, where several hands were busy manufacturing small aneroids and other thermometers. The divisions are all marked by machinery, three dividing-engines being kept on the premises for this purpose; the figures, of course, being traced by hand. Even now, when the season is comparatively slack, Messrs. Darton & Co. dispose of eight or nine gross of clinical thermometers a week, and during abnormal times—for instance, while the influenza scares were prevalent, they could hardly keep pace with the demand.

CALENDARS FOR 1893.

In response to the invitation of Messrs. Hildesheimer & Faulkner, our representative also called at their showrooms in Jewin Street to inspect their designs for calendars for 1893. The very high-class work which this firm produce has been brought to the attention of chemists and druggists through this journal, and Messrs. Hildesheimer & Faulkner seem very well satisfied with the result. They find that chemists appreciate their productions, and they think the custom of distributing an artistic reminder of one's existence



is growing in the trade. Calendars on cards and in booklet forms with charmingly designed fronts, some with tiny diary spaces, and with the backs left blank for an advertisement, are features of the firm's stock. Blotters of various sizes, with one of the beautifully-tinted chromographs on the front cover, are found to be very acceptable gifts. So are the calendar cards with a well-made pocket for letters, to hang on the wall. Calendars with monthly and daily tear-offs, and perpetual calendars in boxes, are also sometimes given. Similar designs are produced for advertising-cards, from a quarto down to an envelope size, and boats, newsboys, cats, dogs, and clowns, with cunningly-devised spaces for advertisements, are favourite media for bringing some special article under the notice of the public.

THE DUKE AND THE DRUGGIST.

Wandering westward one Saturday afternoon recently our Traveller came upon Duke Street, Grosvenor Square. This is the locality where, it was said, a few years since, the Duke of Westminster was exercising his gigantic powers as a landlord with such cruel tyranny. The grievance was that tradesmen who had made a business in the street were to be turned out as their leases expired to make room for improvements. It is true the Duke's agent undertook to do his best to find each such tenant new and better premises in the immediate neighbourhood; but it was felt that this would be an act of grace, and that the contract between

landlord and tenant did not involve this necessity. Mr. Armbrecht, the chemist and coca-wine maker, was one of the victims whose case excited some attention in the press at the time. It is satisfactory to report that the alarm raised has not been justified; the feudal system, moderated, perhaps, to a small extent, by the halfpenny papers and *THE CHEMIST AND DRUGGIST*, works well in Duke Street. The Duke of Westminster is carrying out his improvements, and the thoroughfare will be one of the handsomest in the West End of London. The tenants seem to have been treated with every consideration, and their new homes will be far more healthy and comfortable for them than their old ones. Room has been made, in addition, for numerous blocks of beautiful industrial dwellings, the land for which is let at far below market value. A city chapel of historic interest has found a home in the street, and three chemists—Messrs. Squire, Burden, and Armbrecht—are already located there. Mr. Armbrecht still carries on his chemist's business in an old-fashioned shop with which he was accommodated when his former place was demolished; but he has already moved the greater part of his coca-wine business to the new premises a little nearer Oxford Street, which he has built on ground leased from the Duke. Mr. Armbrecht has by his advertisements familiarised chemists with the imposing architectural design of the new home of the coca-wine. In its external features this had to correspond with the rest of the street; internally, each tenant may adopt such arrangements as will best suit his business. Mr. Armbrecht's building has cost some 10,000*l.* He will have for his money a handsome shop, splendid cellarage, packing, office, and warehouse space for the wine business, and a luxurious home. Mr. Armbrecht has not been many years establishing this business, and it must now be a very considerable one. In the cellars, when our traveller visited them, there were at least 10,000 gallons of the prepared wine in barrels, not to speak of the stock in bottles and the wine which had not been cocatized. No doubt Mr. Armbrecht takes the largest slice of the trade in this article; but he does not exclusively monopolise the business, and the moral which occurs to us is that chemists ought to see that the modern tendency to take some medicines in vinous combination should work to their benefit, rather than to the advantage of the wine dealer. In other words, it seems to us that the medicinal-wine trade is now important enough to chemists to make the licence almost a necessity in good-class businesses.

Before leaving, conversation turned on the past and present methods of learning the pharmaceutical business. Mr. Armbrecht was, as may be assumed from his name, apprenticed in Germany; his master lived at Hamburg; and he was a master worthy of record. Mr. Armbrecht showed us a series of volumes filled with manuscript records of his studies during his apprenticeship. This one contained reports of lectures on the elements of chemistry; the next, descriptions of botanic specimens gathered in early morning excursions; another, notes on pharmaceutical work; another, studies of materia medica; and so on. The master would never allow his apprentices to take notes during a lecture; but, on returning home, each had to write out his report of what he had learned, with diagrams of apparatus and representations of formulæ. To most of these some slight correction or addition appears in the master's handwriting. And this system was carried through all the subjects. Every alkaloid and nearly every chemical was made on the premises, if not for business purposes, as experiments. Our interviewer forgot to ask if the master made a fortune; but he left with the conviction that an honourable recognition and a persistent performance of duty were not exclusively English qualities.

JOHNSEN & JÖRGENSEN.

Messrs. Johnsen & Jørgensen have recently fitted up a new showroom for their glass bottles, and our Traveller went to have a look at it also. The showroom occupies the better part of the second floor of the nice old house in Savage Gardens (not so many years ago the dwelling-house of a City merchant) in which the firm have their offices. Bottles are ranged upon stands and in showcases all along the sides of the apartment. They are all samples, no two alike; and as there must be at least 1,500 altogether, the buyer who could leave Johnsen & Jørgensen's showroom without having found anything to suit him must be really

too difficult to be worth cultivating. The firm now represent twelve glass-bottle works in Sweden, Denmark, Germany, Belgium, and France, for whom they sell in this country and in the colonies. These works form a syndicate among themselves, and their agents who receive the orders allot these for execution to the various works, according to their capacity. The glass-bottle department, Mr. Jørgensen told us, has grown to such dimensions that it now occupies the whole time of one of the partners. The colonial trade is particularly brisk, but the system of the firm is not to deal directly with colonial buyers, but to pass all orders through shipping firms in this country. Samples, indeed, they are willing to send out direct, but, for the rest, "live and let live" is their motto. There is always something new coming out in bottles, though it is probably more difficult to introduce novelties among English buyers than among any others. Just now a new oil-bottle is all the go. To the inexperienced eye it looks very like any other oil-bottle, but to the practical man it possesses the important advantage of being "turned" instead of "firm blown"—that is to say, the molten glass is turned round and round by specially experienced workmen, whereby the bottle assumes much greater evenness of make, and the rim, always perceptible on firm-blown bottles, is done away with. Beer- and wine-bottles are the principal lines with the firm so far as quantity goes; after that come chemists' bottles. The beer-bottles come mostly from Sweden, mineral-water and hock bottles from Germany and Belgium. One of the ugliest bottles in the lot, it seemed to us, was the Gilka bottle—a big amber-coloured, octagon, round-shouldered production, of very uneven metal (apparently blown so on purpose). It derives its name from a liqueur much affected by the natives of certain parts of Germany, and if the contents are as ill-favoured as the flask we may think ourselves lucky that neither the one nor the other has been able to find a footing in this country.

As our representative passed his eye along the solid battalions of amber, blue, green, white, and golden-coloured bottles for a last impression of their diversified shapes and uses, he was attracted by two small-sized ones—one octagon and amber, the other oval and white—which seemed to him particularly attractive. The inscription "Sequah—usage externe," blown upon the side of one of them, at once revealed its use. Not long ago Sequah ordered 2,000 gross of the amber kind.

Personalities.

MR. BOSTOCK HILL has been appointed analyst to the Warwickshire County Council at a salary of 350*l.* per annum.

MR. A. H. FERRIDAY, chemist and druggist, Oakengates, Salop, has purchased the business of Mr. R. H. Shaw, of the same place.

MR. WILLIAM DUNCAN, of Hill Street, Clapton Common, has acquired the business of Mr. Mundy, and will carry on the same at that address.

MR. JOHN R. GILMOUR, eldest son of Mr. William Gilmour, Edinburgh, has just passed the second M.B. examination of the University there with "distinction."

MR. JOHN HALLAWAY, pharmaceutical chemist, is about to remove the business he has carried on for many years at Carlisle to more central premises in Devonshire Street, Carlisle.

DR. WALTER H. INCE, who for some time has been a chemistry demonstrator at Liverpool University College, returns to London to take up a similar position in St. Thomas's Hospital Medical School.

MR. J. CANN, pharmaceutical chemist, of Lawfield Street, Dartford, has been appointed by the Dartford Rural Sanitary Authority to supply the disinfectants required for use in all the districts of the Union.

DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Wheeldon, William Henry, High Street, Knighton, chemist, druggist, seedsman, ale, beer, porter, and wine merchant. Deed of assignment for the benefit of creditors. Trustee—Edward Oldbury, High Street, Knighton, grocer and provision dealer. Dated July 19, 1892; filed July 21, 1892. Unsecured liabilities, 2,978*l.* 15*s.*; estimated net assets, 1,226*l.* 11*s.* 8*d.*; creditors fully secured, 6*l.* The following are scheduled as creditors:—

	£	s.	d.
Adams, R. & T. F., Birmingham	18	7	7
Ayrton & Sanders, Liverpool	15	0	1
Birmingham District and Counties Bank, Knighton	538	10	5
Cooper, Taber & Co., London	53	0	0
Cooper, Wm., & Nephew, Berkhamsted	24	7	0
Coulthurst & Harding, Bristol	15	14	0
Dicksons (Limited), Chester	37	16	11
Evans, Lescher & Webb, London	54	17	0
Henson, J., Derby	11	14	0
Lichfield Brewery Company (Limited), Lichfield ..	144	2	1
Lichfield City Brewery, Lichfield	31	14	0
Maw, S., Son & Thompson, London	12	0	0
Oldbury, E., Knighton	77	10	0
Oldbury, H. J., Knighton	23	18	7
Radnorshire Company (Limited), Knighton ..	11	11	1
Selkirk, Brayley, Butler & Co., Bristol	17	3	2
Southall Bros., Birmingham	44	1	8
Steadman, Mrs. C., Bucknell	11	2	11
Thompson, H. A., & Co., London	10	5	0
Wheeldon, Charles William Thompson, Derby ..	1,603	9	2

Henderson, Christopher, Town End and South Queen Street, Morley, chemist and druggist. Deed of assignment for the benefit of creditors. Trustee—William Hayes, Albion Street, Leeds, accountant. Dated, July 16, 1892; filed, July 21, 1892. Unsecured liabilities, 190*l.* 12*s.* 7*d.*; estimated net assets, 95*l.* The following are scheduled as creditors:—

	£	s.	d.
Heath Brothers, Manchester	14	16	10
Humphrey & Co., Bradford	35	10	0
Pickard Brothers, Leeds	22	0	0
Seeley, Herbert W., Halifax	45	0	0
Simcock, Thomas, Leeds	10	3	11

And 23 under 10*l.*

Gazette.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATION.

Sinclair, Kate (carrying on business as the Sayo's Challenge Remedies Company), Liverpool, patent-medicine vendor.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Tanner, John, Queen Anne Street, W., and Newington Causeway, M.D., M.R.C.P., M.R.C.S., physician, and carrying on business at both addresses, in partnership with J. Barbour and A. McKean, under the style or firm of Tanner, Barbour, and McKean—discharge granted.

SCOTCH SEQUESTRATION.

Anderson, W., Glasgow, veterinary surgeon, August 1, at 12—Faculty Hall, Glasgow.

FROM MID TO WEST.

THE pharmacist interested in his professional brethren would hardly leave the "faithful city" without having a peep and a snap-shot at the famous establishment where the great discovery of Worcestershire sauce was made.

Lea & Perrins came into possession of the business with which their names became so intimately associated in the



early part of this century. A Mr. Guise opened the shop about 1780, and John W. Lea was an apprentice with him. He succeeded his master, and subsequently took William Perrins into partnership. Worcester has had the reputation politically of always being the last stronghold of the falling cause, but its commercial importance has been more than commensurate with its size. In the days before railways it was a sort of metropolis for Wales and the West Midland counties, and the fame of its china has never been eclipsed. Perhaps, however, there are more people who know its sauce than all those put together who could tell anything about its battles, its bishops, its music, or its china.

Mr. Lea was in his shop one day when an old Indian officer came in and asked for some hot sauce; he could not get any hot enough. Mr. Lea bethought himself of an old jar in the store-room which had been neglected for years. It was formerly made for "a nobleman in the county," but the nobleman had departed, and Lea & Perrins had a stock of his sauce on hand. The Indian officer tried it and was delighted. He recommended it among his chums, and a demand sprang up. To meet the English palate the fierce heat of the original had to be modified, and Worcestershire sauce was established. This came to pass soon after the year 1830.

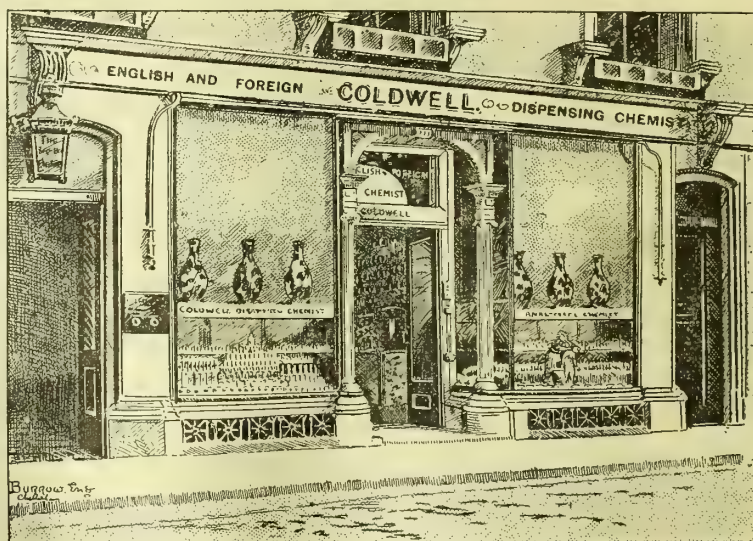
Messrs. George & Welch purchased the drug business in 1865. They have conducted it on the same class lines as their predecessors, and they have introduced some specialities of their own. Mr. Welch retired in 1870, and the present partners are Henry George and W. H. Maxey. Mr. Maxey recently owned one of the chief dispensing businesses in Sheffield, and was formerly an assistant with Messrs. Savory & Moore.

Send the camera on by train, and take an evening walk across the Severn Valley to Malvern. The varying tints and shadows on the Malvern Hills as they gradually charge their aspect will well reward the very moderate exercise. Coming nearer, the numerous Malverns—Great, Little, North, West, Link, and Wells—are seen belting the range of hills with their hotels, villas, and water-cure homes. In the centre of Great Malvern, on the terrace at the top of the town, stands the pharmacy so long associated with the name of the Messrs. Burrow. It is one of the best-built chemists' shops in the country, and we doubt whether there is another so finely situated. The dispenser can glance from his work and survey a charming valley in front of him some sixty or seventy miles in range. This pharmacy was established by Messrs. Lea & Perrins, of Worcester, as a branch in 1850, and was carried on under the management of Messrs. Walter and John Severn Burrow for the proprietors until they joined them in partnership in 1852, the firm then being Lea, Perrins & Burrow. Malvern growing in size and importance year by year, the business was rapidly developed, and became one of the most important pharmacies in the Midlands, both in the extent of its business and the high character it attained.

The senior partners retired about the year 1856, and the pharmacy became the sole property of the Messrs. Burrow, who personally directed its operations for upwards of a quarter of a century. They had during those years established and developed an extensive branch business in mineral waters, availing themselves of the exceptional purity of the Malvern springs. Some fifteen years ago Messrs. Burrow retired from the pharmacy in favour of Mr. E. Metcalfe, who disposed of it in turn to the present proprietor, Mr. David Brainard Coldwell, under whose able management the establishment continues to flourish. Mr. Coldwell has followed the lines of his predecessors, whose assistants were all qualified men. His

pharmacy is registered as a station of the Meteorological Society, and observations are taken daily by verified instruments.

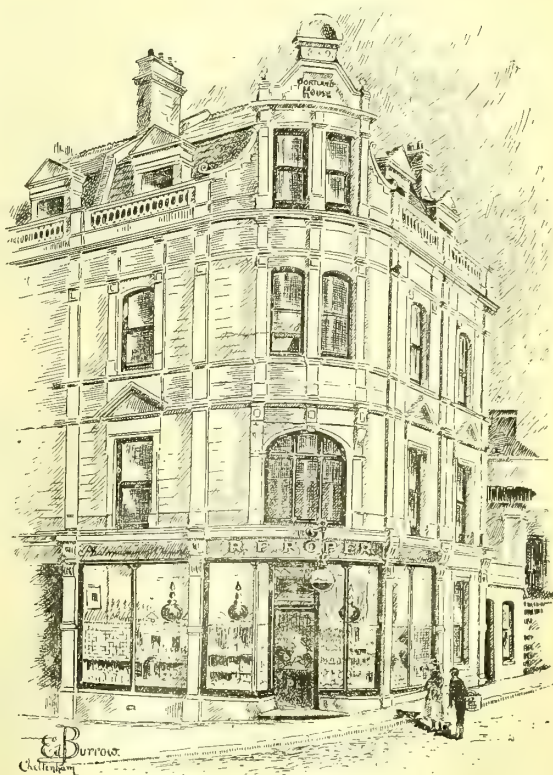
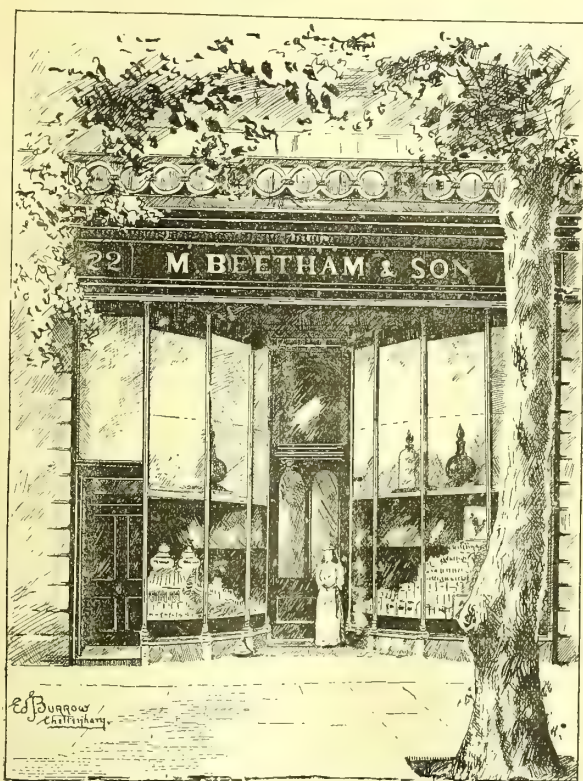
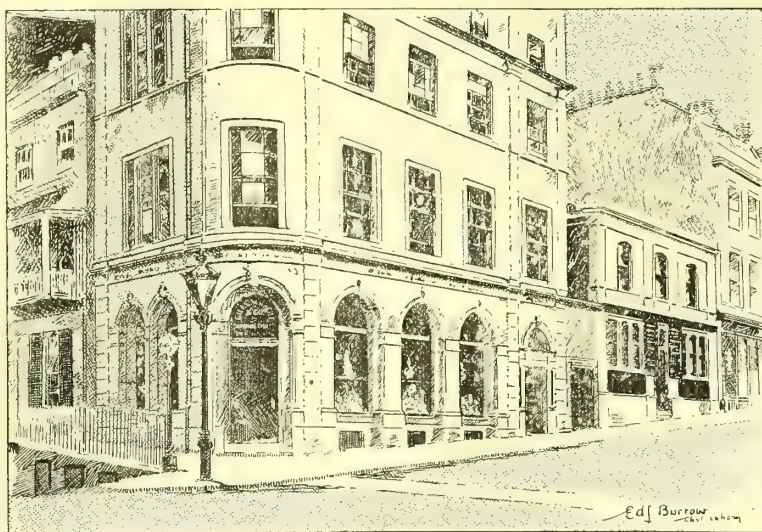
The attractive establishment of Messrs. M. Beetham & Son in the Promenade Villas, Cheltenham, succeeds a much more modest-looking pharmacy, opened in 1845 in the High Street. The business was founded by Mr. M. Beetham, who has retired from active participation in its management for



some four or five years, and his son, the present proprietor, has developed a very important wholesale trade, first in corn-plasters, and later in the famous "Glycerine and Cucumber." Mr. Beetham makes a hobby of photography, and is famous in the district as a camerist.

Bristol is a great place for pharmacy. Cutting is said to have been started there. It is always represented on the

his son, Mr. Richard William Giles, were the proprietors for over fifty years. In 1881, after the retirement of Mr. Giles, Mr. George F. Schacht joined the firm, and amalgamated the business that he had carried on for many years in the same locality. The present owners are Messrs. James Walter White and Alexander Towerzey, who became partners some twenty years ago. They have a large dispensing and retail



Pharmaceutical Council, sometimes doubly so, and has now chosen one of its members of Parliament from the drug trade. We go this time for our specimen shop to that which combines two famous names in the style under which it is conducted—namely, Messrs. Giles, Schacht & Co. This pharmacy was founded in 1821 by Mr. R. B. Giles, who with

trade of the best class, as well as a wholesale and export business in bismuth and pepsin specialities that are known throughout the world. Mr. Schacht was the inventor of the fluid preparation of bismuth named "liq. bismuthi." The smaller building adjoining the retail premises contains warehouse and stock-rooms, with laboratories fully equipped

with steam apparatus for the manufacture of all galenicals, and for analyses and private research. The names of many well-known pharmacists at home and abroad are contained in the roll of apprentices that have received their training amid these surroundings.

Mr. Roper's new shop at the corner of Tavistock Road and Portland Place, Plymouth, is now, perhaps, the best pharmacy in the Three Towns. It is close by the premises which Mr. Roper has occupied for many years, and occupies the ground floor of an imposing building which Mr. Roper has had erected from the design of Mr. Harvey, at a cost of 3,000£. The spacious and well-fitted windows give a very effective outside appearance, while inside the recess-labelled bottles, with which the shelves are furnished, are in good keeping with the general style. Laboratory and dental rooms are reached by side doors from the street, and beyond the latter is a dentist's workshop. This business is conducted by Mr. R. F. Roper, assisted by his brothers, Messrs. F. A. and H. A. Roper. All of them are pharmaceutical chemists.

Notes of Novelties.

SOME HERBAL NOVELTIES.

It is considered to be a gratifying thing, from the temperance point of view, that there is an increased demand for beverages of the herb-beer type, which can be brewed at home and which are characterised by their low alcoholic content. Messrs. Potter & Clarke, of Raven Row, E.C., have in this connection now added to their packets of dry herbs and liquid extract for herb beer a dry extract (Payne's original) which, we should think, will be a popular article. This is presented in a solid cake, which contains in itself all the bitter and flavouring ingredients required for a brew. It is perfectly soluble in hot water, and, owing to its portability and neatness, it is likely to be a favourite. The firm continue to give their careful attention to the packing of herbs in popular form. They are now putting up a sixpenny dandelion coffee (Dr. Thompson's). Another novelty which they send us is the "Clove Pink" tooth-paste, a refreshing and highly-detergent dentifrice. It is put up neatly in collapsible tubes to retail at 3d., 6d., and 1s., and is such a bargain that it well deserves the synonym, "The People's Dentifrice."

STEPHENS'S KNIFE-POWDER.

THIS we have had subjected to trial, and the report made to us is that the powder gives knives a remarkably bright polish with very little rubbing, and with no mess. It is a white powder, put up in tins with perforated top, and is an article which chemists can handle with credit to themselves. Messrs. Stephens & Co., of Kidwelly, South Wales, are the manufacturers.

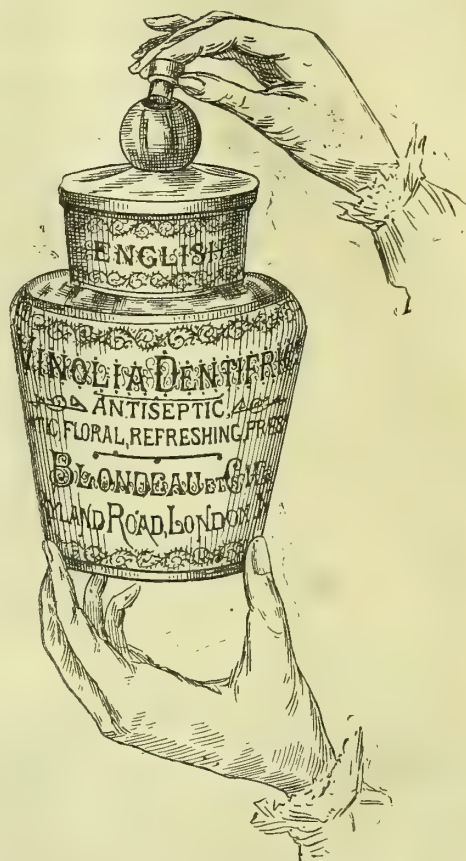
"LACTOMALTINE."

MESSRS. ANDERSON & Co., of Edinburgh, are putting up a combination of malt extract and the solid constituents of milk under the above name. It is intended for those to whom cod-liver oil is unbearable, and the delicacy of this preparation is decidedly in its favour, while its value as a nutritive is well spoken of.

BLONDEAU'S "VINOLIA" DENTIFRICE PATENT STOPPER.

MESSRS. BLONDEAU ET CIE. have patented a glass stopper to use with their registered "Vinolia" dentifrice bottle. This

patent glass stopper is funnelled out from below upwards so that the apex of the funnel is an aperture about a quarter of an inch in diameter in the top of the stopper. In this little opening in the glass stopper fits a small vegetable ivory



stopper. When this ivory stopper is removed, any desired quantity of the powder can be easily poured out on the tooth-brush; and if the glass stopper be removed, even the tooth-brush itself can be introduced into the bottle. The design of the patent is to do away with the necessity of inserting a damp brush into the bottle, and to preserve the perfumes and desirable qualities of the dentifrice till the very last is used.

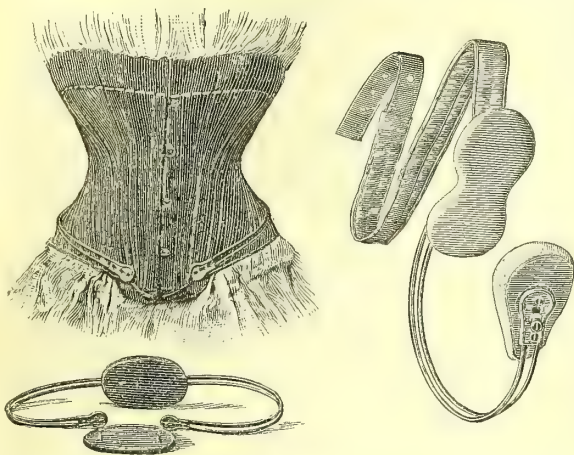
NEW CHEST-PROTECTORS.

MR. VINCENT WOOD has been showing us a new style of chest-protector which he is putting before the trade for the winter season. The material from which the protectors are made is a superior kind of amadou, of a pale buff colour, and with a beautiful velvety surface. It makes, as may be imagined, a handsome article when trimmed with silk binding, and the character of the material (it is 4 millimeters thick, perfectly porous, and highly absorbent) makes it an acceptable addition to this class of surgical goods. Mr. Wood makes the protectors plain or lined with his pine-wool felt, and throat-pieces, knee-caps, and the like are also made from the same material. In the matter of electric belts, Mr. Wood has just made an improvement upon those worn by gentlemen. This consists of a scrotum pouch, which may be worn during horse exercise or at any other time, and removed when desired. The belts are both broad and narrow, and the electric elements of zinc and copper are connected by insulated wire throughout. In cases where the galvanic

current is too weak, it may now be supplemented by the power from a portable battery supplied by Mr. Wood, for which the belt is provided with suitable attachments. This brings the belts well within scientific lines.

FORD'S PATENT ABDOMINAL SUPPORT AND TRUSS.

MR. H. C. QUELOH, of Ludgate Square, is wholesale agent for a new abdominal support which has been patented by Messrs. Ford & Parr, who are the makers. The patented feature of this new belt is that while the steel spring-bands are made to pass round the body outside the corset, the abdominal support passes under the corset as shown in the engraving, being so made that pins attached to it pass through the corset and are screwed tightly to the spring-



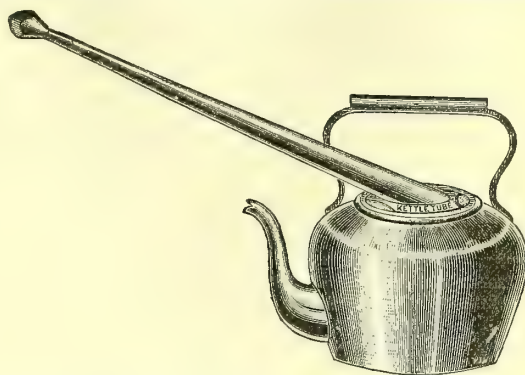
bands. A very light and comfortable apparatus is thus supplied, the special advantage of which is that it cannot "ride up" or get displaced from its proper position. In the construction of Ford's patent truss, a similar light steel spring-band, which, being open, makes the truss light and cool in wear, and a very conveniently-constructed method of adjustment for the pad, are adopted.

"SAMBULINE."

MESSRS. OSBORNE, BAUER & CHEESEMAN have introduced for summer use a new jelly similar to their well-known glycerine-and-honey jelly, but put up in an entirely different form, and differing in character. The old jelly is one which was intended for winter use, but it has gradually been adopted also for anointing the skin during the summer months. The makers think they can provide the public with a more suitable article for that purpose, hence the new "Sambuline." This is a pale-green translucent jelly, having the pleasant odour of elder-flowers. It is put up in collapsible tubes, and when applied to the skin it soothes the smarting of sunburn and leaves the skin in a nice soft condition. Recently there has been an unusually brisk demand for the winter jelly. Those who look into the matter will find that the reason of this is that "Sambuline" has been advertised, and in such a way that the old name is the one which people have carried in their minds. Chemists should, therefore, take note that there are two articles, and while the season remains they may do good business in "Sambuline." It is scented, we understand, with ol. sambuci flor.—a somewhat rare essential oil.

PATENT VAPOURISING-TUBE.

THIS is an article which W. B. Fordham & Sons (Limited) are placing on the market. It is a lid-attachment and bronchitis-tube, which may be fixed to any kitchen kettle



The arrangement is so simple, and the convenience so great, that the wonder is we have had nothing of exactly the same kind before. The tube retails at 1s. 3d.

THIOCAMF.

THIS powerful disinfectant, which Messrs. T. Tyrer & Co. are making under Prof. Emerson Reynolds' patent, is an amber-coloured, syrupy liquid, and on opening the bottle the strong sulphurous odour which is immediately given off convinces one of the active bactericidal character of the disinfectant. A 2a. bottle gives off 20,000 cubic centimetres of disinfecting vapour.

BANKRUPTCY REPORTS.

Re THE SAYDI'S CHALLENGE REMEDIES COMPANY, Byrom Street, Liverpool.

KATE SINCLAIR, and her sister, Edith Mary Sinclair, who traded in Byrom Street, Liverpool, as The Saydi's Challenge Remedies Company, were called on their adjourned public examination, but did not appear, nor were they represented. The Official Receiver having stated that the motion seeking to establish that Mr. Edwin Morris was really the trader in question had been dismissed, the examination was adjourned *sine die*.

Re C. J. COLES, 7 Mincing Lane, E.C., Colonial Broker, trading as C. & C. J. Coles.

THE creditors under this failure met on Friday, July 22, at the London Bankruptcy Court, before Mr. George Wreford, Senior Official Receiver. The Chairman reported that the liabilities amounted to about 25,000l., and the assets were very small. He was informed that the debtor was too ill to attend to business, for which reason the usual statement of affairs had not been filed under the proceedings. The failure appeared to have been partly caused by disastrous speculations in produce. In the absence of an offer resolutions were passed to wind up the estate in bankruptcy, with Mr. E. C. Moore, accountant, Crosby Square, acting as trustee, assisted by a committee of inspection selected from the principal creditors.

Re GEORGE GOODLIFFE, 117 Rendevious Street, and 97 Dover Road, Folkestone, Pharmaceutical Chemist and Optician.

THE adjourned examination of this bankrupt was held at the Canterbury Bankruptcy Court on Friday, before the Registrar, Mr. George Furley. Mr. Hall, who appeared for the trustee, having asked the bankrupt a few questions, the public examination was closed, debtor being requested to furnish the trustee with an account of all the moneys he had borrowed from his mother.

A JUBILEE EXHIBITION.

CONTINENTAL authorities will have it that a twenty-fifth anniversary is a jubilee. In that respect the annual museum of the British Medical Association, which was opened at Nottingham on Tuesday morning, is the jubilee one, for it is the twenty-fifth of the series. "Museum" is a refined expression for the affair—at least, this year. All the characteristics of the exhibition are there, and more prominent this year than ever before that crowning characteristic—backwardness. Not that the exhibitors were laggard, but solely on account of the fact that the series of rooms in which the goods were displayed were still in the hands of carpenters, glaziers, and others of that ilk on Monday morning.

While we write, the meetings of the Association are in full swing at the University College, and it is but fair to say that these could not be better housed. The members may attend the whole of the sections in one day without fatigue; but the probability of their finding their way to Sections A, B, and D of the museum is another matter. The reason is that there has been a new extension of the engineering department of the College, and the sections named have been placed there. It is not a get-at-able place at all. On entering the College one turns to the right, then by poster he is directed to the left along a winding passage; that begins the journey. Now two short flights of steps have to be mounted, and if one is quick at seeing round a corner he will detect a "Books and Instruments" room to the right. There are more instruments in a room above, but two flights of stairs have again to be mounted, and still two more before the visitor reaches the general drug exhibits, which are scattered over one large room and three small ones. It is all very bewildering, and that room in the odd corner near the roof quite needs this placard,

DON'T MISS
THE
DRAWING ROOM,

to assuage the fierce ire of the exhibitors placed therein. Some of the exhibitors wanted THE CHEMIST AND DRUGGIST reporter to come down heavy on someone for all the bother. But whom shall we scarily? The secretaries were all courtesy. They were working like Trojans, and the fact is that all exhibitors who were on the spot had their goods displayed very handsomely by Tuesday morning. Let us hope that the preliminary inconvenience will be compensated by good business, that the initial grumbling will have changed to unqualified satisfaction, and that the disorder will not occur again.

The character of the exhibition as a whole is quite up to previous years. We miss some old exhibitors, and a few are here who have not ventured before. From the reportorial point of view the arrangement is not advantageous for classification, and perforce we follow the order given in the museum-catalogue. First, then, there is the large room on the

SECOND FLOOR OF THE TECHNICAL SCHOOLS.

Here JOHN RICHARDSON & Co. (LIMITED), of Leicester, have the whole of one end of the room on entering devoted to their pharmaceutical products. It is an elegant and imposing exhibit, consisting of three pyramids, made up of coated pills and compressed drugs in the centre, flanked with smaller pyramids of special pharmaceuticals, one at each side of the centre one. A good feature in the case of most of the liquors, syrups, and other liquid preparations is that they are shown in the style in which they are sent out, mostly 1-lb. bottles, and it is noticeable that the bottles used differ in form, this giving distinctiveness and, at the same time, ensuring a certain degree of safety in dispensing. For example, a dispenser, would not confuse between "peptocolos" and liq. ergotæ ammon. This introduction of distinctiveness is decidedly advantageous in practice although it may be a violation of the old-fashioned notion that one style of bottle should be adhered to by a firm. In the exhibit we noticed that considerable prominence is given to suppositories and other forms of medication of a similar nature, while the firm are now giving close attention to the manufacture of gelatine capsules, and turn out beautiful

products in which the gelatine covering is so thin that the size of each capsule is perceptibly reduced. In a room on the first floor J. Richardson & Co. also exhibit; their collection here comprising a fine dispensing-cabinet for doctors, surgical instruments, and various publications.

THE LIQUOR CARNIS COMPANY (LIMITED) have not Liberty to aid them in their display this year, but they show their goods in excellent style, and distribute samples with a free hand, giving prominence to Maltocarnis and Jelly-Carnis. The former diet-adjunct we have had occasion to speak of in favourable terms before now. The jelly appears to be made on the principle recently described by us, the object being to combine the pure uncooked juice of beef with a gelatinising body without coagulating the albuminoid constituents of the juice. In this the company have succeeded, and the product is a pleasant-tasted jelly, which is, doubtless, highly nutritious, and of special value for feeding patients whose strength is greatly reduced. The company are developing the preparations branch of their business, so that with the Liquor Carnis their exhibit has quite an attractive appearance.

THE SANITAS COMPANY (LIMITED) are making a feature just now of washable and non-washable distempers with which 10 per cent. of "Sanitas" is incorporated. These are shown in their Nottingham exhibit along with samples of the many specialities which the company now produce from "Sanitas," their appliances—automatic disinfectors, inhalers, and disinfecting fumigators—being placed in the forefront. A few trifling but structurally important alterations have been made in the automatic disinfectors since we noticed it, the effect of which is to make it a neater and more serviceable article.

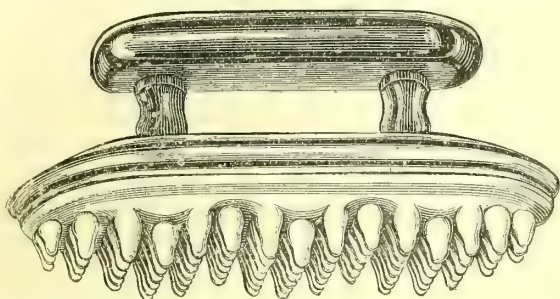
THE MALTINE MANUFACTURING COMPANY and CARNRICK & Co. (LIMITED) conjointly exhibit combinations of Maltine, liquid and solid peptonoids, and Carnrick's soluble food. The latter, as an infants' food, has a peculiarity which is worth mentioning—viz., that the cream of the milk used in making it is removed and replaced by cocoa-butter. This bold step was undertaken on the suggestion of Professor Atfield, the object being to present a milk-food free from the tendency to become rancid. This exhibit is very handsomely displayed, and so is that of the BOVININE COMPANY, which consists solely of Bovinine. Beside this, though occupying a small space, is a stand of Downes' solution. This solution is a colourless iodine devised by Mr. R. J. DOWNES, a well-known Irish pharmaceutical chemist, but, though colourless, it is very active, and has been known to produce iodism, a symptom which we have never heard of in connection with the alkaline colourless iodines. Mr. Downes' solution is really a liniment—that is, it is rubbed into the skin, which it does not vesicate. THE SANITARY WOOD-WOOL COMPANY have a good assortment of Hartmann's wood-wool specialities on show, all of which have previously been referred to in this journal except the complete sanitary outfit for accouchement. This is a very convenient box of articles, which, we should think, druggists will be able to sell as a whole. The company are also showing a new sterilised wood-wool dressing. This is a roll of wool, which, after sterilising, is tied up in parchment-paper like a sausage, the ends of the packet being packed with boric-wool. It is placed in the steriliser again, and the ends of the package are then tied tightly, so that the air may circulate through it, but as bacteria are said not to go through a wool-filter, the dressing remains aseptic.

BURROUGHS, WELLCOME & Co's is the next exhibit in the room, and it fills up the whole of the end wall, another part (consisting mainly of surgical dressings and appliances and medicine-chests) being on the floor below. One Burroughs' exhibit is very like another until it is looked at closely, for tabloids, Kepler malt preparations, elixoids, Fairchild's digestive ferments, valoids, and the like always stand to the front. For the first time this year, however, medical men have the opportunity of testing and tasting essence of malt which goes tastefully with cream and soda water, and some even add a dash of whisky to it without the cream. These combinations will probably have a full degree of popularity in suitable places, but we are inclined to predict that the Kepler essence will have its reputation *par excellence* in the nursery as a natural supplement to the diet of children. In regard to tabloids, it is more than ever noticeable that Burroughs, Wellcome & Co. are

pushing the sugar-coating to a fine art, and they now place on the market a large number of special combinations in this lenticular form, which is so well adapted for swallowing. We notice that the anti-constipation tabloid is now put with a white sugar-coating. This combination is as follows:—

	Grain.
Aloin	$\frac{1}{2}$
Ext. bellad.	$\frac{1}{8}$
Strychnin.	$\frac{1}{16}$
Pulv. ipecac. . . .	$\frac{1}{16}$

One may be taken thrice daily, but as a matter of fact one before dinner is an effectual preventive of bilious sickness. A distinct novelty is exhibited in the shape of a tiny tabloid which represents 10 minims of dialysed iron apparently in an undecomposed state, for the tabloid forms a clear solution with water. An allied tabloid is the Bland's pill, a cream-coloured 4-grain tabloid, which contains, we are told, the ferrous carbonate ready formed. With water these tabloids become green. The firm now stock a variety of ichthyol specialties, the newest being an ointment, and $2\frac{1}{2}$ -grain tabloids which are sugar-coated. Lanoline, we hear, is growing steadily in esteem. While inspecting the surgery exhibit our representative was shown by Mr. Burroughs a massage rubber which is intended to enable



those who require the benefit of massage at home to have it without employing a professional rubber or shampooer. The massage rubber consists of a serrated and waved surface of specially prepared indiarubber, attached to a brass plate, fixed in a polished hard-wood body, with ebony handle, arranged in such a position as to render the use of the massage rubber easy and pleasant, and at the same time affording a capital form of exercise. Messrs. Burroughs, Wellcome & Co. may take up the agency for the rubber; at any rate, they will answer inquiries in the meantime. They also exhibit Milne & Co.'s antiseptic dressings, the manufacture of which has quite recently changed hands, and medicine chests and cases of all kinds are prominent on their stands.

THE UNIVERSAL TEA COMPANY, LIEBIG'S WINE COMPANY, and RIDDLE & Co. have exhibits close beside the last described, but the goods are substantially of the character which have previously been described. Riddle & Co. now have, we may add, a concentrated lemon-squash, which, like their lime-juice, is Stower's brand.

JOHN WYETH & BROTHER, who are represented in this country by Mr. W. F. Horton, 30 Snow Hill, are exhibiting Wyeth's beef-juice, which we recently reported upon, and a number of interesting pharmaceutical preparations, the chief of which is a series of opthalmic discs, both B.P.—that is, made of gelatine—and compressed. In the latter case the basis is a soluble and neutral inert powder, with which the active ingredient is mixed in solution, so that perfect division of the active ingredient is insured before the mixture is apportioned and compressed. They are very pretty preparations. We understand that the firm are to introduce the whole series of their compressed pills into the English market now. They also exhibit a few elegant digestive preparations, such as granular soluble pepsin, amylopsin, and an elixir of digestive ferments, the peculiarity of which is that it contains amylopsin, one of the constituents of pancreatic juice.

Our representative had a short conversation with Mr. John Salamon, of SALAMON & Co., who have lately introduced what they call "purest chloroform," a brand which has

created some attention in this country. It is made, we were told, from chloral hydrate, and the process of purification is a special one. The specific gravity of the non-alcoholised article is 1.502, of the alcoholised 1.496, at 15.5° C. We have not ourselves examined it. The trade, up to the present, has been with Germany and the Continent mainly.

TUCKER & Co. exhibit eucalyptus oils and a large number of preparations of the antiseptic class made therefrom. The same firm exhibit U.S.P. and other American elixirs, and a series of preparations which they call "oleosacchari," which are combinations of essential oils with sugar, for making B.P. *aquæ*, and generally for flavouring. They resemble, in short, the *oleosacchara* which are so popular on the Continent.

CHRISTY & Co., of Lime Street, E.C., have a very neat exhibit this year. The longer the firm exhibit the more inclined they seem to be to pin their faith to raw drugs. This week preparations and specialties are the chief attractions, if we may except a fine dried specimen of pichi in flower, and a specimen of *Cactus grandiflorus* fruit preserved in spirit. Our reporter was informed that the demand for antrophors, or spring bougies, is on the increase. These, we may state, consist of a close spiral of brass wire, upon which is placed a layer of insoluble elastic composition. The common size is that of a No. 4 or 5 catheter. Upon the basis thus made a layer of a suitably medicated mixture is deposited (by simply dipping or otherwise). There is thus provided a bougie for use in the treatment of urethral diseases, and a guard for keeping the walls of the urethra apart, which is no mean consideration in some cases. This year we observe for the first time that these antrophors are made for treatment of disease of the prostate. In these the lower half of the spiral only is coated with the medicament. Another attractive feature of the exhibit is Morstad's cachet apparatus (in several styles) and empty cachets. Messrs. Christy & Co. have also added to their many ventures the gelatine-capsule trade. Those which they show are of foreign make, but they are nice, and we have now the option of getting from the one quarter the "Palma-Christi," sweet as honey, and in flavour delicate as Cadbury's Mexican chocolate, and tempting capsules containing the old fashioned castor-oil. Beside this exhibit is an excellent one by G. MELLIN. Baby's food is the chief part of this, but equally prominent is Mellin's cod-liver-oil emulsion. The formula of this is given as follows, and Mr. R. H. Davies, of the Apothecaries' Hall, says the composition of the emulsion is "in strict accordance" with it:—

Ol. morrhuae	6 fl. oz.
Gum. arabic.	q.s.
Sacch. alb.	q.s.
Aq. cinnamonomi ad ..	12 oz.
Misce ut fiat emuls. et adde:	
Calcii hypophosph. ..	48 gr.
Sodii hypophosph. ..	48 "

Adult dose: One to two tablespoonfuls. Children: One to two teaspoonfuls. Taken, as a rule, after meals, and at bed-time if necessary, always commencing with a small dose, and gradually increasing.

The question, of course, is, How much gum and sugar, and how made? We were pleased to hear from the representative of SACKLINS & Co. that the trade have responded well to their announcements in this journal regarding their mustard and linseed poultices. A packet of the latter, which had been put up eight months, was opened in our reporter's presence, and he found the meal to be perfectly free from rancidity. This is due to the fact that the meal is packed in the rectangular bags when freshly ground. Two per cent. of boric acid is added to it, and each poultice is enclosed in a sheet of parchment-paper. A curious point about the linseed poultices is that, although they are used over and over again for twenty or thirty times, which they can be, very little of the boric acid is dissolved out. This is taken as a proof that the poultices are always aseptic.

JOHNSON & JOHNSON (LIMITED) give prominence this year to the arrangements which have to be made in a private house for a surgical operation on the antiseptic principle. The arrangement has been drawn up for them by Dr. John B. Denver, of Philadelphia, and it is a nice one for displaying the different kinds of dressings and utensils required; in fact, it is to show Johnson & Johnson's make of surgical

dressings. We noticed the use for covering tables and for mops and towels of the company's new product, "Lintine," which is cotton compressed into sheets like soft blotting-paper. This is suitably medicated, and each medication has its peculiar colour. The exhibit also includes a full series of plasters, Upjohn's friable coated pills, and gelatoles, a class of ointment-compounds such as Unna recommends.

CORBYN, STACEY & Co. are showing two splendid green specimens of the peculiar stem of *Cactus grandiflorus* which has five angles, upon the edge of each of which the flowers are borne. These were a good set-off to the preparations of the drug, which has been used rather extensively since Dr. Aulde recommended it for heart and other organic troubles some time ago. Corbyn, Stacey & Co. also show non-alcoholic tinctures such as have been used in the London Temperance Hospital for many years, but which they are now carrying further than has been done at the Hampstead place. The firm appear to appreciate the difficulty of getting a correct designation for the preparations, as they use the word "tincture" with reserve. Their exhibit generally is of a purely pharmaceutical character, and many of the specimens shown are distinctive—e.g., there is a group of medicated collodions; a new syrup of ferrous and potassium bromides; a new aromatic and sweetened castor oil; and nearly all that is new in materia medica is represented either in the original state or in some elegant galenical form.

After passing an attractive exhibit by HENRI NESTLÉ of the world-famed milk-food, the visitor reaches a display by T. HOWARD LLOYD & Co., who, as a firm, have not before been seen at this annual museum. It is not a large, but is a tastefully displayed, exhibit, comprising compressed tablets, coated pills, and granular effervescent preparations. Of the pills we need only add to what has been said before that pink and blue coatings as well as white are exemplified, these and other colours now being wanted sometimes for pills of special composition which retailers devise. The granular preparations are a new department of the firm's, and from our inspection of the samples we can say that they have begun well. The exhibit included a fair representation of liquid preparations, such as fluid extracts and syrups, a "Bromochloral" being amongst the latter. Our reporter gathered from Mr. Lloyd, jun., in the course of a conversation, that "Lanadepts" is made by the firm—that is, they get the rough suint and purify it by chemical means, adding 30 per cent. of water to make it correspond with *adepts lanae*, B.P.

THE ENGINEERING-ROOM

now commands the attention of the visitor, and as we enter it we pass the SEDOX MANUFACTURING COMPANY'S display at the end of the corridor. "Sedox" is the naturally absorbent silky fibre which was introduced last year for surgical purposes. Since then the introducers have worked at the matter diligently, and now show various medicated forms of it, as well as sponges, diapers, chest-protectors, &c., made from the fibre. Inside the room, OPPENHEIMER, SON & Co. (LIMITED), have the central position, and here palatinoids are the principal feature next to the smart young men who speak to visitors about their virtues (*i.e.*, of the palatinoids). For example, a palatinoid of bismuth subnitrate and euonymin is the subject of comment, and a contrast with a pill of the same ingredients is the comparison. The pill dissolves slowly, and not wholly in the stomach. If it is that organ which needs the bismuth, it does not get it; whereas the palatinoid bursts open when it meets the gastric juice, and the bismuth is spread out to perform its mechanical function and specific action upon the weakened walls of the stomach. This is a distinct advantage. Bi-palatinoids also grow in kind and favour, ferrous hypophosphite being the latest thing produced—or, rather, the bi-palatinoids contain the ingredients for the production of the salt, which is thus absolutely unoxidised. Apart from these articles the company exhibit a large number of elegant liquors, of which the most recent are liquor helaline et culverine co. and liquor glabrucinae co., the latter a preparation of *Rhus glabra*, which is prescribed in urinary disorders. Crude drugs, cream of malt, and medicine-cases make up the rest of the attractive exhibit.

The arrangement of the exhibits is not altogether disadvantageous to the exhibitors, since visitors have a sense

of contrast conveyed in firms of diverse interests being grouped together. Thus, the next one tapped, if we may use the term, is that of BRAND & Co., the Mayfair specialists for invalids' foods. And it is a toothsome collection indeed, for here are the essences and jellies with which all chemists are familiar, and a new chicken jelly to tempt the palate of the invalid. A mutton jelly is another recent introduction, both these jellies having distinctive flavours, which will give that variety to invalid nutrition which is so much needed. For the healthy there are soups and jellies of all kinds, and a special feature of this year's exhibit is the prominence given to condiments, such as chutney and Mayfair Relish, as well as several of the firm's old favourites. Beside this exhibit is one by C. J. HEWLETT & SON, which contains many new remedies and compound medicinal preparations of the mist, pepsin, co. c. bismuth type. A useful selection of urinary tests for chemical use, which have been devised by the firm, is also exhibited. These comprise an alkaline bismuth test for sugar, which is perfectly stable and colourless, and when boiled in the proportion of 1 part of urine and 9 parts of reagent, darkens to deep black, according to the proportion of sugar present; the trichloroacetic acid test for albumen, which is delicate, and requires no heat; and the sulphanilic-acid test for typhoid fever, on mixing which with a typhoid patient's urine, previously rendered alkaline with ammonia, a red colour is produced. It is stated to constitute one of the earliest and most constant signs of the disease.

SEABURY & JOHNSON exhibit in an attractive way a large assortment of the products of the Seabury Pharmacal Laboratories, comprising a selection of medicated plasters in rubber combination, and plain and medicated cottons packed in various forms and of several medications. They also have a display of antiseptic gauzes put up in a new form of package, hermetically sealed, and therefore secure from atmospheric pollution. An advantage of this style of packing is that the gauzes are folded in such a way that the folds can be withdrawn from the package and cut off by the operator at pleasure. For those who do not require such gauzes medicated, the firm are now packing sterilised gauze, in screw-capped hermetically-sealed glass jars, sterilised by heat after packing and sealing. Each jar contains five yards of gauze, which unwinds from the centre, so that any required length can be cut off without removing the entire piece. We also observed the sanitary cuspidores introduced by the firm; a display of "hydronaphthol," and its preparations, and Seabury's compound sulphur candles, which we hear are still growing in popularity as a means of aerial disinfection. Dermatological plasters were another of the many items of which we took note, and an enterprising curator informed us that in respect to the delicate skins of ladies the Pharmacal Laboratories now turn out a mustard plaster of half the usual strength. Robin's linseed poultices, which we were the first to note the advantages of, are a sure thing now, but although the Seabury products of the plaster kind are fully in evidence it is apparent that the firm are cultivating with equal vigour and success the trade in antiseptic dressings.

THE APOLLINARIS COMPANY (LIMITED) exhibit in this room their celebrated table-water, as well as Hungarian bitter water and Friedrichshall. It is rather remarkable that of recent years under improved methods of collection the last-named has increased 25 per cent. in strength, but that is not so remarkable as the increase in the sales of Apollinaris. A million bottles a year of an increase means a great deal more than improved revenue to the company.

THE WOODHALL SPA (LIMITED) have a place here, not so much for the purpose of improving the sale of the Spa products as to call the attention of the medical men to the climatic advantages which Woodhall presents to invalids; and beside the company's exhibit of the natural bromo-iodine water and the salt derived from it is an imposing exhibit by the JOHANNIS COMPANY (LIMITED), which comprises simply the table-water collected from the springs at Zollhaus, and aerated with the natural carbonic-acid gas collected thereat. In a small room adjoining are several exhibits which require a note before we pass on to the drawing-room. Here the CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION (LIMITED) make an attractive show of aerated waters in syphons, and of fruit syrups. The Association has just put into stock 10,000 syphons the tops of which are lined with vulcanite, so that the water does not come into

contact with metal. Two 2 gallon syphons are an attraction here, and from these a refreshing beverage is to be dispensed in the course of the week. In the same room **GEORGE MASON & CO. (LIMITED)** are showing samples of all their invalids' specialities, such as essence of beef and concentrated beef-tea, and our reporter was told that since last year the malted food for infants which the company were then beginning to push has come into favour. Here a prominent exhibit is that of Hall's coca wine, made by **STEPHEN SMITH & CO.**, the distillers and wine merchants. "An extract of coca-leaves in good wine" is the simple manner in which they announce it, and although this is the first time that the firm have exhibited in the museum, they do their product justice. The wine differs in some respects from other coca wines—e.g., the coca flavour is sufficiently prominent that the wine cannot be mistaken for a beverage, yet it is pleasant to drink—a fact which is due to the quality of the red wine used in making it. Messrs. Smith's representative reports that Hall's coca wine has "caught on," and that his firm have been asked by the trade to go further into the manufacture of medicinal wines. The "food for gods" was appropriately lodged beside the coca exhibit in an attractive assortment of the products manufactured by **CADBURY BROTHERS**. It is difficult to conceive that cocoa is the only rival in this country to tea, and that its uses are far more varied than tea can ever be put to. Messrs. Cadbury's display gives one an idea of the manner in which the cocoa industry has been developed, for not only is their cocoa essence in evidence, but they show several of the fancy forms in which chocolate is sold. Their guinea case is a thing to make one's mouth water. It is a beautiful plush-covered cabinet with chromo panels, the seven drawers inside being filled with the daintiest comfits. The manufacture of some of these comfits and of finer qualities of chocolates is a slow process, as the chocolate powder must be kept for at least a year, in order to permit the vanilla to blend evenly and thoroughly with it. Messrs. Cadbury get into touch with medical men, as far as is possible at these meetings, by presenting them with an elegantly-bound edition of "Cocoa: All About It"; and their sample cases, containing a bulky box of cocoa essence and three packets of Mexican chocolate, help to perpetuate the "absolute purity" of the Bournville product.

THE DRAWING-ROOM.

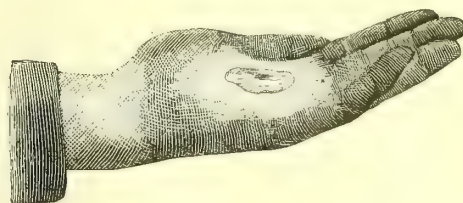
Why this title we cannot tell. "Don't miss it," we may honestly say with the museum secretaries, for there are



some good things in it. **INGRAM & ROYLE** are there with Carlsbad water and salts, Vichy, Contrexeville, and many

other natural waters which they have helped to popularise in this country, while they give special prominence to Flitwick Chalybeate Water, that highly ferruginous English water (fully a grain per oz.) which does not blacken the teeth. Next in catalogue order are **HERTZ & COLLINGWOOD**—Franz Josef, Levico, and Rosbach waters their leading lines. Their exhibit of showcards is so good that it is excusable to give a black-and-white reproduction of one of them. Here a Walachian girl is represented at a well. P. Thumann is the artist, and his picture has been reproduced most faithfully. The chromo contains some twenty colours. **BERNHARD KÜHN** is showing beside this the digestive properties of papain (Finkler), and he exhibits attractively the pure powder and its combinations as well as papain peptones and a few excellent photographs of the papaw-tree, one showing the fruit in splendid clusters. Mr. Kühn also exhibits exalgine and an extract of jambul. **JEYES' SANITARY COMPOUNDS CO. (LIMITED)** exhibit their antiseptic (creolin) and disinfecting preparations. They have just introduced a new article, "Emplastrum Creolini," made by A. de St. Dalmas & Co. This contains 5 per cent. of creolin, and is spread on calico. Obviously there is a distinct advantage in having an adhesive plaster combined with the antiseptic properties of creolin.

We do not recall having seen **BATLEY & WATTS** exhibit in the museum before. Their exhibit consists of a collection of their original liquors, such as belladonna, cinchona, opium, and senna, all of which are displayed nicely. **MCKESSON & ROBBINS** give prominence in their exhibit this year to the compound stearates and the pulverflator, which we described a few weeks ago. In connection with these Mr. Evans, their representative, was showing how water behaves towards the stearates. Putting a little of one of the



stearates on the palm of his hand, he pours about half a teaspoonful of water upon the powder, and then the water runs back and forward over the stearate as a globule of mercury would, without wetting the hand. This naturally creates considerable attraction. He also exhibits the application of liquid albolene as a hydrocarbon throat-spray. **ROWNTREE & Co.'s** "Elect" cocoa and "Queen" chocolate are shown upon the table-extension along with the malt and other pastilles which they recently introduced.

Through Messrs. F. Newbery & Sons, their European agents, **W. R. WARNER & Co.**, of Philadelphia, make an exhibit of sugar-coated pills and compressed goods, which is as attractive to druggists as it is to doctors, for here are placed a full series of those elegant show-vases which the firm have popularised. In these are many kinds of "little pills," and it will be seen from a supplement in this issue that some good anti-stamp labels may be used with these. Our reporter was shown two new combinations. First pil. cascara cathartic, according to Dr. Hinkle's formula. These pills contain aloin, podophyllin, belladonna, strychnine, and gingerine in nicely apportioned doses, and they are coated pink. The combination appears to be a good one for general use as a tonic-aperient. Then there are also Dr. Carl Seiler's antiseptic pastilles for nasal and mouth sprays and douches.

THE LIVERPOOL PATENT LINT COMPANY have their exhibit in this room. It contains samples of their cottons, lints, &c., and a new material which they call "Lustral." It is a fine white fibre of silky appearance, is naturally absorbent, and for surgical use is impregnated with 1 per mille of corrosive sublimate. **BOVBIL (LIMITED)** have a display of their ox-beef preparations in this room also, amongst those new to us being Bospur soup-powder, of which it is said that in it "animal and vegetable nourishment are so blended and concentrated that it contains 400 per cent. more actual nourishment than any desiccated or dried soup

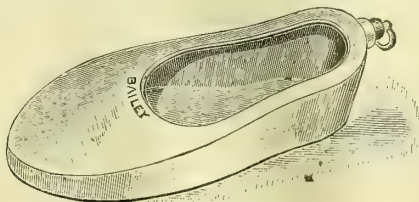
preparation in the world." It sells at 1d. per packet, sufficient for two plates of soup.

ALLEN & HANBURY'S have a certain advantage in their exhibit being placed in the drawing-room. It stands alone, as it were, and in arrangement is characterised by excellent taste. Thus, on one side we have examples of their chief medicinal specialities, including their hypoderms and other compressed tabellæ; then the various Bynia preparations, pastilles, coated pills, and other gelatine goods; and on the other side a series of infants' foods which have a distinctiveness all their own. There are three kinds in the series. No. 1 is the "first food for infants," which is adapted to infants from birth to three months. It is prepared from selected cow's milk by removing the excess of casein, and adding sufficient cream, albumen, and milk-sugar to bring up the quantities of these constituents to the required standard. The mixture is then sterilised, concentrated *in vacuo*, and preserved in hermetically closed vessels. Next is "Mother's milk food," adapted to infants under seven months, which contains all the before-mentioned nutriments, some maltose and soluble phosphates. And lastly "Malted food," adapted to infants of six months and upwards. This is a kind of improved Liebig's food, and, like the others, is sterilised. These foods, especially the first two, meet a real want in the portable infants' food department. The firm are also exhibiting Andreoli's electric ozoniser, an apparatus like a hexagon, made of metal combs meeting in the centre to form cones. Through these an electric current is passed, and while this occurs ozone is produced in sufficient quantity to permit its being inhaled for medicinal purposes.

SURGICAL EXHIBITS.

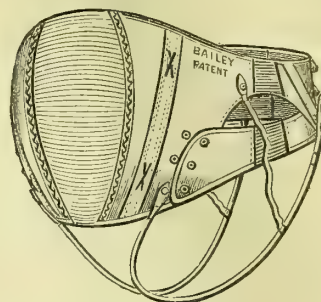
Most of the surgical exhibits are displayed in rooms on the first and second floors. Prominent amongst them is one by LYNCH & CO., in which aluminium instruments are well represented. Aluminium cannot be used for all instruments, but for specula and pessaries it has advantages over all other metals, and this fact is appreciated by Messrs. Lynch & Co. Tracheotomy tubes made from it are wonderfully light—we should think not more than 15 grains—an advantage in this case which is likely to give the metal preference over all others. As our reporter looked over the exhibit, which is quite bewildering in its variety of instruments, he had pointed out to him a 4½d. green ball-syringe, a pile of flat sponge now used as an absorbent in abdominal sections, artificial eyes, a boxwood ointment-box for applying unguents to the rectal cavity, and many forms of celluloid douches. A few sundries, such as spray-producers, cut-glass bottles, shaving-brushes, and the like, always form a part of Messrs. Lynch's exhibit, and they lead to business it would appear. The exhibit of these this year is particularly good.

W. H. BAILEY & SON, of Oxford Street, give special prominence to trusses in their exhibit, amongst them being some samples of superior finish which were highly commended at the recent Cutlers' Hall Exhibition. Gum-elastic and indiarubber trusses are well represented, and there is a new form of truss (rubber-covered) which they have just perfected. This is a steelless truss with a Manx-leg spring on the front of the pad. The spring is made of a metal which can be bent back so as to increase the pressure, and as any of the "legs" can be so bent the pressure can be adjusted downwards or in any other direction which the rupture requires. The firm also exhibited for the first time Buckland's china bed-bath and slipper, which we illustrate.



The great advantage of this bath is that it can also be used as a slipper, and there are no crevices for uncleanly accumulations as in the tin baths. It is made of Minton china. There were also several beautifully-finished abdominal belts, made according to Mr. Bailey's patent. A defect of

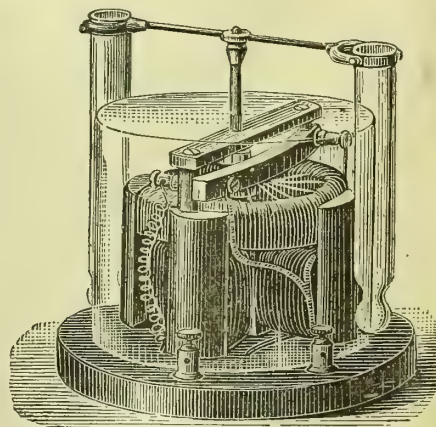
abdominal belts hitherto has been the difficulty of keeping them in place and preventing them from "rucking up." The Bailey belt is so arranged that it



adapts itself to the figure; there are spaces at the sides, through which the hips project, leaving them perfectly free, and removing all unpleasant pressure. The part which supports the soft parts is altogether distinct from that which surrounds the bony structure, so that by merely adjusting each part comfortably the right proportion is obtained, and the difficulty overcome. The manner in which this is done will be seen from the illustration. A gross of perfect clinical thermometers (Kew certificated) was another item in this exhibit which attracted our attention.

An exhibit of a specially interesting character is that of A. HURST & Co. It is devoted entirely to electro-medical apparatus, and contains some excellent examples of sledge-coils, with mechanism for changing the current from 1 to 200 per second. Of incandescent lamps there are good examples, the latest being the "Gastroscope," which is a tiny lamp inserted at the end of a long tube like a stomach-pump. This is passed down the gullet into the stomach, and when the current is turned on the light is sufficiently strong to reveal from the outside any part of the stomach-wall which is thinner than another. This seems incredible, and it did to our reporter; but he did not feel quite equal to swallowing the tube when he was at Nottingham.

Amongst many interesting things which our representative saw in Messrs. Hurst's exhibit was Dr. Ising's "Electric



Centrifuge," which is represented in the accompanying engraving. This consists of a small electric motor with a swinging arm attached to it. At each side of the arm is a holder for a test-tube (which, it will be noticed, is contracted at the base). When the current actuates the motor the test-tubes are swung round at a very rapid rate, and a centrifugal action is set up in the contents of the tube, which causes any suspended matter to rapidly subside. The apparatus has been devised for collecting urine sediments in a few minutes; but it is obvious that it can have many applications in the chemical as well as the clinical laboratory.

When our reporter visited the museum a considerable number of exhibits were still unpacked, and some firms had taken spaces, and their exhibits are mentioned in the catalogue, whose goods were not in evidence at all.

LADY-PHARMACISTS.

SOME six months since we gave some particulars of the progress of the movement which has brought ladies into pharmacy, and we showed that, while a few women have qualified for the profession in several European countries, Great Britain, and especially the United States, have been the lands where the ladies seem to have had the best opportunity. When we wrote last December we stated there were then upwards of 130 ladies on the British register of chemists and druggists whose names appeared there by reason of their having been in business previous to 1868. There are, besides, a good many ladies who own businesses, and some who take part in the management of them, who have come into these positions as executors of their deceased husbands. These, of course, do not appear on the register. Then, notwithstanding the obvious difficulties in the way of ladies who wish to prepare for examination, we find that there are at present on the register eight who appear as pharmaceutical chemists, and eleven who have qualified as chemists and druggists.

In response to our request, several of the ladies who have qualified as pharmacists have been good enough to favour us with their ideas of the position and prospects of women in pharmacy, and these will certainly be read with interest.

Mrs. Sinclair, who is in business at Llandudno, writes as follows:—

"I cannot hope to deal with the subject as it deserves, but my personal obligations to the pioneers of a movement beset with difficulties at its outset, and loyalty to those who bore the brunt of the early opposition offered, together with a desire to encourage new recruits, demand the expression of my thoughts on this matter.

"1. *The Object to be Attained from Women's Standpoint.*—'Aim high, and you will strike high,' is a true and useful saying, and well would it be, when education is completed and life is before young women, that they should form a definite plan for its best development, and thoughtfully

SELECT SOME HONOURABLE CALLING.

Where home duties demand the surrender, in a life of self-sacrifice for those whose right it is to claim it, shall be found a full reward. My words concern others, who are free, and upon whom rests a grave responsibility—a stewardship for which they must render an account. To a thoughtful woman's mind the possibility of qualifying herself for a useful and honourable position in life has a fascination which cannot well be put into words, and such a position is that of a pharmacist.

"Many are the now remunerative callings open to women, but none possess the high privilege wrapped up in what sounds at first the commonplace title—a chemist and druggist. To be a skilled and accomplished chemist is indeed to aim high, and to minister to the suffering with fitting medicine, daily and hourly, in season and out of season, the year round, gives a deep satisfaction, and a wide influence for good.

"2. *The Qualifications Necessary to be a Pharmacist.*—The dictionary must lack one word for the woman, either young or middle-aged, who desires to qualify—namely, I 'can't.' 'No surrender!' whether the difficulties be in the course of study or in view of the examinations, is the only motto permissible. Every possible kindness and consideration on the part of the examiners was my happy experience at Bloomsbury Square, and will be accorded, I am persuaded, to every candidate of my own sex; and if there should be failure at the first attempt, in a longer period of preparation there will be ultimate gain, and success will be attained by the persevering one in the end.

"Other qualifications are yet necessary to be faithful to the power entrusted by the Pharmaceutical Society to the successful candidate (and let me urge the lady-pharmacist to be worthy of her position—forbid that women should fail in this race!), endurance must be exercised, hard work expected,

and no unqualified person may, under any pretext, be invested to do deputy work in a matter so serious as the dispensing of medicines and the handling of potent drugs.

"To be always at the post of duty must be the pharmacist's delight.

"Lastly. *The Results.*—My own experience, looking back upon twenty years spent in connection with this pharmacy, during twelve of which years the full weight and responsibility of its conduct have rested upon myself, warrants me in offering encouragement to others, and calls for much gratitude to a faithful God. Twelve years without a break for rest, and yet able to endure the continual strain with daily renewed vigour, shall testify to His praise.

"The full confidence and kindly esteem of a very considerable resident connection is a happy reward for what has only been their due in daily courtesy, and endeavour to obey the golden rule towards them, on my part. I have

OCCASIONALLY TRYING EXPERIENCES

when visitors flock to the place during the season. Ladies generally are those who are unwilling to hear a word of explanation. They avow they could not meddle with drugs, and form the strange conclusion that, therefore, no other woman ought. Prejudice such as this must have its time to die, and it is easier to bear as the years go by.

"There are other visitors who, by their quick appreciation of the advantages of a pharmacy conducted by one of their own sex, and their unsolicited promise to support the same, more than make up for the first-named, and these last are yearly growing in numbers and in favour of the need and advisability of women-pharmacists, provided they are of a good order and faithful to their responsible calling."

Miss Flora Mitten, who assists her father at Hurstpierpoint, and who is a not unfrequent attendant at the meetings of the British Pharmaceutical Conference, writes:—

"I do not know that my experiences are very interesting or worth relating. I have so gradually grown into the business, and our community have been accustomed to see me here for so many years, that they now take my presence as a matter of course, and do not, so far as I am aware, object at all. When I was young and inexperienced I used to meet with

REBUFS AND DISCOURAGEMENT,

but it never occurred to me to take them seriously to heart or to allow them to daunt me. I do not think that since my return home from passing the examinations any objections have ever been made—at any rate, I cannot recall any expression of the sort at this moment. People come to me as freely as they do to my father, and are apparently as satisfied; women come as well, and in many cases have remarked that it was more comfortable to come to me.

"I sometimes hear this sort of thing, 'That's her,' 'Lor,' 'I thought Flora was a girl's name,' 'She ain't very big,' &c., but I can't make much of a howl over that.

"I attended the South London School of Pharmacy to work up for the examinations, and was well and kindly treated by both professors and students, and always included in whatever might be going on without any effort on my part. Whilst there I took the medal in botany and the first certificate in senior chemistry, and am now attached to the school as a visiting examiner."

Miss Louisa Stammwitz writes, from Reigate:—"The business conducted by Miss A. Neve and myself at Paignton was very successful during the time we had it, and we had no difficulty in disposing of it when, through ill-health, it became necessary for me to give up active work. At first there was some prejudice against us as women chemists, but that almost disappeared after a few months, as far as residents were concerned. Occasionally a visitor would come in and say, 'Is anybody at home?' but when we explained who we were we seldom had the mortification of seeing a prescription taken away unprepared. It seems to me that the reasons for women

PREFERRING THE MEDICAL PROFESSION

to pharmacy are that the social status of the former is superior to that of the latter; the chances of employment after

qualification are greater, appointments being open to women on the *zenana* and other medical missions; and, lastly, the work is infinitely more interesting. Had a medical school for women been established in London when I commenced my studies, I should have entered the medical profession in preference to pharmacy. Miss Minshull and I had considerable difficulty in obtaining instruction in a chemical laboratory until Dr. Muter very kindly opened his to women."

Miss Stammwitz mentions that the petition signed by Miss Minshull, Mrs. Hart, and herself in 1872 did not obtain them admission to the laboratories of the Pharmaceutical Society, and that it was not until both she and Miss Minshull had passed the Minor some time that the Council of the Society opened its laboratories to women. Before joining Miss A. Neve in business, Miss Stammwitz was for nine years dispenser at the New Hospital for Women, and has had several good offers of appointments in a similar position abroad. She concludes, therefore, that there seems to be a future for women as dispensers as well as in business.

In another letter Miss Stammwitz says:—

"Pharmacy is undoubtedly a very suitable profession, or business—as you will—for women, but so long as 'keeping shop' involves loss of social status, few will go into business. In your article of December 12 you wonder why women prefer the medical profession to pharmacy. I think this loss of caste is one, if not the chief, reason; another is the difficulty of obtaining business training, as chemists have hitherto refused to employ women in their shops, or take them as apprentices. At present few pass the pharmaceutical examinations, although many are employed as unqualified dispensers in hospitals. Most people would be surprised to learn how many women do hold dispenserships in hospitals.

"I believe that, as committees awaken to the importance of engaging only qualified dispensers, women will pass the Minor examination in order to secure appointments. I should not advise them to undertake the worry of the Major, for I am under the impression it will soon cease to exist.

"Speaking from several years' experience, I can say that hospital-work is much more exhausting than business; nevertheless, as long as the absurd

PREJUDICE AGAINST 'TRADE'

obtains, women will prefer hospital-work. My experience in business has not been so unpleasant as the picture you present in the December article, for I have only once seen a prescription taken away unfilled, although at first I not unfrequently had to explain that I was a qualified chemist, and had had considerable experience in the preparation of medicines. I always invited inspection of my certificates, which hung in the shop.

"Your articles will be invaluable to women entering the profession of pharmacy, as they will make known the existence of women-chemists, and, I hope, will induce some of the more liberal-minded chemists to employ women."

Miss Margaret E. Buchanan passed in 1887, and was soon after appointed dispenser to the Westminster General Infirmary. She is the only lady student of the Society's School of Pharmacy who has taken double honours, certificates in class, and the silver medal of the Society given by the Council. She has contributed several papers, chiefly chemical, to the School of Pharmacy Students' Association. In reply to our inquiry Miss Buchanan writes:—

"I am unable to say much on the subject of 'the practice of pharmacy by ladies,' as I have as yet only undertaken private work.

"There seems to be an increasing section of the public which recognises the competence of ladies to practise pharmacy, the small numbers of those who qualify and practice being due, I believe, chiefly to

THE DIFFICULTIES OF APPRENTICESHIP.

The better parts of cities, therefore, among educated persons, and among the *clientèle* of lady-doctors, seem to be the most suitable positions for women to practise."

Miss Buchanan believes in the future success of lady-pharmacists. "Now that the difficulties of apprenticeship are fewer," she writes, "and it is becoming recognised by the public and the trade that women can be both business-like and well-trained scientifically, the number of lady-pharmacists will doubtless increase as the field further opens up."

Miss A. Neve says:—"Pharmacy is undoubtedly very suitable for women, but many of us have difficulty in obtaining a business training, which, in my opinion, is as essential to success as scientific knowledge. Socially, chemists, notwithstanding their scientific education, are on a par with other tradesmen, and naturally the superior social status of the medical profession has great attractions for women."

The following interesting notes have been furnished to us, in answer to our appeal, by Miss Florence Brittain, of Birmingham:—"I have been

IN CHARGE OF A HOSPITAL DISPENSARY

for the past eight years, and an idea of the amount of work and responsibility of this office may be gathered from the fact that the attendances last year were close on 25,000.

"During this time, the following views have been impressed upon me, and I shall be happy if they prove of use to you, or to any lady contemplating taking to pharmacy. I believe I am the only qualified chemist among the women who are at present resident in this district and interested in the work of pharmacy, but trust this will not be the case much longer, for I have in this time had the opportunity of training twelve pupils, most of whom at the present time are doing well in their work.

"Experience has shown me—

"1. That the general idea of pharmacy for a girl is far from a satisfactory one.

"2. That the view is widely entertained that the subject may be taken up as a profitable pastime.

"3. That the fact is overlooked, that, if success is to be the ultimate issue, pharmacy requires earnest, concentrated work.

"4. That the necessity of largely sacrificing time, domestic duties and social calls, whilst preparing for the examinations is not sufficiently recognised.

"Dealing with those who devote themselves with more or less assiduity to the work, I find that only a small proportion proceed to the portals of the examination hall, and this is almost entirely due, either to the heavy handicapping of many by the non-recognition on the part of parents and guardians of the unavoidable outlay of money and time necessary for efficient technical education—a handicapping which does not affect a woman devoting herself to the sister profession of medicine, for, in this instance, all fully recognise that the goal is only to be reached by the unstinted outlay of both these things, as well as the sacrifice of lesser matters; or to the fact that the environment to which she has been accustomed is almost certain to prove an unsuitable one for the studious habits which alone will lead to success. I would, therefore, strongly advise a girl before adopting this profession to see that these obstacles are, as far as possible, cleared away at the outset, and, if she can conveniently do so, to separate herself for a short time from social calls and home ties.

"The popular idea seems to be that much in the same way as a clerkship, pharmacy will give a fair remuneration and is a respectable means of gaining a livelihood, whereas the two conditions are not at all analogous—pharmacy involving a large amount of scientific and technical training which mere clerical work does not, but familiarisation with this work only will eradicate the error.

"With regard to the suitability of pharmacy for women I most certainly consider

IT CARRIES OFF THE LAURELS,

for none of the objections raised against a woman practising medicine are applicable to it, and it seems so thoroughly to call into full action the womanly characteristics of neatness, accuracy, and painstaking application. Instead of unfitting her for the execution of domestic duties, it is my experience that the training of pharmacy accentuates the perceptive and sharpens the logical faculties, in this way enabling her to face the battle of life equipped in a far more satisfactory manner than before, whether this battle is to be fought as a 'lonely spinster' or as a partner with a desirable helpmate.

"It is among the many soundly-educated girls of the middle-class that I believe pharmacy will make a firm

agreeable break in the three years' practical work necessary to becoming qualified."

Miss Rose Minshull writes as follows:—

"I must leave to my sister pharmacists who are, or have been, in business the relation of their experience therein.

"As the result of many years' hospital work, I am decidedly of opinion that, certainly in women's and children's hospitals, a lady dispenser is the right woman in the right place. Of course she must know her work thoroughly, for she will find it to be more sharply criticised than a man's would be in the same position, keep well posted up in the current pharmaceutical literature, so as to have at her fingers' ends, when applied to, all that relates to new remedies, &c. (I



MISS STAMMWITZ.



MISS MITTEN.



MRS. SINCLAIR.



MISS BUCHANAN.



MISS BRITAIN.

footing, and to whom the previous occupations widely recognised as 'women's work' were altogether uncongenial, calling into play, as so many of these do, the mechanical qualities only. It is for such middle-class girls that pharmacy has, in my opinion, proved quite a boon, giving them definite occupation which, to many, is imperative, and without which they must inevitably suffer, mentally and physically; whereas by adopting this highly pleasant and congenial work they have found a real happiness and begotten a sense of womanly independence hitherto quite unknown to many in this grade.

"The Assistants' examination at the Apothecaries' Hall forms a most convenient stepping-stone to those of the Pharmaceutical Society; it also has the advantage of being readily appreciated among doctors, besides forming an

supplemented my Major work with a course of analysis of food and drugs, and it has been of great value to me in many ways.)

"She must be quick, and able to

"WORK AMID NOISE

(sometimes in our hall over fifty babies are in full cry at one time) and interruptions without getting flurried, and strong enough to cope with numbers and long hours. She must understand the management of stores, so as to keep her supplies up to the doctors' requirements and yet avoid overstocking. These are not unreasonable qualifications to ask from women, nor unusual ones to be found in them.

"I have held my present appointment for many years, and during all that time my relations with the committees and

medical staff have been extremely satisfactory, and I have never suffered any disadvantage from being a woman.

"As to the difficulty or non-difficulty of obtaining appointments, perhaps I have been exceptionally fortunate, for the two I have held were offered to me, and more than one partnership in business has been proposed to me."

Miss M. E. Neve, who until recently carried on a pharmacy for several years in Eastbourne, says:—"During the time I was in Eastbourne I certainly found considerable prejudice against women-chemists (especially amongst ladies); but as the years went by the prejudice gradually decreased. I was very happy in my work, and my business, though small, was a steadily increasing one." Miss Neve adds that she would have probably been in Eastbourne still but the lease was running out and no reasonable terms could be obtained for its renewal. She concludes:—"You ask my opinion as to whether pharmacy is a suitable sphere for women; from my own experience I should say, Decidedly it is so."

Among English lady-pharmacists it is interesting to note that Miss Isabella Clarke, who was referred to in our previous article as the pioneer of the qualified ladies in England, is now the wife of a pharmaceutical chemist who passed his Major examination on the same day as herself, the numbers of their certificates very properly adjoining. Miss R. C. Minshull passed the Major in February, 1879, and was appointed dispenser to the North-Eastern Hospital for Children.

Miss Lucy E. Boole passed in 1888, and then worked for some time in the Research Laboratory of the Society. The result of her studies was a paper by herself and Professor Dunstan on "Tartar Emetic," dealing chiefly with its purity and estimation by volumetric process. She is stated to have a fair analytical connection and practice.

On this subject we have before us a very lengthy and, we must say, a not very logical letter from a French pharmacien. His aim is to show

THE OTHER SIDE OF THE SHIELD.

He notes that we "are urging educated women in straitened or slender circumstances to enter the pharmaceutical profession, under the impression that such a career would be both suitable, easy, and remunerative to the fair sex. You are, however, under a threefold misapprehension." [So is he, for we never advocated the adoption of the profession; we only related what had been done.] "I cannot understand how you, usually so far-seeing, can have advocated such a proposal, which evidently is founded on prejudice and misleading appearances."

Then he proceeds, at great length, to point out the difficulties of preparation for the profession, the long hours and weary and responsible labours, and the scanty remuneration. He continues:—

"After these considerations, do you still think, sir, that this profession (pharmacy) is suitable—I do not say to woman's intellectual qualities, which I believe equal in almost every way to those of man, but to her physical constitution? Nature herself opposes such an idea; wise Nature, whose opinion is unasked, protests against the choice of a profession so difficult and exacting, without rest or respite."

"Before introducing women into unsuitable professions, it would be more rational to consider all the occupations and employments ridiculously and unjustly filled by men—situations which Nature intended to be given to women. Let us first turn out, and replace by the fair sex, the handsome and athletic gentlemen who do not disdain to employ their vigorous muscles in offering to ladies a pair of gloves, a skein of thread, or a yard of ribbon. Let the ladies' tailors and staymakers give place to the weaker sex; in fact, let all these easy and delicate occupations, which do not demand muscular effort, be left to women. When a fairer distribution of labour is made, it will not be the weaker, but the so-called stronger sex, that will need protection. Instead of this, under pretext of liberty and equality, women are urged on to misplaced ambitions, subversive of all reason and order. They are encouraged to quit the modest, but useful place which they hold in all civilised nations, and to enter everywhere into competition with men. It was first the lady-

doctor, now it is the lady-pharmacist, next will come the lady-lawyer, the lady-bailiff—and afterwards? Truly this confusion and promiscuity promises us a merry ending to the present century!"

And why should we not wind up the century merrily? Our man-pharmacist's arguments do not figure very gloriously by the side of the unpretentious but convincing communications which we are privileged to publish from our lady friends.

AT THE COUNTER.

"A BOTTLEFUL of Imprecations."—This was the third interruption during a hot and savoury dinner.

"ALLSOPP'S Polands Plaster" and "Magnacea for a baby" are the items on a Worcestershire order sent to us.

FROM HALIFAX.—Customer: "Please, sir, will you give me a bottle of syrup of hypothesis for weakness?"

Customer: "Please, I want a bottle of patent embodiment." Embrocation was supplied.

WHAT A CHEMIST DOES FOR TWOPENCE.—Well-to-do old gent insists upon seeing the principal. He produces about $\frac{1}{4}$ lb. of lead and an immense pocket-knife, and requests to have a piece cut off that will weigh $\frac{1}{2}$ drachm. During the operation he lets it out that he has got to know about something that is to do him a lot of good, and is going to try it. After the operation, when he has got his $\frac{1}{2}$ drachm of lead, he asks for 1 oz. of the very best carbonate of soda. Our conscience-stricken correspondent who narrates this event asks if we consider that 433.33 per cent. on the soda was an outrageous profit on the transaction?

AT A CHINESE COUNTER.—The following specimens are written orders which have been handed over the counter in a pharmacy at Shanghai:—

"Peng quiyara" [this was written by a Japanese, who wanted pain-killer]; "Cachepot oil"; " $\frac{1}{4}$ unse of tarrac acid, 1 unse of glycerin, 1 unse of water"; "Scoth's Emulsion God Liver."

"My sister who has bunions would take it as a great favour if you would send her a set of your calendars" [this is written by someone with a French name].

"2 blood suckers" [this is from a Japanese agency].

"Mulbey water which use in summer time that taste is sweet and color is red."

The following is from Fuh Wo, an employé on a ship: "I am much thankfulness to me to let Has the bearer a nice calendar for this year and then much obliged."

GEOGRAPHY AND CHEMISTRY.—Lady (tremendous swell, whose child has been to Board School): "A pennyworth of Pacyfic powder." Chemist: "North or South, madam?" Lady (not to be done): "Oh, South, please." Chemist: "Oh, the red?" Lady: "What do you mean by red?" Chemist: "South Pacyfic is hot, and North Pacyfic is cold, hence red is South, and white is North." Lady (indignantly): "Indeed, I don't know anything about hence. My child has been to school and caught something in her head; that's the kind I want." Chemist: "Then the North, or white, is required, since it's for the child."

THE title of "Doctor" was invented, so it is claimed, during the twelfth century, when universities were first established. The first person upon whom the title of "Doctor of Medicine" was bestowed was William Gordenia, the degree being conferred by college at Asti in 1329.—*Western Druggist.*

Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected, and Translated.

PREPARATION OF CANTHARIDIN.

M. DEBUCHY speaks highly of the advantages of methyl-formic ether for the separation of cantharidin (*Jour. Phar-Chem.*, xxvi. 13). It is superior to chloroform, ether, acetic ether, and other solvents generally used. It is customary to use carbon bisulphide for the removal of the fat of cantharides, but this has the disadvantage of being a cantharidin solvent. This petroleum ether is not, and is to be preferred. It would have been an advantage if M. Debuchy had stated the sp. gr. and boiling-point of the most suitable petroleum ether for the purpose.

COLOURING-MATTER IN SHELL-FISH.

DR. JAMES LEICESTER, of Merchant Venturers' Technical School, Bristol, in a note to the *Chemical News*, gives a probable explanation of the change of colours that shrimps and lobsters undergo upon boiling. Concentrated hydrochloric acid in which a few shrimps have been digested acquires a bright purple colour resembling limus solution. This colour goes after three or four days, and the solution becomes of a dirty-brown colour. The coloration is not caused by any iodine compound, but is probably of an organic nature. Acetic acid and caustic potash give slightly yellow solutions.

ANALYSIS OF BLACK OILS.

To determine the percentage of tar in black oils the following process is given by Mr. Ernest Speidel in the *Oil, Paint, and Drug Reporter*:—Take 100 c.c. of the oil, add to it 25 c.c. of concentrated sulphuric acid, and stir vigorously with a glass rod for about five minutes; then add about 200 c.c. of clear water-white naphtha, and stir. Allow to stand until the acid settles; then decant. Repeat the washing two or three times, or as often as necessary, so that the naphtha from the last washing is almost colourless. Treat the sulphuric acid from which all the naphtha has been decanted, with alcohol, stir well; the alcohol dissolves the sulphuric acid. Let the tar settle, pour off the alcohol, and repeat the operation until the alcohol is clear. Rinse the tar out of the beaker with a little sulphuric ether, and transfer to a small evaporating-dish, that has been previously weighed, evaporate the ether, and weigh the residue of tar.

PERNICIOUS SEEDS IN CATTLE-FEEDING STUFFS.

AT a recent meeting of the Society of Public Analysts Dr. J. Walter Leather described how castor-oil seed and croton-seed can be detected in cattle-foods, in which they are not unfrequently present. The method is microscopical. First, some of the material is digested in dilute hydrochloric or sulphuric acid (1 or 2 per cent.) for half an hour on the water-bath. The acid liquid is decanted, the food washed well with water, and then digested for an equal time with 1 or 2 per cent. sodium-hydrate solution. Decantation and washing are effected as before, and it is advisable to treat again with dilute acid, so as to minimise the dark colour resulting from the alkaline treatment. All this is preliminary treatment; the detection of the testæ of the castor-oil and croton seeds now remains. These look black under the microscope, and their colour is retained after standing in chlorinated-lime solution for three or four days, whereas the testæ of all other seeds likely to be found in cattle-food are bleached in an hour or two. The prepared sample is, therefore, kept in the bleaching-solution for a few hours, then washed and examined microscopically. In this way Dr. Leather has been able to detect the admixture of one seed each of the castor-oil and croton plants in a pound of coarsely-ground cotton cake. Further details are given in the *Analyst*, page 120, of the delicacy of the method. In the course of the discussion Mr. Bernard Dyer said that sometimes the seed was added accidentally and sometimes intentionally. It had been found in Brazilian cotton meal and cake; and in that case, he believed, it had been accidentally introduced through the castor-oil plant growing as a weed among

the cotton; but in some cases he was sure that it was deliberately added through ignorance. There was an enormous quantity of castor cake produced, especially in tropical countries, which ought all to be used as manure. It was sometimes bought up by people who were ignorant of its poisonous properties. He had recently had a sample of Niger seed cake sent to him for the purpose of examination, with the view of ascertaining whether it contained castor-seed, and he found that it did. Since then he had found a little castor-seed in a sample of linseed cake. He also found a considerable quantity of Niger cake in it, with which the linseed cake had been adulterated, and it seemed not at all improbable that the Niger cake had contained the castor.

ASSAY OF TEA.

FOR the estimation of the caffeine in tea, Domergue and Nicolas propose the following method:—Boil 50 grms. of the coarsely-powdered tea in 50 to 60 c.c. of water for a few minutes and add 100 c.c. of a 3 per-cent. solution of mercuric acetate; boil for a few moments, and filter, washing the filter with boiling water until the filtrate is colourless. The total filtrate should measure about 300 c.c., and it is to be evaporated on the water-bath to 20–25 c.c. To this is added 2 grms. of calcined magnesia and 75 grms. of sand or broken glass, the mixture dried, and exhausted with chloroform or benzine in a Soxhlet tube. From the chloroform the alkaloid is recovered in an amorphous state, as it contains a little waxy matter, but it may be freed from this by dissolving in boiling water and crystallising. The process takes about three hours to perform. It is generally considered—indeed, has been proved—that the caffeine content of tea bears little or no relation to its price, but Domergue and Nicolas give figures which show such a relation. They are as follows:—

	Price per kilo.	Caffeine
	£. s. d.	per cent.
Assam	8 85 ..	4.39
Pekoe flower ..	7 50 ..	4.25
Pekoe	7 90 ..	3.78
Congou Manning ..	7 60 ..	3.20
Pekoe Congou ..	6 60 ..	2.74
Pekoe Orange ..	6 60 ..	3.49
Souchong	6 10 ..	2.56
Congou	5 50 ..	2.75
Souchong	4 35 ..	1.20
Congou	4 00 ..	0.91

The *Apotheker Zeitung* calls attention to the difference between the results of these observers and others, and quotes Waage's figures as evidence that most teas show caffeine about 2 per cent. It seems to us that a comparative examination of existing methods of assaying tea is desirable.

AVERAGE YIELDS OF ALKALOIDS.

M. ADRIAN finds that on a manufacturing scale he obtains the following yields of alkaloids from the respective drugs:—250 to 350 grammes of atropine from 100 kilos. of commercial belladonna-root containing 12 to 20 per cent. of inert matter (moisture, stem, &c.).

50 to 55 grammes of atropine from 100 kilos. of fresh belladonna leaves and branches.

11 to 12 grammes of atropine from 100 kilos. of fresh belladonna stems and leaf-stems.

32 to 34 grammes of atropine from 100 kilos. of fresh belladonna herb (leaf and stem together).

80 to 100 grammes of amorphous aconitine, and 100 to 150 grammes of crystallised aconitine from 100 kilos. of commercial aconite-root, containing 15 per cent. of foreign matter (moisture, &c.), when treated with cold alcohol. A total of 150 to 180 grammes amorphous aconitine is obtained when digestion with alcohol is done on the water-bath.

500 to 600 grammes of pilocarpine nitrate from 100 kilos. of jaborandi-leaves.

800 to 1,700 grammes of sparteine sulphate from 100 kilos. of dried broom.

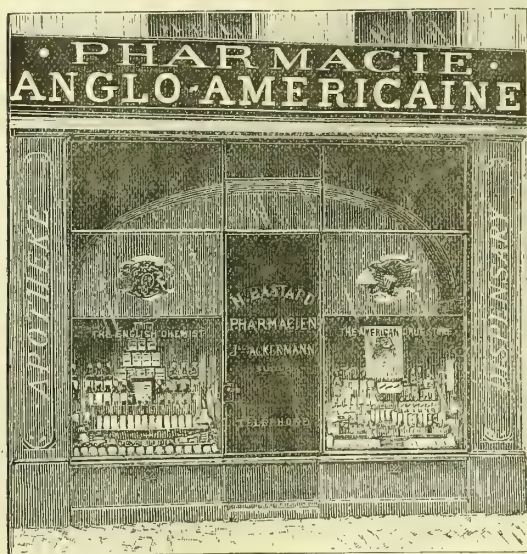
120 to 180 grammes of physostigmine sulphate from 100 kilos. of Calabar bean.

Some commercial jaborandi-leaves yield only 100 grammes of pilocarpine nitrate for 100 kilos. We take these figures from an article on the therapeutic uses of alkaloids, by Dr. G. Bardet, in *Nouveaux Remèdes*, page 244.

English Pharmacies Abroad.

TWO OTHER SHOPS IN GENEVA.

One of the first pharmacies described in this series was an important modern shop in Geneva. There is still another business in the old city of Calvin, however, which may justly lay claim to be mentioned among British pharmacies abroad. That business is Mr. Jules Ackermann's Anglo-American pharmacy in the Rue des Allemands. The outside of the shop is shown in our first illustration. The origin of the business which has now devolved upon Mr. Ackermann, who is of German birth, is lost in the mist of ages. All that is positively known of it is that it existed and flourished in 1602, and that in 1615, it was in the hands of one Abraham Le Royer, a Huguenot refugee, whose descendant is now President of the Senate of the French Republic. The Le Royer family owned the business, and carried it on in direct succession until 1840. The name of the illustrious



THE PHARMACIE ANGLO-AMERICAINE IN GENEVA.

chemist Dumas is indissolubly associated with Mr. Ackermann's shop, in which the young Frenchman was engaged as an assistant while pursuing his studies at Geneva University under Pictet, Saussure, de Candolle, and others.

It was in Mr. Ackermann's shop that the use of iodine in medicine originated. Young Dumas had devoted considerable time to the study of the chemistry of the substance, and, having ascertained its presence in the sponges which were sold in the shop, demonstrated the fact one day to a Dr. Coindet, a local medical man of some repute. The doctor took all the credit for the discovery, but gradually young Dumas's merits as a chemist became known, and the back parlour of the old pharmacy became the meeting-place of many of the most famous men in Switzerland, who gathered there to hear the young man expound his views. Since the last of the Le Royers left the shop has had three proprietors, the second of whom was the "N. Bastard" whose name still figures in the *raison sociale* of the firm. Mr. Ackermann styles his pharmacy the "Pharmacie Anglo-Américaine," a title which appears to be fully justified by the amount of patronage bestowed upon him by British and transatlantic visitors, and by his knowledge of their requirements. Mr. Ackermann carries an extensive stock of remedies favoured by English-speaking customers, and employs an English assistant for the express purpose of ministering to the wants of our country-

men and their first cousins. Mr. Ackermann is the sole consignee for Switzerland of several British manufacturing firms, and in his bonded warehouse in Geneva large quantities of Allen & Hanbury's goods, Vinolia soap, Horsford's acid phos-



INTERIOR OF MR. ACKERMANN'S PHARMACY.

phates, and other pharmaceutical goods are always awaiting withdrawal from Customs control. The duty upon non-alcoholic patent-medicines in Switzerland is equal to about 40 per cent., and upon alcoholic ones 70 per cent.

THE PHARMACIE GOEGG.

But yet another pharmacy in the many-tongued city by the lake claims our attention. We mentioned Goegg's pharmacy casually in our last article on Geneva, and will now devote a few lines to a description. The fittings are in carved oak, and the shop-rounds have the modern shield-enamel labels and cut globular stoppers.

The dispensing-department opens out from the pharmacy through an ornamental archway. It contains the usual oxygen gasometer and the principal galenical preparations of the Swiss, German, English, and United States Pharmacopœias and the French Codex. The staff consists of four qualified and one unqualified assistants, in addition to Professor Goegg, the proprietor, who, when not conducting his class, works at his business as hard as any man. "Business hours," says an English pharmacist who at one time was engaged in Mr. Goegg's business, "were from 9 till 9, with one and a half hour for dinner, one for tea, two evenings weekly off at 6 o'clock, and every other Sunday free.

POLYGLOT DISPENSING.

"A steady stream of customers [would set in] soon after 10, increasing from 12 to 5. English, French, German, and Italian were frequently being spoken at the same time, and the big prescription-book would occasionally show four consecutive prescriptions emanating from as many countries. The daily average of prescriptions from May to September inclusive was about 180. Dispensing was undoubtedly the backbone of this business, the prescribing being carefully limited to the English-speaking customers, and generally done by the senior English assistant. Large quantities of pills were frequently ordered—50, 100, or even 250—and were always turned out in bottles. Cachets were also a favourite medium for powders—25, 50, or 100 being the number usually prescribed.

"For specialities we had medicinal wines, such as *quinquina* (three varieties), coca, kola, &c. These had a very large sale, and were put up in litre and half-litre bottles, bearing most attractive labels, and capsuled. *Alcool de menthe* and pastilles were in exceptional demand. Weak antiseptic solutions, such as *sublimé*, *acide phenique* and *borique*, sold well,

and were kept ready in litre bottles; also medicated wools and tissues of several kinds. Urine-analysis was frequently required. The inhalation of oxygen was quite a solemn ceremony. The patients would walk straight through and sit down at a small table placed by the gasometer; would then proceed to connect their own glass mouthpiece with the rubber tube leading from the main, and take their usual measurement of oxygen as an ordinary mortal might his bitter, and at about the same price—viz., 50 centimes."

BEYROUTH.

This is the shop of Mr. Murad Baroodi, the Christian pharmacist of Beyrouth, in Syria, whose business was described by Mr. Burroughs in one of the interesting letters which that gentleman sent us from the East last year. Mr. Baroodi is represented as about to take leave of a customer on horseback, while the idle apprentice, with true Oriental supineness, lazes his time away lounging against the stable-door upon the left, and even the industrious apprentice to



MURAD BAROODI'S SHOP IN BEYROUTH.

the right cannot refrain to quit his mortar for a moment to cast a look at the departing client.

HE READS "THE CHEMIST AND DRUGGIST" AND PROSPERS.

"Mr. Baroodi," wrote Mr. Burroughs at the time of his visit, "has been a subscriber to THE CHEMIST AND DRUGGIST for twelve years. The DIARIES for the past four years are always before him on his desk, and the older ones he keeps for reference at home. I asked him how he came to buy certain English chemical and pharmaceutical products. He replied, 'From seeing the advertisements in THE CHEMIST AND DRUGGIST.' So thorough has he been in this respect that his pharmacy is the recognised headquarters for English products. I noticed in his stock large quantities of Howards' quinine and cocaine, iodoform, &c., Squire's chemical food, Fellows's syrup hypophosphites, Allen & Hanburys' tonga, cod-liver oil, and malted food, Pears' soap, Eno's salt, Cockle's, Beecham's, and Holloway's pills, lactopeptine, and Fletcher's liquors, largely bought through seeing them in the CHEMIST AND DRUGGIST advertising columns."

Mr. Baroodi has done much to develop the great natural resources of his country. He manufactures soap, olive oil, and orange-flower water, and, in addition to his chemist's business, does a considerable wholesale trade in pharmaceutical goods in his district.

TRIESTE.

British pharmacy in the thriving Austrian port of Trieste is represented by the "Farmacia Serravallo" (the population of Trieste is by nationality predominantly Italian), of the appearance of which the two subjoined sketches furnish some idea. With the fondness of the true Southron Latin for names and titles of sacred history, the originator of Serravallo's business called his shop "Farmacia Al Redentore," or At the Sign of the Saviour, and that name it bears until this day.

The new premises in the Palazzo Contana, to which the pharmacy was recently removed, are of magnificent dimensions, in thorough accord with the beauty and costliness of their decorations. The dispensary is a hall of enormous dimensions, designed by one of the best-known Italian architects. No other materials than mahogany, oak, olive-wood, and marble are used in its construction. A wide gallery runs along three sides of the hall, and the ceiling is decorated with inlaid wood. To the right of the dispensing

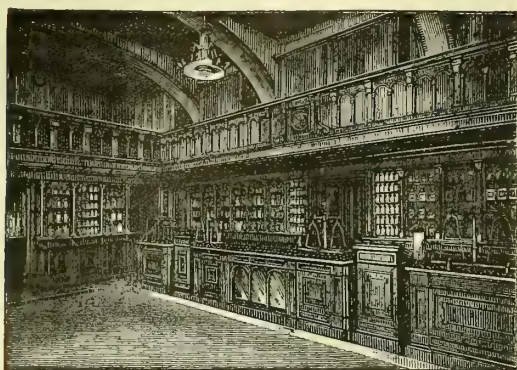
department are a consulting-room (where medical assistance may be summoned at any hour of the day) and the private office of the manager. To the left is a room fitted as an



PHARMACY AT THE SIGN OF THE SAVIOUR, TRIESTE.

ambulance, and a department for medical examinations. At the back of the pharmacy is an extensive laboratory, and behind that, separated from it by a glass partition, a room

for chemical analysis. The pharmacy is connected with a large warehouse for the wholesale part of the business.



INTERIOR OF SERRAVALLO'S PHARMACY IN TRIESTE.

Mr. Serravallo is agent for several English houses—Burroughs' Wellcome & Co. among others.

ZURICH.

The ancient city of Zürich also boasts its "Anglo-American Pharmacy," of the outside of which we here give a representation. This business is owned by Dr. C. Dünninger, who acquired his knowledge of British pharmacy at the establishment of Mr. Groves, in Florence. He now appears to cater for a considerable section of all the nations that on earth do dwell, for we notice that his business is variously entitled by him, "The Anglo-American Pharmacy," "Deutsche Apotheke," "Farmacia Italiana," and "Pharmacie Internationale." The pharmacy is situated upon the ground floor of a fine modern five-storey building, richly



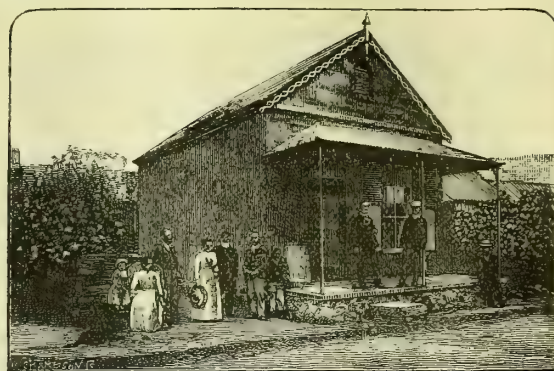
DÜNNINGER'S PHARMACY IN ZÜRICH.

ornamented in red sandstone, and within a couple of minutes' walk of the quay on the Lake of Zürich. The interior of the shop is all handsomely fitted in nut-wood. The dispensing-office is separated by a curtain from the stock-room, crude-drug room, and laboratory. Dr. Dünninger, who is a Swiss himself, has roamed for a whole decade through Central Europe, plying his profession of a chemist's assistant under various outlandish masters, and gathering a motley store of information as he went along.

UNDER AFRIC'S SKIES

The next picture is a representation of Mr. Norwood Coaker's recently-opened new shop in Jagersfontein, Orange Free State. "Jagersfontein" signifies "The Huntsman's Spring," and the shop is called the "Iron Apotheek" because it is wrought in burnt brick, upon a diamondiferous soil, beneath a copper sky. It is hoped to prove a gold-mine to its proprietor, whose iron perseverance, we trust, will lead him on to further fortune. Mr. Norwood Coaker, the proprietor, opened his business in September, 1880, in a small iron shanty about 10 feet by 12, to which he afterwards added a "wing." The "old show" now stands discarded next to the new erection, like a dull and insignificant

chrysalis-envelope beside a gorgeous and free-winged butterfly. The whilom chrysalis is now used as a store-house. In after-years, perhaps, when Bloemfontein shall have become a great world-centre, we may be able to present our subscribers with a picture of some eleven-storeyed "Norwood Coaker Drug Company" palace, beside which the neat shop our friend now occupies shall ineffectually pale. It is only in a new country that a successful chemist can keep his cast-off premises alongside of him, as he outgrows them, to remind him of his small beginning, like stepping-stones by which he has risen to higher things. Jagersfontein is purely a diamond-mining community, and the noise of blasting by dynamite is to be heard at intervals on every day of



the year with the solitary exception of Christmas, on which day, at any rate, our black brethren will not work at any price. The innocent negro is well up to dates, and on December 25 the white boss has to regale him most royally on beef and brandy (supplied *ad libitum*) as sure as the sun rises. The principal drug supplied to these gentry is, of course, the wonder-working magnes. sulph. They do not believe in pills. Large quantities of succ. limæ, *raw*, are also a favourite remedy with the black employés. Cuts and deep gashes on the occiput and sinciput from falling stones form the main portion of the minor surgery required, whilst more fatal accidents by dynamite and the falling of large quantities of ground are but too painfully frequent. The neighbouring Boers, who send their sheep and cow dung to market, where it is sold for fuel, are very fair takers of medicine, although, unfortunately for "the trade," they mostly prefer to buy their household Dutch medicines from the stores, where they get their coffee and sugar, and to which they sell hides, skins, and other produce. There is no idle population in Jagersfontein; everyone has to work, and visitors are few and far between. At times, however, some English globe-trotter, or colonial magnate returning from some high political business in Bloemfontein, condescends to visit the Golconda of the Free State. Mr. Coaker has just opened another business at Bloemfontein.

In our sketch, which is reproduced from a photo taken in 1891, Mr. Coaker is represented standing by his wife and child together with some friends and relatives. The clergyman is the Episcopal rector of Fauresmith, the Rev. S. W. Steven, whose name is a household word all the country round. Mr. J. H. Clempson and Mr. Albert Tozer, two London assistants, are on the *stoep*, whilst the native boy is in close proximity to the pestle and mortar.

HAMBURG has made wonderful progress as a port during the past fifty years. In 1841 it did 15 per cent. of the shipping of the world, England having 46 per cent. of it, and other countries 39 per cent. Now Hamburg has 37 per cent., and other countries than England 18 per cent.

NATAL PARAFFIN.—According to Mr. T. A. Aitken, B.A., Natal shale gives excellent yields of paraffin wax and sulphate of ammonia, and the oil obtained is equal to the best American, and producible at one-third the cost. A London syndicate has despatched an eminent Scottish oil-chemist to the colony to test these conclusions and take further steps. Oil from Dundee shale is of specific gravity 820 and flash-point 140°.

INK.

THE manufacture of writing-ink is still carried out in an exceedingly empirical fashion, although there are undoubtedly a number of noted makers who have endeavoured, and that successfully, to bring the teachings of science to bear upon the composition and permanence of their products. A glance at any of the best books of reference shows, however, that the old empiricism and the modern exactitude are curiously blended together, and there is really no well-defined line of procedure to guide the novice who ventures into the atramental region. It is, therefore, with pleasure that we give publicity to the following account of an important research on the subject by the well-known pharmacist Dr. William Inglis Clark. This research, we may say, was undertaken and completed when Dr. Clark was a laboratory assistant to Duncan, Flockhart & Co., in which firm he is now a partner, and, under the title "An Attempt to Place the Manufacture of Ink on a Scientific Basis," it was submitted to the Edinburgh University as a thesis for the degree of Doctor of Science. The thesis met with commendation from the University authorities, and, having served its purpose in securing him the degree, the writer did not think of publication; but, at our request, Dr. Clark has sent us the first part of the work, to deal with it as we think fit. The other two parts contain analytical details, and the one that we now deal with sufficiently expresses the conclusions of the research. We ought to say that the thesis was written fourteen years ago, but, as far as we are aware, no one—at least, in this country or America—has gone over the same ground.

Towards the beginning of this century a Dr. Lewis made some attempts to place the manufacture of ink on a satisfactory basis, and he succeeded so far as to determine that an excess of iron salt in the ink is detrimental to its permanence, such ink becoming brown on exposure. Three parts of galls to one part of ferrous sulphate were the proportions which he fixed upon as the best. He did not use boiling water in extracting the galls, and this has to be taken into account in considering exact experiments, for cold water would not, as he used it, extract more than half of the gallo-tannic acid from the galls. This observer was the first to introduce logwood as a tinctorial agent, and he made the interesting and important observation that acetic acid in the menstruum provides an ink of greater body and blackness than sulphuric acid does—a circumstance due to the smaller resistance of acetic acid to the formation of iron gallo-tannate. This observation has since been utilised by dyers. In 1798 Ribancourt determined that an excess of galls is quite as injurious to the permanence of ink as an excess of iron, but Dr. Clark's research does not sustain his explanation that this is due to the reducing action of the gallo-tannic acid. Dr. Bostock communicated a paper to the Society of Arts in 1830 in the course of which he stated that the tannin, mucilage, and extractive matter are "without doubt the principal causes of the difficulty which is encountered in the formation of a perfect and durable ink. For a good ink the essential ingredients are gallic acid and a sesqui-salt of iron." In this point Dr. Bostock peculiarly hit the mark. Owing to his working with galls he was unable to make decisive experiments, but he concludes, and that rightly, that in proportion as ink consists merely of gallate of iron it is less liable to decomposition and any kind of metamorphosis.

The introduction of blue-black ink is the next phase of the development towards modern methods which is noticed. The object of adding a dye is to give temporary colour to the ink, and, as indigo-paste is used, it has been assumed that this keeps the iron gallo-tannate in solution. Any virtue of this kind which indigo-paste possesses is more likely due to the sulphuric acid which it contains than to the indigo itself. The essential part of the paste required is the sulpho-indigotate of sodium, now commonly called indigo carmine. The commercial paste contains varying proportions of free sulphuric acid, and it is essential in ink-manufacture that only the minimum of this constituent should be admitted. It is somewhat difficult to determine the proportion of acid present by the ordinary alkalimetric methods, but, by treating a known weight of the paste with excess of barium carbonate, and absorbing the evolved carbonic dioxide in a

weighed potash bulb, the amount of sulphuric acid can be accurately obtained. Three samples of paste, which were found to be very suitable for ink-making, gave the following figures:—

Sample A, 0.45 per cent. CO_2	= 1.0 per cent. H_2SO_4 .
" B, 0.319 "	" = 0.71 "
" C, 0.235 "	" = 0.52 "

The paste should not, therefore, contain more than 1 per cent. of H_2SO_4 , and when it is remembered that as much as 40 per cent. has been found in commercial paste, the importance of watching this factor becomes apparent. An excess of acid in the ink corrodes pens, delays the darkening of writing, and sometimes perforates the paper. Apart from these objections it was noticed in the course of the research that up to a certain point the addition of sulphuric acid was advantageous, and then just the opposite. This is shown by the following figures, obtained by exposing equal measures of an experimental ink (536 grammes each of tannin and pure FeSO_4 in 50 c.c. water plus the amount of acid indicated) in cylindrical jars:—

Acid added = CO_2	Time exposed	Weight of ppt.	P.c. of Fe in ppt.
Per cent.	Hours	Grm.	
0.0	214	0.1043	8.3
0.01703	648	0.0923	8.66
0.03406	648	0.0403	10.42
0.05109	648	0.0198	8.53
0.06812	2,000	0.0000	0.00

The stability of an ink precipitate depends upon the amount of iron which it contains, and which on no account should be less than 8 per cent. More than the highest amount of acid above indicated throws down a white granular precipitate.

Similar experiments to the foregoing with gallic acid revealed the fact that no precipitate whatever is obtained under precisely similar conditions. This point followed up explained in a measure why a gall infusion prepared with hot water is not suitable for a blue-black, whilst a cold-water infusion is. In the latter case a comparatively small percentage of tannin is extracted from the galls, while much is extracted with hot water, and the consequence is that on adding the indigo-blue the colour of the latter is not brought out as it should be. Substantially the same thing occurs with ink made with the respective acids, although the blue colour remains for a considerable time unimpaired in a tannin ink, and it appears to be due to the fact that ferrous tannate reduces indigo-blue to indigo-white, a change which the low reducing-power of ferrous gallate does little to effect. The vegetable matter present in common inks facilitates the destruction, or, rather, alteration and precipitation, of the indigo, for the dye appears in the iron precipitate, and may be extracted from it with boiling water.

The investigation having demonstrated the superiority of tannin and gallic acid to galls, the opportunity was taken to determine the correct ratio of tannin and sulphate of iron to be used for ink. As in experiments previously mentioned, samples of ink were made containing different proportions of essential ingredients, exposed, and the percentage and nature of the precipitate determined. The results show that:—

1. The amount of precipitate increases as the proportion of iron to tannin is increased.

2. The composition of the precipitate is so variable as to preclude the possibility of its being a definite body. Increase of iron in the solution has not at first any effect on the composition of the precipitate, but afterwards iron is found in it in greater but not proportional amount.

3. At one point the proportions of iron in the precipitate and in solution are the same, and this is at between 6 and 10 parts of iron to 100 parts of tannin.

4. The proportion of iron in the precipitate varies with the length of time the ink has been exposed. At first the precipitate contains 10 per cent. of iron, but by-and-by a new one having only 7.5 per cent. is formed, and in from forty to seventy days we find one of 5.7 per cent., resembling $(\text{C}_7\text{H}_5\text{HO}_2)_2\text{Fe}_2$. Simultaneously iron increases in the ink (proportionate to the tannin). These results differ markedly from those of Wittstein recorded in Gmelin's "Chemistry."

5. These results show, and practice confirms, that 16 parts of iron (80 ferrous sulphate) and 100 parts of tannin are best for ink-manufacture.

The research now travelled in a direction which accumulating experience showed to be obligatory. Blue-black tannin ink lost colour, and the reducing nature of the tannin tended to the formation of a highly objectionable precipitate in the ink, which made writing anything but a pleasure. These two faults were doubtless linked together in some way, and seemed not to exist when gallic acid was used, for ink so made was found to precipitate only after long exposure, it required no free acid to keep the precipitate in solution, retained the indigo-blue colour for a long time, alkalies did not decompose the ink, and provided blacker and more permanent writing. It is also notable that one of the most popular English blue-black writing-inks is a gallic-acid one. Determination of the correct proportions of gallic acid and ferrous sulphate to use was the subject of prolonged experiments, which were conducted on similar lines to those already detailed. The conclusions as to precipitation were also similar. Thirty parts of iron (150 of ferrous sulphate) and 100 parts of gallic acid were found to be the most suitable proportions for ink-making. It is advisable, however, not to discard tannin altogether, owing to the slow blackening of the gallic-acid ink, and a little tannin gives initial blackening and body, while it is absolutely necessary for copying-ink. Initial blackness can also be ensured by oxidising 21 per cent. of the ferrous sulphate without adding the extra acid necessary to the formation of a ferric salt.

The concluding portion of the research was devoted to the influence of sugar upon the permanence of ink, and the results of the experiments are summed up in the following sentences:—"It would be injurious to add 3 per cent. of sugar to a tannin ink, while from 4 to 10 per cent. would be quite allowable. Most copying-inks contain about 3.5 per cent. of sugar—not far from the critical amount. With gallic acid more than 3 per cent. of sugar hardly varies the precipitate, but the importance of this point is somewhat diminished by the fact that the presence of sugar is by no means necessary in a writing-ink. Dextrin is a much superior substance to use. Curiously this body rapidly precipitates a tannin ink; hence it is useless for copying-ink, but for the gallic ink it is an excellent thickener."

While the thesis does not profess to exhaust the whole subject, it is apparent from the abstract that many points of difficulty are explained, and in the light of the knowledge thus recorded that it is possible to carry on the manufacture of gall ink in a rational way.

NEARLY CAUGHT.

THE story which I am about to tell, writes a Belfast correspondent, relates to an occurrence which happened four years ago, when I was an assistant in a medical hall in an inland county in Ireland.

I had often thought of sending you an account of the affair, thinking that it might be interesting to other members of the trade, and being encouraged by those of my friends to whom I told it; but I have not hitherto had such a favourable opportunity as the present, since I am now in that exasperating, waiting-for-something-to-turn-up, condition, which the great Wilkins bore with so much fortitude.

The town was small, and situated on the banks of the Erne. The inhabitants numbered about a thousand, and were, in general, far too healthy for the successful running of a medical hall, so that the assistant had not much difficulty, at close of day, in totting up his customers; but on market-days, from 10 in the morning until 5 or 6 in the afternoon, there was a perfect deluge of customers, and all in the greatest hurry to catch the last train, or the last cart, or the last something or other.

On these days it was all the unfortunate assistant could do to get a morsel jerked down at intervals to prevent collapse. Well, it was at the close of such a day's business

that, pretty well exhausted with hunger and fatigue, I was going to close the door for the night, when I was interrupted by a stranger. He was a little old man, scarcely 5 feet in height; his clothing was of the muddiest description, and had belonged to a man of much greater stature, for though his trousers were repeatedly turned up, they still kissed the ground. His coat was of the "Artful Dodger" type, and his hat was only stopped from falling over his head by the well-developed auricular appendages, and, in conclusion, he carried a blackthorn.

"Well, my man?" said I, rather sharply, for I did not think him a likely customer, but one of those travelling mendicants who pass their lives travelling from town to town, and subsist on charity, or theft, or both.

Said he, "God save yer 'oner; wud yer 'oner take a luk at this an' tell me if its goold, if yer plaze?"

While he was speaking, he fumbled in his pockets, and, after carefully looking around, apparently to see that no person was looking, he produced a small packet, and when he had taken off a considerable quantity of paper wrapping, he handed me a watch-chain; it was large and heavy, but the pattern was so coarse and inartistic that I could not conceive it possible that it was gold, so I jestingly told him not to allow his expectations to rise too high. Then I applied a drop of nitric acid, and awaited, expecting to see effervescence, and our familiar friend copper nitrate; but I was not a little taken aback to find the chain remain clear and bright; I then applied the acid to several parts of the chain with a like result. I thought surely there must be something wrong with the acid, so I took down a fresh bottle, s.g. 1.42, and applied it as before; but it had no more effect than the other. At this stage I was pretty well convinced that the article was gold, or at least plated, yet I put the chain into a small beaker, and covered it completely with the acid; of course, it remained unaffected. While I was engaged in examining the chain, the old man kept up a running commentary, such as "If yer 'oner had iver an ould pair o' boots, shure they wud be more use to me than that chain," and "If yer 'oner wud give me five shillin's ye cud keep it," together with a good deal more of the like.

I am afraid that, at this point, my conduct was far from honourable or straightforward, inasmuch as I was purposing to take advantage of this old man's signorance to enrich myself at his expense; but I trust that my brethren will be more sparing in their condemnation of me when they understand how my sin was punished. I was still making a pretext of examining the article, but was indeed only considering the advisability of giving him a crown and getting rid of him; but there was the rub. I knew he would take up his quarters in the town for the night, and he might be prompted to babble about our transaction, and, in all probability, he would come back and demand more; and, besides, I should get shown up as a sharp dealer. I decided to put him off until the morning, pretending that I was going to make a more careful examination of it, then give him 5s., and hope for his speedy departure. I asked him how he came by it, and his story was that he had been at a fair that day, seven miles distant, and he had found it on the way. I still kept up the pretext of examination, and having placed a retort-stand on the counter, I applied the heat of a spirit-lamp, and was engaged in chatting with the old fellow when the contents of that beaker were seized with convulsions; red fumes came off galore. In attempting to remove the beaker to the sink I was severely burnt, and my fingers were a beautiful yellow colour for a month or more.

Eventually, when the row had subsided, the mahogany counter was beautifully etched, the pharmacy was filled with NO₂ to the point of suffocation, and the cause of all this mischief, bereft of all its golden colour, had shrunk, as if ashamed of itself, into a remote corner of the beaker, looking like badly worn tinplate. I reached the old man the remains of his chain, expressed my sorrow that it was not gold, and went home that night with the feelings of Whang, the miller, when he found his mill had fallen.

A clergyman to whom I told the circumstance at the time said that he had heard it was a common practice with sharpers to coat cheap jewellery with wax or vaseline, and then present it to the unwary assistant, who, in many cases, tumbled to the trick. Whether this is true or not, I cannot say; but I have never heard any other explanation.

PASSING THE MINOR BY HOME-STUDY.

THE new Minor is such a comprehensive examination, and requires such a volume of practical work, that it has become more and more an examination for which students require the special training afforded by schools of pharmacy. But that efficient preparation may be done by home-study is shown by the following paper, sent to us by Mr. Thomas Mackenzie, of Inverness, who recently passed the examination. The particulars given by Mr. Mackenzie show how anyone similarly circumstanced may make the most of the spare time that falls to the lot of the chemist's assistant. To the paper we append particulars of the practical work which the writer had to perform at the examination.

THE PREPARATION.

About a year and a half ago, I attended the Chemists' Assistants' and Apprentices' Association's lectures in chemistry, pharmacy, and materia medica for about three months, when the session came to a close. Having acquired an elementary knowledge of chemistry, and been granted the use of their laboratory, I resolved to work for the "Minor" alone. I will describe each subject separately, and my mode of preparation.

In chemistry I read "Attfield," both inorganic and organic, according to the requirements of the new schedule. I also read Buckmaster's "Inorganic Chemistry," and found it very useful for the non-metals. In qualitative analysis I used Dr. Stevenson Macadam's book for the common salts in everyday use, but for the rarer salts, such as hypophosphites, valerianates, permanganates, salicylates, and a few others, I had to resort to Attfield's.

For volumetric estimations I read "Attfield," pages 715 to 746, which contains all the necessary information for candidates. There is also a very good article on volumetric analysis in THE CHEMIST AND DRUGGIST for September 26, 1891, which should be read by all students. I prepared all my standard solutions, and estimated nearly all the substances given in the B.P., including HCN, two samples of which yielded 2.07 and 2.16 per cent. respectively. The apparatus I used was a Mohr's "burette," graduated on the metric system, and a set of grammes weights.

For the extraction of the alkaloids I used a mortar and pestle, Florence flask, a separator, funnels, and a few bottles. I made duplicate assays of nux vomica, opium, and cinchona, according to the directions given in the B.P. I prepared spirit, ætheris nitrosi, and estimated it by means of Allen's nitrometer; also alcohol, chloroform, ether, æther. purus, and æther. aceticus by means of an ordinary retort, with wide-mouthed bottle as receiver, and instead of Liebig's condenser I used a wet cloth.

In physics I read "Wootton's Problems," and practised taking specific gravity by means of ordinary bottles and scales. For the estimation of carbon, hydrogen, oxygen, and nitrogen in organic compounds I read "Attfield," pages 782 to 788. The construction of the barometer and thermometer is also found in "Attfield."

In pharmacy and dispensing I read the B.P., and noted the various methods in making galenical preparations. I received much assistance from THE CHEMISTS' AND DRUGGISTS' DIARIES for 1886 and 1887 and "The Art of Dispensing." In the shop I prepared a great number of galenical preparations of daily occurrence, and practised plaster-spreading. I also practised after hours the preparation of such things as syrup. ferri. iodidi, green extracts, emulsions, aqueous solutions of resinous tinctures, green extract and tannin suppositories, opium and acetate of lead suppositories, camphor, carbolic acid, creasote, croton-oil pills, and a few others as mentioned in "The Art of Dispensing." Proficiency in this department can only be acquired by practice.

For botany I read Edmond's and Balfour's, and, having got up the necessary information as required by the schedule, I betook myself to fields and gardens for practical work. I studied minutely all the parts of the flower and inflorescence,

the methods of reproduction in phanerogams and ferns. With the microscope I examined the various plant-tissues, sections of dicotyledonous, monocotyledonous, and cryptogamic stems, and pollen-grains and hairs.

In materia medica I read "Wills" and "Gerrard," and learned to recognise all the specimens in the B.P. and those appended in the schedule, got up their active principles, habitats, sources, their chief characteristics, and the preparations into which they enter, which is all that is required in this subject.

For prescription-reading the only text-book I read was Pereira's "Selectæ Prescriptis." I had also a number of prescriptions to dispense daily.

THE EXAMINATION.

In pharmacy I had to prepare infusion of senega, and the following prescriptions to dispense, the time given being three hours:—

Sodii carb.	gr. xx.
Morph. acet.	" j.
Infus. senegæ ad	3vj.

Sig.: Take a sixth part every sixth hour.

Ferri et quinin. cit.	gr. ij.
Strychninæ	" ½

Ft. pil. Mitte tales xij.

Sig.: One after food.

Menthol.	gr. x.
Chloroform... .. .	℥xv.
Zinci oxid.	3ss.
Lanolin.	3ij.
Ol. olivæ	3j.

M. et ft. ung.

Sapon. mol'is	5ij.
Aquæ	3ij.
Camphor.	3j.
Ol. terebinth.	3ij.

M. et ft. lin.

Morphiæ hydrochlor.	gr. j.
Bismuthi subnit.	" xxiv.
Sodii bicarb.	" xxxvj.
Ol. menth. pip.	gtt. iij.

M. et ft. pulv.

Divide in pulv. duodecim.

PRACTICAL CHEMISTRY.

I had the following given to test:—

- I. A very dilute portion of HCN neutral to test-papers.
- II. Citrate of bismuth.
- III. Strychnine.
- IV. To find out solution of soda, and to test its strength volumetrically.
- V. Zinc acetate to test.

CHEESE-MAKING and the acidity of the milk or whey bear a relation to each other. The Bath and West of England Society have had the matter investigated, and it was found possible to make cheese in such a way as to be guided in judging the condition of the curd by determinations of acidity alone. The product was a decided success in every respect. The average acidity of the mixed milk before adding rennet was .24 per cent., but on setting the whey only showed .16 per cent. of lactic acid. When the whey showed a percentage of acidity slightly greater than that in the milk before renneting, the process was sufficiently advanced to draw off the whey and pile the curd. Determinations of acidity in the later stages show that the careful development of definite amounts of lactic acid is essential to success. The bacteriological observations also prove that most of the organisms which get into the milk are not able to exist in an acid material, consequently by ensuring a proper development of acidity in the curd we destroy their activity, which would otherwise spoil the cheese. Not only does the *Bacillus acidilactici* play the most important part in the making of the cheese, but it is also the chief agent in the ripening process.

THE PATIENT—THE DOCTOR—THE REMEDY.

THIS phrase, suitably illustrated with "figures," was the *motif* of an effective window-display, "compiled" last Christmas for Mr. Barge's Old Town Street establishment at Plymouth by Mr. E. Dangerfield, whose Birmingham windows we brought before chemists some twelve months ago.

A fashionable medico wearing gold pince-nez hands the emaciated patient (in a pink dressing-gown) a medicine-glass full of "Hill's quinine wine" (tr. aurantii).

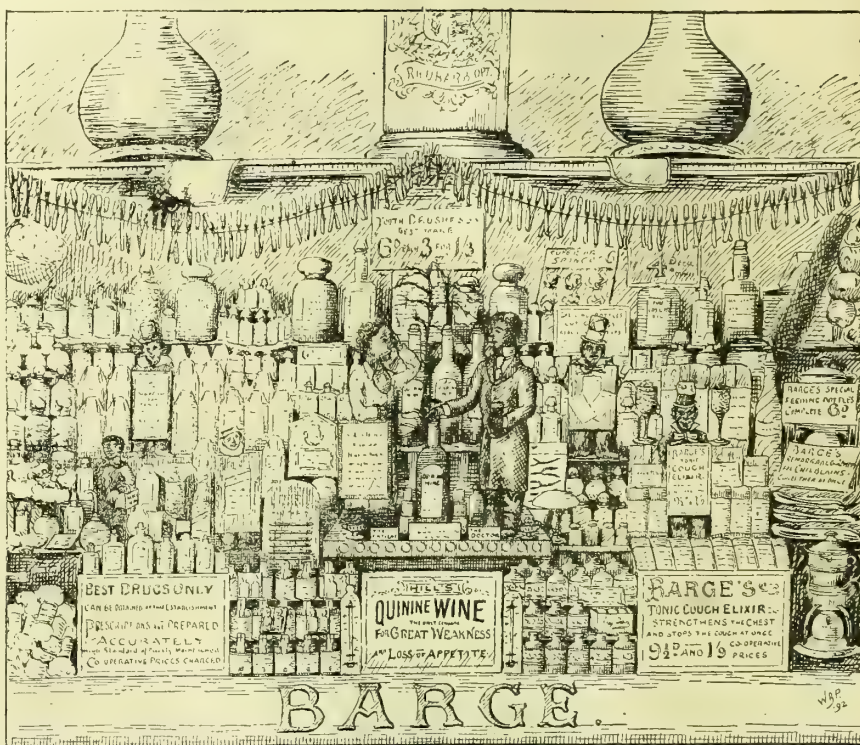
A card is suspended from the patient's arm with the inscription:—

"These Figures are manufactured in our Laboratory from Drugs, Chemicals, and Surgical Appliances in everyday use, such as Shellac, Resin, Salprunella Balls, Tow, Bandages, &c."

On the left a saucy errand-boy with plaid comforter and facsimile medicine-basket was about to throw a snowball at an imaginary victim round the corner. This reprehensible youth formed the centre of a "dispensing group," which included mixtures, liniment, lotion, ointment, pills—indeed, the majority of pharmacopœial galenicals—all carefully got up and finished off in best style; a prescription with its accompanying envelope lay carelessly in the midst—this and all the labels bearing the name of a supposititious "Mrs. Brown."

Four comic sandwich-men carried boards advertising

various proprietary articles. These figures were novel to the "Three Towns," and the window was a great success and was besieged by compact crowds all day long. The errand-



boy was a special favourite with the juvenile spectators, and the "real live" errand-boy of the establishment had rather a trying time in consequence.

AN AQUARIUM FOR THE PHARMACY.

IN the summer months especially, an aquarium with a fountain is an attractive object in a pharmacy. The following sketch and description of one which a correspondent fitted up two or three years ago may prove interesting.

This consisted of a large-size bell-glass aquarium, standing in a "Doulton" jar of dark-brown ware. A fountain played continually to a height of 18 or 20 inches from the water-level. To avoid splashing, a broad ring of plate-glass rested on the top of the aquarium through which the fountain played, the edge being made of cork-work, within which was a circular trough full of growing ferns. The aquarium was stocked with the usual golden carp, planorbis snails, vallisneria, &c., besides a number of loach, whose wistful faces and uncouth antics created great amusement. Ferns in pots flourished around the base, and as the whole thing was backed by a mirror, the effect was charmingly cool and fresh amidst the dust and sultry glare of an August afternoon. Sometimes an attractive show of filters replaced the ferns around the base.

The entrance and exit tubes of bent glass were practically invisible. The supply came through a small gas-pipe from a cistern at the top of the house, and was regulated by an ordinary tap at the back of the dispensing-counter.

About the same time we developed a taste for lizards, snakes, tree-frogs, and other "fearful wild fowl," which were exhibited in the pharmacy, with some show of reason, as Esculapius has always been associated with the ophidian race even in the pharmaceutical "arms." Our two principal snakes were of goodly proportions, being fully 5 feet long, and were allowed to dispose themselves helically on a walking-stick in an empty aquarium. One was some kind of peaceable water-snake, the other a very fierce fellow with formidable fangs. The latter escaped one night, and all in

the house retired to rest with terror and misgivings;



the reptile was ultimately found in a cupboard, whence it was drawn by a thickly-gloved hand, notwithstanding

threatening attitudes and loud hisses. However, one Sunday morning a planorbis snail stopped the exit-pipe of the aquarium above; the water overflowed into the snakes' abode, and we found the water-snake quietly swimming on the surface, while the other lay drowned, with its mouth open, at the bottom. The lizards fought among themselves, and killed one another; the tree-frogs, after gazing inanely at nothing for some days, also perished; and our zoological collection was again reduced to the original "harmless necessary cat" of the establishment.

But the aquarium proper, with its fish and ferns, was always a pleasant thing to look upon, even in winter.

E. D.

PHARMACEUTICAL APPARATUS.

POWDER-DIVIDERS.

IN England the powder-divider is practically unknown. The eye is the aid to most dispensers, the prescription-scales that of the accurate man, and we seem to get along satisfactorily. In American pharmacies, however, powder-dividers are very commonly used, and if they were better known in this country they would be found as convenient as pill-machines are.

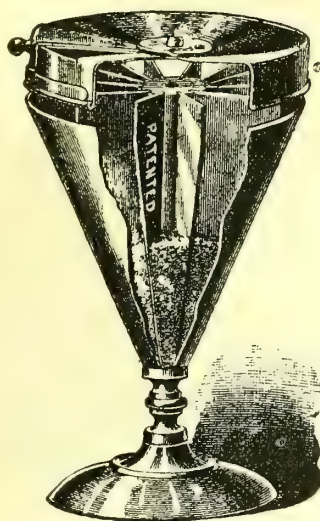


FIG. 1.

It will be seen from this that the cover forms a receptacle for the divided powders. Another form (fig. 2)



FIG. 2.

is made by Fox, Futz & Webster, of New York and Boston, and was described in a recent issue of the *Pharmaceutical Record*. The trough is 9 inches long, 1 inch wide, and $\frac{3}{8}$ inch deep, closed at one end. The powder is placed in the trough, and a rubber plug placed opposite the graduation



FIG. 3.

denoting the number of powders the prescription is to be divided into. The powder is then levelled in the trough by the use of the leveller (fig. 3), after which the plug is removed and the powder divided and removed through the open end of the trough by use of the spatula (fig. 4) in connection with the graduation-marks. The third form of divider was originally described in the *Western Druggist*. It is made by Mr. W. J. Hull, and consists of a trough (fig. 5, 1), within which are fitted a subdivider (2), an indicator (3), and the marker (4). The



FIG. 4.

divider is shown in fig. 6. There is an opening at the side of the trough for withdrawing a divisional part of the powder. The apparatus is worked by closing the opening, placing the powder into it, if for twenty-four,

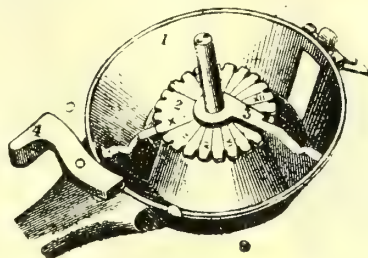


FIG. 5.

then the divider. The marker catches the toothed edge of the divider cover so that when the opening is again freed and 4 drawn back a portion of the powder is brought

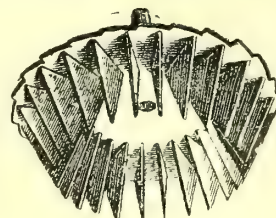


FIG. 6.

round to the opening and ejected. This goes on until the whole twenty-four portions are collected on powder-papers. The indicator 3 is used when less than twenty-four powders are wanted, the wedge x at the same time being put in. In the figure the trough is shown divided for fifteen powders. The working in this case can be readily understood.

OLEUM LINI SULPHURATUM, OR THIOLINIC ACID

ACCORDING to the *Apotheker-Zeitung* this preparation has been patented in Germany by Dr. F. Kobbe, of Leipzig, and the specification shows it to be made by heating 6 parts of linseed oil with 1 part of flowers of sulphur at about 230° C., with constant stirring, until the mixture froths strongly. Then it is allowed to cool, and 1 part of sulphurated oil—the old balsam of sulphur, it will be noted—is heated on a water-bath (80°–100° C.) with 2 parts of sulphuric acid, s.g. 1.840. An evolution of SO₂ ensues, and the mixture becomes a homogeneous solution. It is freed from excess of sulphuric acid by washing with water, is filtered through cloth, and dried by a gentle warmth.

The product is thiolinic acid. It is a brittle solid in the cold, becoming soft between 60° and 75° C. The colour of the acid is greenish-brown, and it contains 14.2 per cent. of sulphur. It is insoluble in water, but combines with caustic and carbonated alkalies, and sodium chloride precipitates the salts from solution. One part of the acid requires 0.123 part of caustic potash for neutralisation. From either of these alkaline solutions salts of the alkaline earths and metallic salts, such as zinc sulphate and lead nitrate, throw down corresponding metallic thiolinates. It would appear that salts of thiolinic acid part with their sulphur somewhat freely, and it is to this characteristic that their use in therapeutics will depend.

FULLER'S EARTH is found in the vicinity of Reigate, Dorking, and Leith Hill. It is extracted in the form of a very soft stone, which crumbles at the touch, and it has to go through a process of manufacture before it is fit for sale. Last year the quantity extracted was 4,500 tons, and its value was estimated at 10,500%.

Leaves from a Recipe-Book.



NCE more we open the recipe-book which we have recently used to so good purpose, and on this occasion we select those formulæ which pertain to the toilet. The first one that we meet is a formula for quinine dentifrice which was formerly in the possession of a West-end of London chemist, who died forty-two years ago. The dentifrice was a favourite one with the Queen and the late Prince Consort; and it has an association with Lord Byron, in so far as his

daughter Ada, Countess of Lovelace, was in the habit of buying it half-a-dozen boxes at a time, "calling at the establishment where it was made in her carriage," says our chronicler. A fashionable dentist of a generation ago thought so much of the dentifrice that he had it put up in No. 14 turned wood boxes, and labelled with his own name, and there are many other honourable associations in connection with it. "Super," "Opt.," and "Verum," are added to one or other of all the ingredients in the original recipe, but we prefer to give it on the understanding that only the best materials are to be used.

Quinine Dentifrice.

[As used by Her Majesty the Queen.]

Pulv. rad. iridis flor.	..	..	..	3xij.
" cretæ præcipitat.	..	..	..	3xxvj.
" oss. sepia	..	..	..	3ij.
Ol. rosæ virgin.	..	..	..	℥lxxx.
Quinina sulphatis	..	..	..	3ij.
Pulv. saponis hispan. (fresh)	..	..	..	3ij.
Ol. cinnamomi	..	..	..	℥lxxv.

All the powders to be finely levigated and mixed in the above order, the oils being intimately mixed before passing the powder through a fine sieve three times.

The powder may be coloured with carmine, but it is much nicer uncoloured. To sell as a special dentifrice, at 1s. 6d. per box, or 2s. 6d. per 2-oz. globe-stoppered bottle.

Rhatany Dentrifrice.

Pulv. iridis flor.	..	..	..	3vj.
" oss. sepia	..	..	..	3vj.
" cretæ præcip.	..	..	..	3xxiv.
" krameria	..	..	..	3ix.
Carmin.	..	..	..	3iss.
Boraci	..	..	..	3ij.
Pulv. antimonialis	..	..	..	3vj.
Ol. rosæ virgin.	..	..	..	gtt. xxiv.
" neroli	..	..	..	gtt. xvj.
" cedrat.	..	..	..	gtt. viij.
" cinnamom.	..	..	..	gtt. viij.
" caryoph.	..	..	..	gtt. viij.
" lavand. ang.	..	..	..	gtt. iv.
" pimentæ	..	..	..	gtt. iv.
Tinct. myrrhæ	..	..	..	3vj.
Extrait violæ	..	..	..	3vj.
Magnes. carb. pond.	..	..	..	3vj.

Mix well, and pass through a fine drum sieve twenty times.

This is a superior preparation, which has been retailed at 6d. per oz.; so also has the following:—

Aromatic Dentifrice.

Magnes. caroon. pond.	..	..	..	3vij.
Cretæ præcip.	..	..	..	3xxiv.
Pulv. iridis flor.	..	..	..	3iv.
" sapon. hispan. (fresh)	..	..	..	3iv.
Carmin.	..	..	..	gr. xx.
Ol. caryoph. ang.	..	..	..	3ij.
" cinnam. ver.	..	..	..	3j.
" origani pallid.	..	..	..	℥l.
" rosæ geranii	..	..	..	3j.
" rosæ virgin.	..	..	..	3j.
Ess. moschi	..	..	..	3j.

Mix well, and pass through a fine drum sieve several times.

French Dentifrice.

Pulv. camphoræ	..	..	..	3xvj.
Cretæ præcipitat.	..	..	..	lb. v.
Carmin.	..	..	..	3iss.
Ol. rosæ virgin.	..	..	..	3ij.

M.

This should be passed through a fine drum sieve after being thoroughly mixed. To bring out the beautiful colour the dentifrice should be passed through the sieve twenty times. It is an elegant preparation properly prepared.

Antiseptic Dentifrice.

Pulv. rad. irid. flor.	..	..	..	3ij.
" glycyrrh. decort.	..	..	..	3ij.
" sapon. hispan. (fresh)	..	..	..	3vj.
Cretæ præcipitat.	..	..	..	3j.
Acid. boracic.	..	..	..	3ij.
Acid. benzoic.	..	..	..	3j.
Magnes. carb. pond. ad	..	..	..	3iv.
Ol. eucalypti	..	..	..	℥lxx.
" rosæ virgin.	..	..	..	℥lv.
" menth. pip. ang.	..	..	..	℥lv.
" limonis	..	..	..	℥lx.

Mix in the order written, and pass through a fine drum sieve. If desired coloured, add 20 grains of carmine, which gives an elegant tint.

Dental Tincture of Myrrh.

Macis contus.	..	..	..	gr. l.
Myrrh. opt. cont.	..	..	..	3iv. gr. x.
Rad. krameria cont.	..	..	..	3iv. gr. x.
Glycerini	..	..	..	3s.
Sp. vini. rect.	..	..	..	3xij.

Macerate for fourteen days, shaking every day or every second day once during the day, then filter.

Retail 2 oz., flat-shape best quality white glass bottle, 1s.

Directions: Half a teaspoonful in a wineglassful of water (tepid in winter) will be found a most effectual astringent wash for the teeth and gums. It should be used every night and in the morning.

Tincture of Myrrh and Borax.

Myrrh. elect. cont.	..	..	..	3j.
Tinct. krameria	..	..	..	5x.
Sodæ bborat.	..	..	..	3iss.
Glycerine [Price's]	..	..	..	3ss.
Eau de Cologne	..	..	..	3x.

Macerate fourteen days, and filter.

A most elegant and fragrant preparation, suitable for first-class business, and very brilliant in appearance.

Vegetable Hair-wash.

Tinct. cantharidis	..	..	..	3j.
Spt. rosmarin.	..	..	..	3j.
Ol. amygdal. dulc.	..	..	..	3iv.
" lavand. ang.	..	..	..	℥lx.
" bergamot.	..	..	..	℥lxx.
" rosæ virgin.	..	..	..	gtt. iv.

M.

To be applied every other morning, well shaking the bottle before use. Retail price, 6-oz. bottle, 2s.

Nursery Hair-lotion.

Cort. quillaia cont.	..	..	..	3ss.
Lig. quassia	..	..	..	3j.
Chirata	..	..	..	3ij.
Aquæ bullientis	..	..	..	Oij.
Infuse for one hour, strain, and add—				
Sodæ salicylat.	..	..	..	3j.
Tinct. lavand. co.	..	..	..	3j.

The lotion may be set aside for four days then filtered and bottled. Four-ounce bottles have been sold at 7d.; 8-oz., 1s. It is a good lotion.

Directions: After combing the hair thoroughly, apply the lotion to the roots with a sponge, sprinkle some upon the hair-brush and well brush the hair in order to distribute the lotion equally.

Lime-juice and Glycerine.

Olei nucis	Oiv.
Aque calcis	Oij.
Liquor. calcis sacch. . . .	3iv.
Ol. limonis	3ss.
„ bergamot.	3j.
„ neroli	gtt. vj.
„ cinnamomi	gtt. vj.

In making it add the liquor. calcis sacch. to the aqua calcis, then add both to the oil, shaking vigorously in a bottle capable of holding nearly double the quantity. Let it stand for a few days, and if any oil float on the surface, add a little more liquor. calcis sacch. When finished, add the essential oils, and let stand a week with frequent agitation.

Transparent Castor-oil Pomade.

Cetacei	3ij.
Ol. ricini ital.	3v.

Melt, and add gradually with constant stirring—

Sp. vin. rect.	3v.
------------------------	-----

Then add—

Ol. bergamot.	℥xxx.
„ neroli	℥iv.
„ caryoph.	℥iv.
„ verbenæ	℥iv.
„ rosæ virgin.	℥iv.

Mix, and fill into bottle previously warmed.

Has usually been sent out in Maw's 3-oz. glass pomade-jars. It is a very elegant preparation.

Crystallised Cream for the Hair.

Ol. ricini	3vñj.
„ amygdal. dulc.	3vñj.
Cetacei	3ij.
Ol. bergamot.	3ij.
„ lavand. ang.	3is.
Extrait jasmín.	gtt. viij.
„ violæ	gtt. viij.
Ol. rosæ virgin.	gtt. viij.

Melt the spermaceti and add the fixed oils, warming gently only. Add the perfumes. Place the bottles for the pomade in a shallow dish containing hot water, and pour the melted pomade into them. Leave undisturbed until the pomade is solid.

To colour yellow add 2 oz. of palm oil, and pink with a little alkanet-root.

Camphor Ball.

Ceræ albæ	3iv.
Cetacei	3ij.
Ol. ricini	3vj.
Pulv. camphoræ	3j.
Glycerini	3iv.
Ol. pimentæ	3j.

Melt the wax and spermaceti on a water-bath, add the castor oil, then the camphor. Pour into a warm (but not hot) mortar, beat in in the glycerine until smooth, and add the essential oil.

SOME HOUSEHOLD REQUISITES.

Concentrated Essence of Ginger.

Rad. zingib. jam. cont. . . .	45 oz. (avoir.)
Sp. vin. rect. (58-per-cent.) . .	140 oz.
Sacch. alb.	2½ lbs.
Sem. cardam. min. contus. . . .	3ij. 3ij.

Macerate one month and filter.

Cochineal Colouring.

Carmin.	3j.
Liquor. ammon. fortis, 880° . .	3vj.
Sp. vin. rect.	3iv.
Sacch. alb. (in lumps)	3 lbs. (avoir.)
Aqua destill. ad	80 fl. oz.

Rub the carmine down with the ammonia, make the sugar into a syrup with 2 pints of water, and when cold add to the carmine solution; then add spirit, and make up to 80 fl. oz. with aqua destill. Strain through fine muslin.

The Celebrated Newmarket Sauce.

Shallots	40 oz.
Cloves	3 „
Celery-seed	2 „
Mace	1 „
Capsicum	1 „
Walnut-ketchup	2 quarts
Mushroom-ketchup	2 „
India soy	3 „
Acid. acet. fort. (Beafof's) .. .	1 gallon
Water	6 gallons (imperial measure)
Salt	2 lbs.

Peel and slice the shallots, bruise the capsicum, cloves, celery-seed, and mace, and pour on the other ingredients.

Furniture-paste.

Ceræ flav. (in shreds)	3viij.
Ol. terebinth.	3xx.
Ol. lini	3ij.
Rad. anchusæ.	3iss.

Digest the alkanet in the mixed oils, strain, melt the wax on a water-bath, and add the oils to it, constantly stirring.

Neatsfoot Oil (Imitation).

Colza oil	2 gallons
Lard	3 lbs.

The lard to be melted and well stirred in the oil.

Medical Cleanings.

ANODYNE SINAPISMS.

DR. B. W. RICHARDSON, in the *Aselepiad*, says mustard can be used advantageously as the menstruum for anodynes in the form of external application, and without destroying its value as a counter-irritant. The mode of application consists in mixing the mustard into a thick solution either with olive oil or with glycerine, and then incorporating the anodyne, opium, tincture of aconite, cocaine, belladonna, or other narcotic. The vascularity caused by the mustard favours absorption, and an insensibility amounting to a slight local anæsthesia can be induced by this simple method.

TOOTH CULTURE.

IN an address delivered at the annual meeting of the Eastern Counties Branch of the British Dental Association, Sir James Crichton-Browne referred to a change which has taken place in bread as one of the causes of the increase of dental caries. So far as our own country is concerned, this is essentially an age of white bread and fine flour, and it is an age, therefore, in which we are no longer partaking, to anything like the same amount that our ancestors did, of the bran or husky parts of wheat, and so are deprived to a large degree of a chemical element which they contain—namely, fluorine. The late Dr. George Wilson showed that fluorine is more widely distributed in nature than was before his time supposed; but still, as he pointed out, it is but sparingly present where it does occur, and the only channels by which it can apparently find its way into the animal economy are through the siliceous stems of grasses and the outer husks of grain, in which it exists in comparative abundance. Analysis has proved that the enamel of the teeth contains more fluorine, in the form of fluoride of calcium, than any other part of the body, and fluorine might, indeed, be regarded as the characteristic chemical constituent of this structure, the hardest of all animal tissue, and containing 95.5 per cent. of salts, against 72 per cent. in the dentine. As this is so, it is clear that a supply of fluorine while the development of the teeth is proceeding is essential to the proper formation of the enamel, and that any deficiency in this respect must result in thin and inferior enamel. Sir James Crichton-Browne thinks it well worthy of consideration whether the reintroduction into our diet of a supply of fluorine in some suitable natural form, such as exists in the pellicles of our grain-stuffs, might not do something to fortify the teeth of the next generation.

THE MEDICAL STAFF CORPS OF THE ARMY.

BY ONE WHO HAS SERVED.

THE Editor of this journal has suggested that a few remarks on the prospects and advisability of young druggists donning Her Majesty's uniform, based on experience, may be acceptable. I propose, therefore, to give in



this paper a brief account of what a young fellow may expect by adopting a career in that non-combatant but important branch of the service known as the Medical Staff Corps.

Having met the recruiting-sergeant, been medically examined, and, if fit, duly attested, the youthful aspirant to "medico-martial" honours, shortly finds himself safely landed at South Camp, Aldershot, where in V and Z lines are situated the *dépôt* and training-school of the corps he has joined.

During the first week he will be served with his clothing, accoutrements, and free kit, and posted to one of two companies, the *dépôt* being thus divided for disciplinary and economical purposes; and the first month is spent in mastering the intricate mysteries of the goose-step, squad and company drill, and the various "regulation" methods of appearing in uniform, with or without equipment, on or off duty, and other details of the routine of a soldier's life, precisely similar to a lad joining a line battalion. Having become a little accustomed to military *régime*, a class of forty or fifty recruits is formed, which for about two months undergoes a thorough and systematic training, under a surgeon, in physiological outlines, bandaging, hospital-ward duties, stretcher exercise, and allied work, as laid down in the Medical Regulations, Part II.

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[Mem.—I strongly recommend anyone about to join the corps to procure this manual, price 1s. 6d., from any Government publishers.]

Surmising that our young "chemicus" has passed class successfully—the examination being of the simplest character, and entirely oral—we shall next find him posted for duty to some station-hospital, or, perhaps, a general one—e.g., Netley and Woolwich—and mostly employed in the capacity of ward orderly, gaining knowledge daily in the application of dressings, symptoms of diseases, and observation and nursing of the sick generally.

But now comes the bitter pill. According to the rate of promotion in the corps (about 2,400 strong, of whom 700 odd are warrant and non-commissioned officers) during the last few years, it takes fully five years to become lance-corporal—the first step in non-commissioned rank. Thus, a man joining for three years with the colours and nine years in the reserve cannot possibly obtain promotion unless he extend his colour-service to seven years, which, provided he is of good character and suitable for the corps, he is always encouraged to do.

But still, as a private, he can receive advancement in grade as orderly with corresponding increase of pay—conditionally, of course, on good conduct, smartness, and aptitude for ward-work; and reverting again to our ideal young

soldier, we find him after three or four months' good ward-work, appointed second-class orderly, and wearing one worsted bar on right arm, his pay 9s. a week *clear*, and probably employed for a while on staff duties, as issuer in the steward's store, surgeryman to the compounder or clerk in the senior medical officer's office, in all of which capacities he will gain knowledge absolutely essential to him, when he in turn becomes a non-commissioned officer—the clerical knowledge, in particular, being only acquired by constant practice in compiling the many various returns, the modes of official correspondence, and close acquaintance with the never-ending regulations connected therewith.

Supposing, again, our man has resolved to extend his service to seven years with the colours, having completed his original three years, and obtained a second-class school-certificate (dictation, arithmetic, and army accounts), or a first, perhaps (dictation, arithmetic, geography, English history, and copying manuscript), he will now obtain permission to sit for his corporal's examination (written), which comprises knowledge of duties of a Medical Staff Corps non-commissioned officer in the various employments of ward-master, pack-storekeeper, steward, and compounder; anatomical and physiological outlines, names and uses of surgical instruments and appliances for fractures and dislocations, modes of arresting hæmorrhage, restoration of the apparently drowned, nursing of helpless patients, observations of the sick, and ward-management generally; and for active service the theory and practice of rendering aid to the wounded in battle, and the best means of transporting them, as embodied in stretcher-drill.

I have dwelt at some length on the early part of the private's career in the Medical Staff Corps advisedly—firstly, on account of its exceedingly trying nature; and, secondly, because there are so many things to be learnt before the private can emerge into an efficient non-commissioned officer.

Our friend, having successfully passed his corporal's examination, must gird up his loins and prepare for the compounder's ordeal, for which he is allowed to sit after six months' attendance in a military surgery, and favourable report by the surgeon and compounder instructing him.

The examining board is usually composed of one surgeon-major and two surgeon-captains, and it is upon the opinion and recommendation of this board that the Director-General of the Medical Staff grants the certificate of compounder of medicines.

The chief subjects are:—

- (i.) Composition, mode of preparing, and doses of all B.P. preparations.
- (ii.) Poisons: symptoms, antidotes, &c.
- (iii.) Practical dispensing: preservation of drugs, and their tests by odour, colour, form, &c.
- (iv.) Rendering of all documents connected with supplies, demands, and transfers of medicines, instruments, and surgical materials.

Our friend having been successful, can now rest on his oars, as no more examinations are necessary until he qualifies for warrant officer—a rank, owing to the present stagnation of promotion, he most probably will not attain within twenty-one years, unless the corps is increased, or the "Great War of 1892" happen elsewhere than in the pages of *Black and White*.

With six years' service completed, we find our friend full corporal, performing the duties of compounder, and held personally responsible for all drugs, &c., in his charge, with an orderly under him for cleaning up, &c., and his time 9 A.M. to about 1 P.M. occupied in dispensing and attending to the wants of the medical officers; and the afternoon—say, from 2 till 4—employed in attending to out-patients, married people, &c.; his daily pay 2s. 10½d. *clear*. And in his surgery we will leave him.

Before concluding this sketch, I may as well summarise some of the advantages and disadvantages most likely to accrue to a young druggist by becoming an army compounder, and I also append a table showing the pay in the Medical Staff Corps:—

Advantages.

1. Permanence, and after twenty-one years a pension.
2. Comparatively short hours, and more time for recreation.
3. Opportunities for foreign service.

Disadvantages.

1. Loss of touch with current trade affairs.
2. Limited supply of drugs, entailing less experience.
3. Excessively slow promotion.

Rank	Full Daily Pay	Weekly Pay After Paying Messing and Washing	Time Taken to Attain the Rank
Private	<i>s. d.</i>	<i>s. d.</i>	
(a) 3rd class orderly ..	1 6	7 10½	On joining
2nd " ..	1 8	9 0½	About 6 months
1st " ..	1 10	10 2½	" 15 "
Lance-corporal ..	2 2 (b)	12 6½	" 5 years
Corporal ..	2 9	16 7½	" 5½ "
Lance-sergeant ..	3 4	(d)	" 10 "
Sergeant ..	3 8		" 10½ "

Staff-sergeants, 4s. 3d. and 4s. 6d.; warrant officers, 5s. 6d. per diem.

(a) 8d. per diem extra if a lunatic attendant, or over infectious diseases.

(b) Including one good-conduct-badge pay.

(c) 6d. per diem extra if employed as compounder.

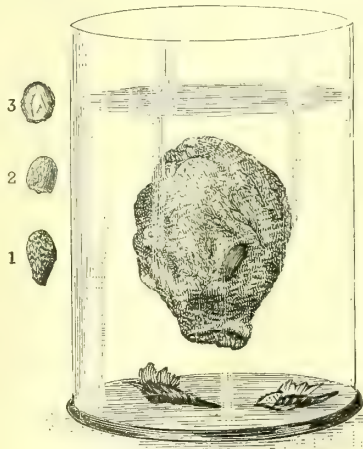
(d) Less stoppages for sergeants' mess.

The young man who heads this article is a second-class orderly in service uniform. The tunic is a dark-blue cloth with red facings. When not in service in the barracks or camp he may wear an easy-fitting patrol jacket, but if going out into the town he must wear his tunic with a white belt and a round dark-blue cap with red band. The red cross on his arm in a white circle with yellow border is the distinguishing mark of the corps.

A REMARKABLE FRUIT.

By JOHN R. JACKSON, Curator of the Museums, Kew.

IT has been often remarked that a Chinese druggist's shop contains some of the most extraordinary products imaginable, some of which have yet, perhaps, to be developed in European pharmacy. One of the most remarkable among fruits is perhaps that of *Sterculia scaphigera*, a plant growing in China and Siam. It was first brought to notice so long back as 1861 by Daniel Hanbury, who published a notice of it in that year in the *Pharmaceutical Journal*,



STERCULIA SCAPHIGERA.

1. Fruit ($\frac{1}{4}$ nat. size).
2. Seed.
3. Section of seed. The fruit in jar shows the proportion to which it swells in water—viz., from the size of 1.

since which time no further notice has been taken of it, except that in the Siamese collection of edible products shown in the Health Exhibition in 1884 the fruits were shown, and quite recently some fruits have been received at the Royal Gardens, Kew.

The plant producing this fruit is known by the somewhat barbarous name of "Boa-tam-paijang," and in Bangkok as "Bungtalai." It is described as a lofty tree, with coriaceous leaves 12 to 14 inches long and 6 inches wide. The flowers are in panicles, and are succeeded by wing-like follicles 6 to 8 inches long by 3 to 4 inches wide. These contain the fruits, which are from $\frac{3}{4}$ inch to $1\frac{1}{4}$ inch long and $\frac{1}{2}$ inch wide, ovoid, usually somewhat elongated at the lower extremity, which is terminated by a large opaque scar—the point of attachment to the follicle, which is membranous, somewhat boat-shaped, and inflated. The fruits are of a dark-brown colour and wrinkled on the outside. If one of these fruits is placed in water, in the course of an hour or two it swells to an enormous bulk, forming a gelatinous mass, which, after being sweetened, is eaten by the people as a delicacy. These fruits were introduced about 1840 into one of the Paris hospitals as a certain specific in diarrhoea and dysentery, but they gave no satisfactory results besides that of an ordinary demulcent; nevertheless, in 1854 they were quoted in the wholesale price-list of Messrs. Menier & Co., of Paris, at 3*l.* 13*s.* per lb.

Though the gelatinous property of the seed is remarkable, there seems to be no reason to suppose that they will ever become of any recognised use in this country. They were analysed by Professor Guibourt, who gave the following results:—

In the Pericarp.

Green oil	1·06
Bassorine	59·04
Brown astringent matter	1·06
Mucilage	
Woody fibre and epidermis	3·20

In the Nucleus.

Fatty matter	2·98
Saline and bitter extract	0·21
Starch	31·91
Cellular tissue	

100·00

Sir Robert Schomburgk, sometime British Consul at Bangkok, reported that from the trees growing by the roadsides the fruits often drop to the ground in such quantities that, when they become wetted with rain, such a thick mass of glutinous jelly is formed as to render the passage of the road on foot or horseback a matter of difficulty.

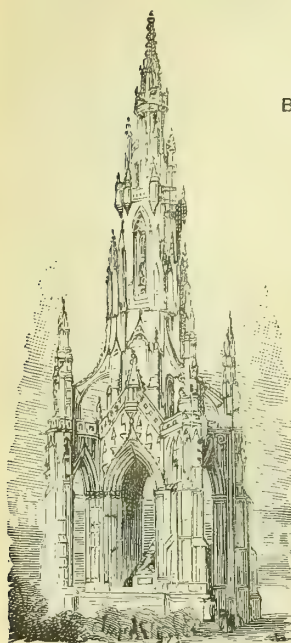
ACETOGEN.—An analysis (*Phar. Zeit.* 429) of the substance going by this name on the Continent shows that it is composed of 21 per cent. of calcium phosphate, 45 per cent. of disodiumphosphate, and 40 per cent. of ammonium phosphate.

A RISK OF ELEGANT PHARMACY.—A pharmacist at Aniche, near Douai (one of the busy French Northern towns), recently received a visit from a schoolboy of tender age, who, offering a few pence, demanded "some of those red sweets you sold my schoolfellow." The varieties of "tuck" indulged in by young France are numerous, and our pharmacist made further inquiries. With schoolboy frankness, an explanation was at once given. Rushing to one of his cupboards, where a bottle of arsenic pills should have been, the chemist confirmed his horrible suspicions. The little fellow's comrade had evidently entered the pharmacy just at the moment when, after serving a few arsenic pills to a lady customer, the proprietor had occasion to quit the shop for a few moments. Making straight for the cupboard where he had observed the bottle was replaced, the lad had possessed himself of the brightly-coloured sweetmeats (as he supposed) which had aroused his cupidity, and promptly pocketed them. Once free from scholastic duties, he distributed them to his youthful friends, of whom this was one. The pharmacist acted with equal promptitude, and straightway obtained the names of those who had accepted the deadly "goodies." The powerful emetics which they got will probably make them hesitate before again accepting their young friend's offerings.

EDINBURGH.

VISITED BY THE
BRITISH PHARMACEUTICAL CONFERENCE, 1871.
RETURN VISIT, AUGUST, 1892.

*"Thy sons Edina, social, kind,
With open arms the stranger hail."*

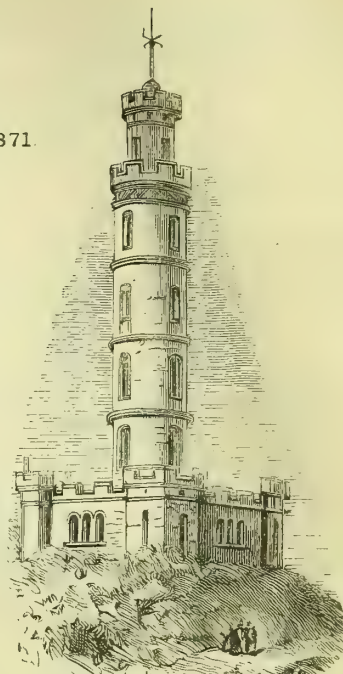


THE SCOTT MONUMENT.

THE Edinburgh Learned of that period were in general more noted for clearness of head than for warmth of heart: with the exception of the good old Blacklock, scarcely one among them seems to have looked at Burns with any true sympathy, or indeed much otherwise than as at a highly curious *thing*." So Carlyle thought, and said in one of the most brilliant of his essays. Yet Burns's recollections of the city, his memories of hospitality to a farm hind, and his gratitude for its elevating influence, served to prompt the "address" from which we quote—not the happiest of his poems, but honest in expression:—

Here Justice, from her native skies,
High wields her balance and her rod;
There Learning, with his eagle eyes,
Seeks Science in her coy abode.

A century has passed since Burns was a "stranger" in "Scotia's darling Seat," and it remains much



NELSON'S MONUMENT, CALTON HILL.

what it was in his day. The New Town has developed to the plan which Craig laid out for it; Princes Street has become one of the finest thoroughfares in Europe; the Nor' Loch by its side has given place to delightful Gardens; "palaces and towers" have been reared which Burns did not dream of; but the city remains the pride of Scotland—a centre of Education, Justice, and Learning such as history shows few parallels of.

"Our staple industry is education," said a Lord Provost of Edinburgh not many years ago, and that expression is the finger-post to the pharmaceutical strangers who will visit it next month. It is "no mean city" which they will see. In topography unique in these climes, for, like Rome, it is a town scattered over and among a range of eminences, and it is rich in historic interest and architectural grandeur; but the living fact which pharmacists will not less appreciate is that it is steeped in learning and that its wealth arises from the propagation of knowledge. Its schools for elementary and secondary education alone entitle Edinburgh to prominence in this respect, but it is the fame of the University and Medical School which has drawn students to the city from all parts of the world. It scarcely needs to be said that the Medical School has more than any other in the universe influenced the art of healing for upwards of a century, and that influence is at the present moment as great as it has been since Monro *primus* entered the chair of anatomy in 1720. One cannot imagine that an influence whose beneficence has been so widely felt should not have left its mark nearer the source, and we have an expression of it in the honourable associations of medicine and pharmacy in the city, and the easy gradation by which many of the followers of the latter calling have ascended to higher branches of medical and physical science.

The Medical School has made astonishing progress within the past twenty years. Strictly speaking, the medical department of the University is not the Edinburgh Medical School, for it comprises the University, the extra-mural schools, the Royal Colleges of Physicians and Surgeons, medical societies, the Royal Infirmary, and all similar institutions wherein are persons recognised by the University as teachers. To this catholic principle is unquestionably due much of its success. It favours freshness, stimulates progress, and provides a means for educational experience which cannot obtain in the four walls of a university alone.

PROGRESS OF EDINBURGH PHARMACY.

In many respects pharmacy has also progressed during the same period. In the matter of the Conference, for example, the Local Committee of 1871 consisted of twenty-three persons; the committee of this year numbers 218, half of whom Edinburgh alone provides, the remainder hailing from towns in the neighbouring counties. We have happy recollections of the warmth of Edinburgh hospitality in 1871. Then there was one of the most brilliant *conversazioni* which British pharmacy can boast of, the late Emperor of Brazil being one of the guests, and other titled persons giving a tone to the affair which is not usual at druggists' meetings. There were feastings and tourings on conditions such as the principles of the Conference will not permit nowadays. There was no lack of solid pharmacy, either, for the genial President, Mr. W. W. Stoddart, to direct. John Mackay was at the wheel as Local Secretary; he had admirable lieutenants, and they made the eighth meeting of the Conference a record which will take some beating.

In Scotland, at least, Edinburgh pharmacy has always held high rank, and to acquire experience in one or other of the pharmacies in the centre of the city is one of the desires of the ambitious. But, unlike the similar ambition amongst English assistants to have a period of service in a London house, tradition has little to do with the Scotch motive. The Scotch capital, like the English, offers splendid educational opportunities, and these, with the prospect of variety in dispensing practice, are the sole attractions to the provincial assistant. On the fingers of one hand we may count the pharmacies which are reckoned the most attractive in this direction, although there are at least a score more wherein it is known excellent experience and training are obtainable. Few pharmaceutical visitors to Edinburgh can help having the same curiosity as Scotch assistants regarding the pharmacies which are historic, or which are notable in some special direction, for the fact cannot be overlooked that with the retail pharmacy of the city the introduction and manufacture of anæsthetics and narcotics are honourably associated. Perhaps the fact that medical men were at the head of the three leading firms had something to do with this. At any rate, it is interesting to note that Baillie J. F. Macfarlan was a licentiate of the Royal College of Surgeons. So was Mr. William Flockhart, and Mr. Thomas

Smith, happily still alive, has his name on the Medical Register as well as on the Register of Pharmaceutical Chemists.

DUNCAN-FLOCKHART'S.

The headquarters of Messrs. Duncan, Flockhart & Co. are at 52 North Bridge, close to the General Post Office. There it was that John Duncan commenced in 1811; many years after a branch was opened at 117 Princes Street (which is now the more important retail business), and some fifteen years ago the firm launched boldly out into the wholesale trade with works and warehouse in the Canongate quarter. The Leith business, Duncan, Flockhart & Powell, is no longer directly connected with the Edinburgh firm. The Duncan-Flockhart influence has been very widely felt in Scotch pharmacy. While the firm has unquestionably the largest dispensing and retail business, there have gone out from its pharmacies a large number of young druggists who also perpetuate the old name by the liberal use of it on their labels and signs. When this century dawned, Mr. Duncan was in business in Perth, along with the late Mr. James Hamilton and Mr. Dandie. These were three exceptional men, and it was according to the nature of things that the fair city should become too small to hold the three of them. Mr. Dandie remained to continue the business as Dandie, Newby & Dandie; Mr. James Hamilton went to Dundee and built up a prosperous business, which is now represented in Messrs. James Hardie & Son (Mr. Hardie, sen., having been a partner with Mr. Hamilton before the death of the latter); and Mr. Duncan went to Edinburgh. He had been nearly a dozen years there when young Flockhart came from Kinross-shire to be an apprentice with him, and in course of time the apprentice became a partner. The proximity of the shop to the University and the friendly relations of the firm with doctors, especially with Sir James Y. Simpson, bulk largely amongst the factors which determined its success. It says not a little for the shrewdness and ability of the partners that as time went on they kept pace with the fertility of Simpson's brain. Chloroform was, of course, the biggest thing, but the great ladies' doctor was one of the keenest for new remedies, and these, with the chloroform, were produced in the Duncan-Flockhart laboratory below the street, which, by the way, is laid upon a series of arches. It thus happened that long before Duncan, Flockhart & Co. ranked as a wholesale house all the principal druggists in Scotland ran an account with them; there was the place to get the new things, particularly the syrups and liquors of Simpson's prescriptions. It was the custom then for provincial druggists who had business relations with the firm to visit Edinburgh once or twice a year in order to square accounts. The business grew apace, and when the original partners died, in 1871, it seemed to have reached its zenith; but fresh blood has carried on the work to even greater things, and now there is no attempt to live on past reputation. Amongst those who have been connected with it as partners were Mr. William Tait and Mr. John Simpson (nephew of the professor). At present the firm consists of six individuals—Mr. James Buchanan, the senior partner, who, with Mr. J. Laidlaw Ewing, manages the North Bridge pharmacy; Mr. James Heron and Mr. Alexander Noble, who are the principals in the West-end branch; and Mr. Robert Dick and Dr. Inglis Clark, who work the wholesale business in South Canongate. The premises in the Canongate are within a stone's throw of Holyrood, and are amongst the largest and finest-equipped pharmaceutical factories in the kingdom. They comprise chloroform laboratories, an aerated-water factory, pharmaceutical laboratories, and warehouse and count-rooms. It is impossible in the compass of the present article to describe these departments with anything like fulness—indeed, it must be confessed that many sections cannot be described. In the chloroform-place, for example, all that one can see is raw material going in at one end of the plant and pure chloroform coming out at the other. One sees nothing—smells nothing—of the anæsthetic nature, and there is no apparatus of the kind in the world, for it is all of recent design by Dr. Inglis Clark, whom we regard as a mechanician as much as a chemist. Probably he would take his D.Sc. in the engineering department if he were to live his life over again. As it is his reputation is that of a chemist. The pharmaceutical laboratories were erected about four years ago, the intention being to meet the increasing

demand for medicinal specialities and pharmacopœial preparations. One floor of this large four-floor building is devoted to capsule-making, and other notable departments are for pills and fluid galenicals, in each of which there is apparatus of the most original character. Mr. D. B. Dott, F.R.S.E., the firm's research chemist, has also a suite of laboratories in this building. We must leave the aerated-water factory to the imagination; we suppose there is none larger in Scotland—certainly the syphon trade is immense, and the firm fit up their own syphons, having a foundry and finishing-shops on the establishment. The warehouse is a model of arrangement and method, and it is noticeable that in the works female labour is largely employed. There is no lack of energy about the firm; already they have pushed their business to the uttermost parts of Scotland, and have now a representative in the north of England. In time they will doubtless get as far south as London, and will take rank with the metropolitan houses. In spite of this activity, the members of the firm have done their share of public pharmaceutical work. Mr. Buchanan was for many years an examiner, and a very searching one he was, too. Botany was his subject. Long before Mr. Chamberlain's orchids were heard of, Mr. Buchanan had spent a fortune on the cultivation of these fascinating plants, and his gardens are one of the sights of Edinburgh. Few men in Edinburgh pharmacy



JAMES LAIDLAW EWING.

are more highly esteemed than he; he is Scotch to the backbone, and as large-hearted as they make them. Next in seniority in the partnership comes Mr. James Heron, who, while being a warm supporter of the Pharmaceutical Society's work in Edinburgh, has not taken office; but his colleague, Mr. Noble, has served as an examiner, and is now on the Executive. Mr. Robert Dick, who has done so much to make the firm's wholesale trade, pairs with Mr. Heron in the matter of public pharmaceutical work, and, as has already been mentioned, his Canongate colleague is Dr. Inglis Clark, who, after ten years' service to the Pharmaceutical Society as examiner in botany and a member of the Executive, had to give his whole time to business. Dr. Clark is the youngest partner of the firm, and is still on the bright side of 40. It took the workers of the Pharmaceutical Society in Scotland some time to discover Mr. J. L. Ewing, and yet for many years he had, as Convener of the Edinburgh Price-list Committee, given excellent proof of his administrative ability, and sustained the price-list and its regulations practically inviolate until the advent of "cutters" into the city. Mr. Ewing was admitted as a partner into Duncan, Flockhart & Co.'s on the death of his uncle, Mr. William Tait. He is rather a retiring man, and it is questionable if he would have come forward as a candi-

date for the North British Branch chairmanship if he had not been asked. His appointment has been one of the best things done in the North for many years past, and his administrative powers are worthy of greater scope than is afforded him in Edinburgh. As vice-chairman of the Conference Local Committee, he has had much to do with the local arrangements, and has greatly relieved Mr. J. R. Young, the chairman, whose health has been somewhat feeble lately.

MORPHIA MANUFACTURE.

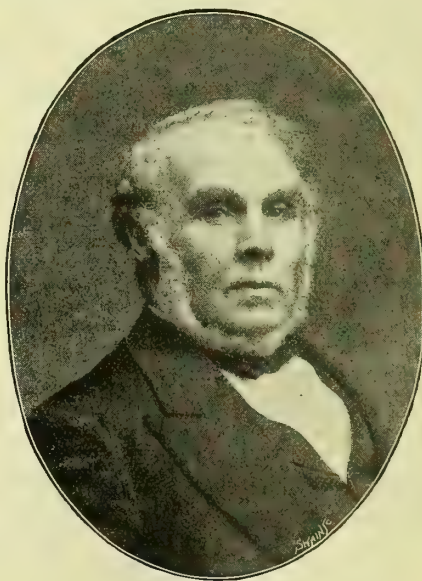
The mention of Mr. Young's name naturally takes us on to another Edinburgh manufacture, as noted as the chloroform one. The modern Athens makes morphia for the world, and J. F. Macfarlan & Co. and T. & H. Smith & Co. are the manufacturers thereof. Mr. Young is the senior partner of the first-named firm. It is said that Edinburgh has become the centre of chloroform-manufacture in the United Kingdom owing to a fault in fiscal arrangements. At the time that Sir James Y. Simpson popularised the use of the anæsthetic, Scotland had the good fortune not to pay so heavy a spirit-tax as the less-favoured people south of the border; and so it happened that the Edinburgh manufactures (for the two firms which we have named are also makers of chloroform) took the lead, and they have kept it ever since. While there was no such advantage in the case of morphia, there were peculiar reasons why the manufacture of that alkaloid should be associated with Edinburgh. In the early decades of the century Dr. William Gregory occupied the Chemistry chair at the University, and he was one of the most original pharmaceutical chemists in pre-Pharmaceutical Society days. There are not a few processes which we owe to him, but by far the most important is that which he devised in 1831 for the manufacture of hydrochlorate of morphia. We refer to the calcium-chloride process, which is still pharmacopœial. Morphia does not appear to have been much used during the quarter-century following its discovery by Sertürner in 1817, and any that was in the market was made by Robiquet's magnesia method, which necessitated the use of alcohol. The product was undoubtedly contaminated with other opium alkaloids. The effect of Dr. Gregory's discovery was at once felt: hydrochlorate of morphia, from being an almost unknown salt of the alkaloid, became the most-used one, and its manufacture was commenced by Mr. John F. Macfarlan and the Messrs. Smith. Professor Christison was a thorough believer in Gregory's process, and he said: "My opinion coincides with the practice of the Edinburgh manufacturers, who continue to follow that process, and who produce a salt of unrivalled purity and cheapness." That sentence was written fifty years ago, and it is to the credit of Edinburgh that it has retained this branch of chemical industry, and is able at the present time to supply Germany, the United States, and all important countries in the world with "the salt of unrivalled purity and cheapness." There are few other medicinal chemicals, except chloroform, of which the same can be said.

[MACFARLAN'S.

One of those at the foundation of the industry, and to whom British pharmacy owes a peculiar debt, was John F. Macfarlan. When Gregory's process was first made known, he had turned 50, and was a chemist and druggist in the North Bridge. He held a medical qualification—had, indeed, practised for some time before he adopted pharmacy—but he never actually gave up his connection with medicine. He was a member of the Royal Medical Society, a president, a treasurer, and honorary member of the same, and in this connection he had the intimate friendship of all the professors and the pick of the graduates of the Edinburgh Medical School. It was natural that he should take up Gregory's process. He was himself an accomplished chemist, a splendid man of business, and in his hands morphia-manufacture became a good thing. He also practically interested himself in the production of ether, chloroform, spirit of nitrous ether, and other distillates of that character, and when, a little more than forty years ago, methylated spirit was invented as the Government expression of duty-free spirit, Mr. Macfarlan made a study of it, and soon showed that he had a knowledge of its possibilities far beyond what the Excise people had dreamed of. It was in consequence of his researches that the Government

of the day appointed a special commission, consisting of Graham, Hofmann, and Redwood, to inquire if the use of methylated spirit, as Mr. Macfarlan suggested, was likely to defraud the Revenue. It is too long a story to go into now; let us briefly, therefore, say that Mr. Macfarlan was the first to show that pure chloroform and pure sulphuric ether can be made from methylated spirit. He also showed the same in regard to spirit of nitrous ether, so that when the necessity for restricting the use of methylated spirit was recognised, spirit of nitrous ether was ranked as one of the things which might not be made from it. But Mr. Macfarlan did more than demonstrate the chemistry of his subject. His association with the medical men of the city enabled him to get a most exhaustive trial of methylated chloroform at the Edinburgh maternity hospital, and upon the highly favourable report depends the confidence which has given methylated chloroform a place in medicine. Mr. Macfarlan was a founder of the Pharmaceutical Society (which means one of the first nine members in Scotland), a member of the Council, and President of the North British Branch. He was one of the most respected citizens in Edinburgh, a baillie of the city, and an active worker in many civic, social, and religious bodies.

When Mr. Macfarlan died, in 1851, the management of his firm devolved upon Mr. David Rennie Brown and Mr. James Robertson Young, the former controlling the technical, and



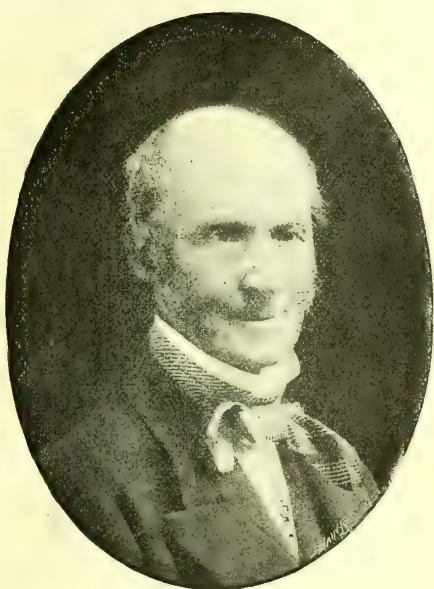
JAMES ROBERTSON YOUNG.

the latter the commercial, part of the business. Mr. Brown is another whose name is writ large in the annals of Scotch pharmacy. He served it well, and his memory is perpetuated by a portrait which is placed in the Board-room at 36 York Place. His son, Mr. David Brown, succeeded him in the management of the factory, which lies in the shadow of Holyrood. Sometimes in the morning, when one walks on the Royal Terrace or Calton Hill, the odour from the opium-vats in the valley below is wafted upwards. That is all that most people get to know of the factory and what goes on in it. It is a place covering several acres, and consisting of a number of separate buildings. It is some years since we walked through these. Then the demand for Lister's antiseptics (Messrs. Macfarlan & Co. were associated with Sir Joseph Lister in all his early experiments, and were his recognised makers long after he came to London) was great, and special departments of the factory were devoted to their manufacture. Since then the firm have added an aerated-water department to alkaloids and anæsthetics. They have still the retail and wholesale drug business at 17 North Bridge—and a smaller shop for such an historic business there is not, perhaps, in the kingdom. One has to be told that there are floors above and several beneath the street

before one can conceive the shop to be capable of anything like the business that is done in it. Behind his desk on the north side of the shop Mr. Young is to be found most days. Bailie Macfarlan's mantle fell upon him. He is Treasurer of the Royal Medical Society, and an administrator in many other public and charitable institutions in the city. His devotion to pharmacy has yet to be written about. In his early days he read papers to the Branch, became its President, an examiner, a member of Council; in fact, no one in Scotland has served the Pharmaceutical Society so long as Mr. J. R. Young, and those who differed from him in regard to the autonomy of the Branch would not be the last to acknowledge the value of his services. Mr. Young has, on several occasions, been a Vice-President of the Conference, is so now, and is at the head of the Local Committee.

SMITH'S.

There is a story told in Edinburgh that when Mr. Thomas Smith was a student of medicine there, and was wont to spend his evenings in his brother's shop in Duke Street, a good deal of experimenting was done in a quiet way. On one of these nights morphia was the subject of inquiry, and a frying-pan was the most impressive piece of the apparatus employed. The experiment was a success, and from the frying pan came out morphia of novel purity. Mr. Smith took his L.R.C.S.E., and in conjunction with Dr. William



THOMAS SMITH.

Brown, the president of his college, he was appointed to attend patients in the Canonmills district during the cholera epidemic of 1831-32, but he has never practised since. Mr. Smith is an old man now, and his brother Henry has long since passed to his rest. No two names together bulk so largely in English pharmaceutical literature. Down to a recent date "T. & H. Smith" was the signature to the many contributions to our knowledge of the opium alkaloids which have come from Mr. Thomas Smith's pen. Few know him, but all who do have been charmed by his modest bearing, his passionate love for chemical research, and his intensely interesting conversation. For some years after his retirement from the firm of T. & H. Smith & Co. he lived at Heriot Hill House in Canonmills, beside the chemical factory which he so long controlled. Here one could see him now and then in his studio-laboratory—perhaps helping his old colleagues to perfect some rare salt of morphia, to devise a new process, or perfect an old one; but generally it was some subject unconnected with business that he was working at—indeed, the last that the writer saw him engaged in was a photographic matter, which he was investigating for an architect friend.

It was on the occasion of one of these visits that Mr.

Smith was asked about the truth of the frying-pan story. A smile was the answer, and we were content to take the bustle outside as evidence enough of the resource and industry of the brothers Smith. They made many notable discoveries in regard to the composition of opium. They were the first to isolate cryptine, one of the most remarkable of natural alkaloids, and several other opium principles are bracketed with their names, while they have put on record some careful determinations of the proportions in which the active constituents of opium exist in the drug. Their researches include other branches of pharmaceutical chemistry. For example, it is to them that we owe the discovery of aloin in Barbadoes aloes, and Conference visitors will find it worth their while to see the specimens which are in the Pharmaceutical Museum in Edinburgh. Certainly there are none finer to be seen anywhere. The Messrs. Smith also isolated an essential oil from Socotrine aloes. They got about an ounce from 400 lbs. of the aloes. How few have seen it!

The principal manufactures of the firm are the opium alkaloids, aloin, jalapin, scammony resin, chloroform, and ether, on the pharmaceutical side. They have also an important business in coffee essences and aerated waters. Their wholesale premises are in Duke Street, adjoining a neat retail pharmacy still associated with their name. The factory is passed on the way to the Botanic Gardens. Few enter it for the purpose of inspection, and we notice that the Local Committee do not include it in the programme of attractions. It would have been a liberal education to have had a walk round, for everything about morphia-making is not so simple as Gregory's process looks in the Pharmacopeia. Among the most noticeable things in the factory are the large "infusion-pots"—we may call them that—used for exhausting willow-bark. These would make respectable gasometers for some of the villages round Edinburgh. From this spot the United States receives the most of its morphia, "Smith's" being the brand in request there in spite of the enormous tariff which our American cousins have imposed upon themselves. Americans are partial to Edinburgh, though. Half the clergymen in the States get their clothes there, and the average American girl knows more about Rizzio and Mons Meg than many of the inhabitants of Auld Reekie.

A WORD ABOUT THE SHOPS.

Was it that mysterious and erudite correspondent of THE CHEMIST AND DRUGGIST, "Heder," who told once how he always made it a point to inspect chemists' shop-windows when he went a-holidaying? A good thing, too! Shop-windows are among the educational influences peculiar to the nineteenth century, and Edinburgh pharmacists recognise that, for at certain seasons of the year you will find in their windows all the educational announcements that the School of Medicine can make. There are huge posters and tiny handbills. Some of the latter have a blank space, in which an aspirant to academical renown has filled in his name. He is just beginning to teach, and will be wondrously content if he gets half-a-dozen pupils. Such is the way they begin to mount the ladder to the richly-endowed University chairs. A few of the present occupants were glad at one time to get their class-bills accepted for show by the chemists of the town. Birth and circumstance are not the key to success in Edinburgh. If a man has done brilliantly in his classes, and is a gentleman, he need not trouble himself as to whether his father was a mechanic or a millionaire.

But that is not shop-windows. Edinburgh pharmacies are, on the whole, a trifle disappointing. The founders of those in the centre have all had one style in their mind—good solid mahogany, with a little scrolled carving and a bit of mirror here and there—a style which lasts well, and is thoroughly respectable, but is never really impressive, except to the young men from the country, who all view them from the outside with that half-ambitious, half-depressing feeling that comes over one who is about to seek a situation inside. Looking at them without that sensation, what strikes us is that most of the principal pharmacies are very long and very narrow. This circumstance is prejudicial to effectiveness in fittings. Comparatively few shops in George Street and Princes Street were built for business purposes. These streets were originally residential quarters,

and with the exigencies of the times the ground-floors of the dwelling-houses have been remodelled into business premises. This accounts for the inordinate length of many shops.

GEORGE STREET.

The pharmacy of all others which Conference visitors will seek most is that of Mr. Peter Boa, 119 George Street. This business was formerly owned by the late Mr. John Mackay. After his death Mr. Boa succeeded to the management, and



JOHN MACKAY, LOCAL SECRETARY, 1871.

several years ago bought the business. It was at No. 55, however, that Mr. Mackay started when he went back to Edinburgh from his sojourn at Bell's, in Oxford Street; and while he was labouring there as Jacob Bell's Scotch *alter ego* he was also building up for himself a unique business in

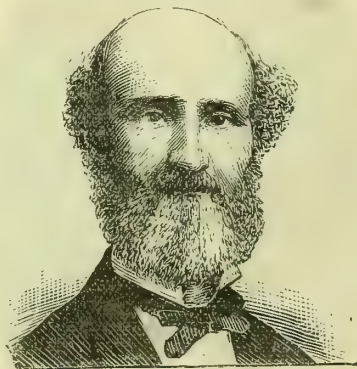


PETER BOA, LOCAL SECRETARY, 1892.

culinary essences, condiments, and invalids' specialties, which business ultimately outgrew the capacity of 119 George Street, and was transferred to large premises in Canning Street, which is not far from the famous Free St. George's Church. The Canning Street business is a purely wholesale

one, with commodious pharmaceutical laboratories, and an aerated-water factory attached to it—Messrs. George Duncan Mackay, William Mackay, and Adam Kennedy being the partners. Mr. Boa retains his connection with the firm as their wholesale agent, as the long association of his shop with the Mackay firm still brings to it wholesale customers. The shop is a handsomely fitted one, and is notable for the elaborately carved cornices and panels. It is a single shop, with a commodious window. There is seldom much display in this, as our picture shows, for Mr. Boa has been known to advocate a wire-blind era for pharmacy. The wire blind is the Edinburgh index of professionalism. Mr. Boa is a high-toned man, then? Yes, in all that is professional in pharmacy; but he has his weather-eye open to business, and if there is a new drug or a new sundry just out, it is sure to be got at No. 119. Nor does he spare printers' ink, and he uses it effectively and quietly. The thoroughly practical character of his published papers is well known, and although he has been an examiner for six months only, he is a popular man in that capacity. It is a happy circumstance that the Conference local secretaries of 1871 and 1892 come from the same shop.

If we now walk along George Street, eastwards, we meet with other pharmacies which are worth looking at. There is Mr. J. B. Stephenson's exquisite place, 48 North Frederick Street (which, unfortunately, we are unable to illustrate). It is not a large shop, though double, but the design is one that has been copied by many owing to its perfect good taste. Mr. Stephenson is the solitary Scotchman who has filled the presidential chair of the Conference, and how well he filled it only those who were at Aberdeen in 1885 can understand. A man of high culture, a ready speaker and

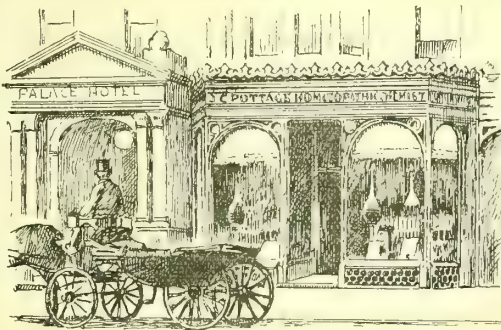
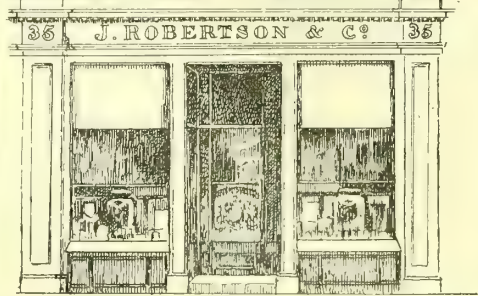
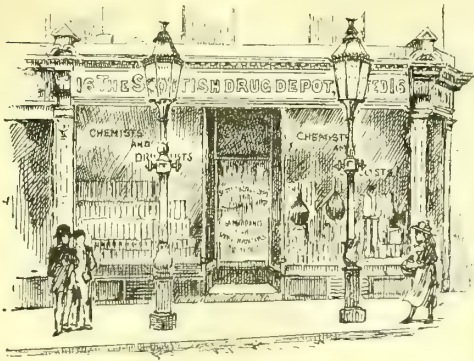


JOHN BERTRAM STEPHENSON.

accomplished pharmacist, he has proved himself to be in his public capacities as President of the North British Branch, and Chairman of the Board of Examiners for Scotland. His services, especially in the capacity of Treasurer of the Branch, were a few years ago recognised by his colleagues in a handsome manner. It was well deserved, for there is no detail of official work which he undertakes that is too small for his attention, and he gives time and thought to his duties in connection with the Pharmaceutical Society that none but his immediate colleagues are aware of.

Turning again to George Street, on the north side we pass the shop of Gardner & Ainslie: old fashioned, for the business was established in 1778. We have to mount a few steps to reach it, and there we see Mr. William Ainslie, silver-haired, but still active—his son, William Wood Ainslie, associated with him in the manufacturing and commercial departments. This pharmacy is celebrated for its veterinary medicines, and as one of the first to popularise 1-in-7 concentrated preparations. There are more in the field now, but Gardner & Ainslie retain their reputation and, we hope, their customers. Mr. Ainslie, like Mr. Gardner before him, was a President of the Branch and an examiner.

On the opposite side of the street, No. 35, is one of the best pharmacies in Edinburgh, the double shop occupied by James Robertson & Co. This is the aristocratic business of the town, the old connection including the Castle and Holyrood. Mr. Thomas Thompson, an energetic



Englishman, is the present proprietor. He has not been content to repose on the traditions of the business and its old connection, for he has of recent years commenced the manufacture of flexible gelatine and other medicinal specialities, an aerated-water factory also being connected with the business. Mr. Thompson is the inventor of an ingenious apparatus for coating pills with gelatine, also of the method of combining the ingredients of Bland's pill with a hydrocarbon and capsuling the mass. The retail business was founded by Mr. James Robertson, who, in his declining years, took Mr. J. B. Stephenson into partnership. After Mr. Stephenson left, the business was carried on by managers, and it was during this period that Mons. Chantrell, the French teacher, who was hanged for poisoning his wife with opium, ingratiated himself with Mr. Thomas, the manager. Mr. Thomas died suddenly before Chantrell's trial came on, but the evidence of other assistants from the pharmacy was of considerable importance to the prosecution.

PRINCES STREET.

There are four pharmacies in Princes Street, and of these the most attractive is that of Mr. J. C. Pottage, the homeopathic chemist. This is an elegant double shop situated in the midst of the principal hotels, and differing from all the pharmacies in the centre by its attractive window-displays. In the days when a Pears' soap-ball was sold for every sixpenny cake Mr. Pottage used to fill one of the two windows with the balls. They were always as bright as polished glass, and the effect of the display upon the ever-changing streams of sojourners, who saw it the first thing in the morning and the last at night, can be better imagined than described. One morning, a few years ago, there was a transformation. The brown-amber balls had given place to a beautiful display of cream-coloured soap-balls. They were as if made from ivory, and they were Mr. Pottage's speciality. The change startled Edinburgh, and one was apt to look over the street to see if the Castle was still standing. Now, why was this? There were all sorts of conjectures, but it was unanimously agreed that Pears' soap had been hit hard, and that the makers would not be happy until they got the window again. By-and-by the cream balls disappeared, and the old display returned. Yet there are no Esaus in the Pears family. On another occasion the west window was the medium of an astounding advertisement. We all know the virtues of sulphur. Sleep with a piece of it, or dust it in the stockings, and rheumatism vanishes. It fell to Mr. Pottage to give a business-like and modern touch to the old-fashioned cure. He had brimstone moulded into egg-shape. Each egg weighed a few ounces; there was a special virtue in the ovoid form—one could grasp it nicely in the hand—and a pair of them were a family medicine-chest which would last for generations. The eggs sold at 1s. each, and it took Mr. Pottage all his time to keep his window full of them, for the eggs sold by the gross, and moulders and packers could scarcely keep pace with the demand—all of which shows what there is in novelty. But while Mr. Pottage has a 'cute eye to the importance of trade of this character, he has never lost sight of the fact that he is a homeopathic chemist, and the first to pioneer that cult in Edinburgh. His business connection ramifies through the whole of Scotland. His hotel trade is a thing to make one's mouth water, for Americans are devoted homeopaths, and any day during the season one who drops into his shop may rub against a Vanderbilt or other touring American to whom money is a burden. Mr. Pottage is President of the British Homeopathic Pharmaceutical Society, and is an Englishman.

It is a curious fact that two of the three firms in Princes Street bear English names. Although the late Mr. H. C. Baildon did not establish the business at No. 73, he went there from Coventry to manage it for a London firm, and the business as it is was really made by him. Mr. Baildon was a force in Edinburgh pharmacy, with a very strong Scotch side to his character. This was shown in his energetic advocacy of a branch of the Pharmaceutical Society and a Board of Examiners being established in Edinburgh when the Pharmacy Act of 1852 was proposed. That was the price insisted upon as the equivalent for Scotch agreement with the Act. Thirty-five years later Mr. Baildon's son—Mr. H. Belllyse Baildon, B.A.—was an equally strenuous champion for Scotch independence in pharmacy. By this time Baildon the

younger had served the Pharmaceutical Society as an examiner and as President of the Branch. He was at the head of the business in Princes Street, and had established a branch at the west end of the street nearer the abodes of consulting physicians. But he had always had a stronger liking for literature than for pharmacy. He had published poems, dramas, and essays to the extent of half-a-dozen volumes before he transferred the pharmacy business to his manager, Mr. Robert Aitken, retiring to devote himself to literature as literary critic to a leading Edinburgh newspaper. Mr. Robert Aitken, his successor, is an Edinburgh man, but he was several years in Bell's, is an experienced microscopist, and was one of the active workers in the Edinburgh Assistants' Association at its foundation. His principal pharmacy is just opposite the Royal Institution, the headquarters of the Royal Society of Edinburgh. It is a double shop a few steps above the level of the street, and there is in it many a relic of old-time pharmacy.

CUTTING IN EDINBURGH.

We have already referred to Messrs. Duncan, Flockhart & Co.'s and J. F. Macfarlan & Co.'s pharmacies in North Bridge. Besides those which we illustrate, there are many which are worthy of inspection, and to some of which historic interest is attached. There is Mr. Gilmour's, in Elm Row, Leith Walk; Mr. Mackenzie's and Mr. Dewar's, in Forest Road, close to the Infirmary; Mr. Lunan's, in Queensferry Street; Mr. Scobie's, and several others, in Shandwick Place; and in Leith there are a few old-established places, Mr. Coats's fine new pharmacy in Tolbooth Wynd being one of the handsomest in the district. One other illustration requires comment—viz., that of the Scottish Drug Depôt's store, in Nicolson Street, a good example of "limited" pharmacy. It is just seven years ago that Edinburgh was first threatened with cutting. Previous to that the price-list was adhered to with astonishing unanimity by the whole of the trade. There was a feeling, from the smallest man in the suburbs to the biggest in the centre, that the list was a sacred thing, only to be departed from in "p.p." circumstances. Someone may have sinned now and then; still the "one-price" principle virtually reigned, and the trade was unanimous in maintaining it. The cutter came in 1885, in the shape of Inman & Co., Leith Street. There was no excitement, for what could one shop do against a hundred? Moreover, the style was peculiar to Edinburgh, the window-displays recalled the grocer, and though the premises were commodious, "they do not appear to be overwhelmed with business." So remarked our Edinburgh correspondent, when the newcomers had been in the place three months. By-and-by came Mr. Gray, an ex-bank manager, with a "limited" drug-depôt at the foot of Leith Walk; cutting became an unquestionable reality; it invaded the drug-trade itself; cheap patents began to be heard of; one pharmacy after another broke away from the price-list; the trade was called together, there was a stormy meeting, and after that it was "every man for himself."

In one sense this has not been an unmixed evil for Edinburgh. While the price-list was maintained inviolate, pharmacies sprang up like mushrooms, and competition was entirely in multiplication of shops. Prescriptions were plentiful, prices were good, and provided a man was content to jog along and wait for the increase he would get it. Then it was largely a matter of picking up crumbs from older businesses; but now the enterprise and energy of each man gets full play, and in that sense the new way is an improvement. The store which we illustrate is one in Nicolson Street. It speaks for itself. The company has been in difficulties, but is recovering, and the founder was lately before the Old Bailey "beaks," and has gone into retirement for a time. Inman & Co. are still in Leith Street (the wisdom of our correspondent notwithstanding), and are "established."

WHOLESALE HOUSES.

Edinburgh is well supplied with wholesale houses. Several firms have already been mentioned who are concerned in special manufactures. Messrs. Raimes, Clark & Co. are the oldest firm of a purely wholesale character. Their premises are in Smith's Place, Leith Walk. The firm was founded by Mr. Richard Raimes, who afterwards took Mr. George Blanshard into partnership. After Mr. Blanshard's death John and

Richard, sons of Mr. Richard Raimés, sen., were associated with their father, and about five years ago Mr. Richard Clark joined the firm as a partner, death by this time having removed old Mr. Raimés and his son John. Mr. Richard Raimés, jun., was not a strong man, and, after a few years' co-operation with Mr. Clark, he succumbed to a pulmonary attack. Mr. Clark, we may say, was initiated into wholesale pharmacy at Smith's Place. He afterwards was in business for himself with Mr. William Pinkerton at Greenside Place, and it was at the expiry of that partnership that he went further down the walk. At the same time Mr. Pinkerton and Mr. Adam Gibson, of Leven, set up together, as Pinkerton, Gibson & Co., a wholesale and manufacturing drug-business in Thistle Street Lane, and fortune has favoured their undertaking. The Scottish Drug Dépôt also embarked on a wholesale trade, but they abandoned it when they got into difficulties. Since then Messrs. Anderson & Co. have, at Murano Place, started the manufacture of galenicals and pharmaceutical specialties. When the Conference visited Edinburgh in 1871 the bulk of the wholesale business done in Edinburgh was in crude drugs and patents. That is now completely changed. True, patents can be bought at something like $2\frac{1}{2}$ per cent. above the manufacturers' prices, but no secret is made of the fact that drugs and preparations must be ordered along with them.

An important business is done from Edinburgh in essence of coffee, one maker of which we have already named. Another firm, whose name is especially known in the colonies, is Messrs. Thomas Symington & Co. Mr. Symington, from Gardner & Ainslie's, went to Dundas Street, to open a pharmacy. When he had brought his experiments on coffee to perfection he took Mr. J. Innes Fraser into partnership (pharmaceutical, not coffee-essential), left Mr. Fraser to look after the pharmacy, and devoted his whole time to the coffee. We have not had the good fortune to visit the coffee firm's laboratories and factory at Beaverbank. "Why don't you?" we imagine we hear Mr. Symington say; and when we do—well, the whole process of manufacturing the essences will be "quite clear," like the coffee made from them.

THE NORTH BRITISH BRANCH.

For many years after the Pharmaceutical Society took rooms in Edinburgh for the purposes imposed by the Pharmacy Act of 1852, the local managers of the Branch made it directly educational. Classes were held, and lectures given, preparatory for the examinations. But as the true functions of the Branch developed, these had to go by the board, partly because they were not very successful, partly because there were better things to do. In the first year of the Society's existence it had nine members in Scotland—viz., H. C. Baildon, W. R. Davenport, J. Duncan, W. Flockhart, James Gardner, Robert Lindsay, John Mackay (secretary), and James Robertson, of Edinburgh; and Gavin Stiell, of Dunfermline. There were two associates—T. S. Pattison and J. Horwood, both of Edinburgh. Now there are about five hundred adherents of all grades in Scotland. The history of the Branch, and of the men who have been associated with it, is too interesting to risk entering upon at this stage. Suffice it to say that it is the one branch remaining of dozens that Jacob Bell started, and if the same determination had been behind the whole of them as was behind the Edinburgh branch (for that it only was at first) they would all have been alive now, and the Pharmaceutical Society a stronger body. The Branch is excellently housed at 36 York Place, where George Combe, the phrenologist, used to live. York Place is reached from Waterloo Place by passing down Register Street and Elder Street. The left of the spot, where stands the "statue of the Iron Duke in bronze by Steel," points the way. Mr. J. Rutherford Hill, the popular Assistant-Secretary, will give everybody a hearty welcome, we are sure. It is in this house that the examinations are held, and all meetings in connection with the Branch. The Edinburgh Chemists', Assistants', and Apprentices' Association also holds its meetings there. It is only a year younger than the London Association, and it is its peculiar boast that it has never gone outside its own membership for a penny nor for a paper. More ideas have been taken from the Association for the B.P. than from any other body in the kingdom. That is another of its peculiarities. There is still another: the comma between "chemists" and

"assistants," which provides for the retention of members when they go into business.

HOW TO GET THERE.

As in ancient times all roads led to Rome, so in the present all lead to Edinburgh, and the fastest travelling in the world is thither. It seems superfluous, then, to tell people how to get to Edinburgh, but a note or two may not be out of place, taking London as the starting-point. From here there are three routes. The Great Northern is quickest and shortest, and the Midland is accounted the prettiest because it goes through the Scott country; the journey is about an hour longer. The London and North-Western has an excellent and quick service. Some of the Great Northern trains do the journey in $8\frac{1}{2}$ hours, and a comfortable journey it is, especially in the day time, in which case an ample dinner is provided at York. The return fare at this season is 50s. third class; another 6s. takes the traveller on to Aberdeen and back, and 3l. is the fare for the return journey to Inverness, with the privilege of breaking the journey at any place north of Grantham. These extended journeys are good for those who wish to stay a few days after the Conference meetings. The Inverness ticket, for example, enables them to cross the Forth and Tay bridges, run up to Aberdeen, and by the Moray Firth coast (where there are the loveliest fishing-village glimpses imaginable) to Inverness. If the thing has been properly managed at King's Cross, the return journey will be down the Highland Railway to Perth, passing or stopping at Pitlochry and Dunkeld; then from Perth across Fifeshire to Edinburgh. Somewhere about the 15th of the month there are excursions to Edinburgh, Glasgow, and the principal towns in Scotland by the three railways at half the tourist rate for return. These are by specified ordinary night trains, and for periods of four to eleven days. The August excursions may fit in with the Conference. In former years special excursion trains were run. This year's style is better, we have heard.

WHAT TO DO.

We cannot pretend to describe in a paragraph all that is to be seen in Edinburgh. Let it be understood that Waterloo Place, where the Waterloo Hotel is, runs up from the Post-Office to Calton Hill. Nelson's monument, on the top of the hill, with the National monument, is a feature of the east end of the city; the Scott monument stands in the centre of Princes Street, and the Castle at the south-west end. These are the landmarks for the lost and strayed. Two things can be done in the morning. Walk up Calton Hill, round it, down by narrow lanes to Holyrood, up by the Canongate and High Street to the Castle, and back by the Mound and Princes Street to an 8 o'clock breakfast. Start at 6. After breakfast take a Morningside car, and on the top make the circular route back to the Post-office in time for the Conference meeting at 10. On another morning seek an appetite on the top of Arthur's Seat. The paths from the Queen's drive up are thickly strewn with appetites—say, those who never reach the lion's head in the morning—and for that reason the Assistants' Association should depute a staff of their botanical guides to pilot strangers upwards. If it rains, stay in bed; if not, remember that in bed you will not see what Marmion saw:—

The distant city glow
With gloomy splendour red;
For on the smoke-wreaths, huge and slow,
That round her sable turrets flow,
The morning beams were shed,
And tinged them with a lustre proud,
Like that which streaks a thundercloud.
Such dusky grandeur clothed the height
Where the huge Castle holds its state,
And all the steep slope down,
Whose ridgy back heaves to the sky,
Piled deep and massy, close and high,
Mine own romantic town!

IN CHICAGO there is a drug-store for every 1,200 inhabitants, and the number (of stores) is increasing. So says the *Registered Pharmacist*. Consequently there are a great many failures, rents being from \$100 to \$1,000 a month.

PHOTOGRAPHIC STOCK FOR CHEMISTS.

In another column reference is made to the opportunities which chemists have of cultivating a trade in photographic materials, chemicals, &c. In the following notes, therefore, we set out a variety of formulæ for the solutions most usually in demand, and which the chemist may make up, keep in stock, and sell at a good profit.

PYRO. AND AMMONIA.

DEVELOPING agents are very numerous, but pyro. and ammonia hold their own against all comers, and are by far the most generally used. The formula given below is one which Mr. H. P. Robinson, the well-known photographer, used for most of his successful pictures:—

A.				
Pyrogallol	..	..	..	1 oz.
Citric acid	..	..	..	40 grs.
Water	..	..	..	7½ oz.

B.				
Bromide of potassium	..	..	..	120 grs.
Water	..	..	..	7 oz.
Ammonia '880	..	..	..	1 "

C.				
Bromide of potassium	..	..	..	80 grs.
Water	..	..	..	8 oz.

The solution C is only to be used in emergency. Of the solutions A and B use 60 minims each to 3 oz. of water.

The following formula is recommended by Mr. Lionel Clark, as giving the "best gamut of graduations":—

Pyrogallol	..	..	..	2 grs.
Sulphite of soda	..	..	..	8 "
Bromide of potassium	..	..	..	½ "
Ammonia '880	..	..	..	2 minims
Distilled water up to	..	..	..	1 fluid oz.

For instantaneous work, Mr. Clark says, "we want a developer rich in pyro., very little bromide, and a fair quantity of alkali," and he gives the following as meeting the requirements:—

Pyro.	..	..	..	4 grs.
Bromide	..	..	..	½ "
Ammonia '880	..	..	..	3 minims
Water up to	..	..	..	1 fluid oz.

In these days of hand-cameras, the chemist may frequently be asked for a special developer for instantaneous work. The last quoted formula is likely to suit his customer. This developer is very slow, and care and patience will be required in using.

TEN-PER-CENT. SOLUTIONS.

MR. C. H. BOTHAMLEY, F.I.C., F.C.S., in his excellent "Manual of Photography," gives the following formula for development with pyro.:—

No. 1. Developer.

	Oz.
Pyro	.. .. 1
Potassium metabisulphite	.. .. 1
Water up to	.. .. 10

No. 2. Accelerator.

	Oz.
Ammonia '880	.. .. 1
Water up to	.. .. 10

No. 3. Restrainer.

	Oz.
Ammonium bromide	.. .. 1
Water up to	.. .. 10

These are, as it will be seen, 10-per-cent. solutions—i.e., 1 part of the active agent is contained in every 10 parts of the solution. Mr. Bothamley's remarks upon 10-per-cent. solutions are worth attention because this form of developer is one which can easily be understood. Messrs. Marion & Co. some few years since supplied 10 per-cent. solutions ready prepared, and were at the trouble to give very

complete instructions as to the proportions to be used for most of the plates in the market.

Mr. Bothamley says:—"A normal developer would contain in each fluid oz. 30 fluid grs. (or minims) of the pyro. solution, 30 fluid grs. (or minims) of the bromide solution, and 60 fluid grs. (or minims) of the ammonia solution. With this developer a quarter-plate requires from 1 to 1½ oz., half-plate 2 oz., and a whole-plate 3 oz."

PYRO.-POTASH.

A VERY clean-working developer is pyro. and potash, and the following formula has received practical proof:—

A.				
Pyro.	..	..	..	2 drs.
Bromide of ammonium	..	..	..	2 scruples
Citric acid	..	..	..	½ "
Methylated spirit	..	..	..	1 oz.
Water	..	..	..	1 "

Dissolve the bromide and citric acid in the water first, then add the spirit, and lastly the pyro.

B.				
Carbonate of potash (chemically pure)	..	..	..	Oz. 1
Water	..	..	..	1

In practice use 1 dr. of A to 3 oz. of water, flood the plate for two or three minutes, and then return it to the measure and if the image is slow in "coming up," add three or four drops of B. With this formula development should be complete in about ten minutes.

BEACH'S DEVELOPER.

ANOTHER formula for a pyro.-potash developer which had a great run amongst amateurs, and is still a stock line with all the wholesale dealers, is "Beach's." This developer was introduced some years ago by Mr. F. C. Beach, of New York. The formula is as follows:—

A.				
Warm water (distilled)	..	..	..	Oz. 2
Sulphite of soda (pure)	..	..	..	2
When cold add to above—				
1st, Sulphurous acid	..	..	..	2
2nd, Pyrogallol	..	..	..	½

B.				
(a) Water (distilled)	..	..	..	Oz. 4
Carbonate of potash (pure)	..	..	..	3
(b) Warm water (distilled)	..	..	..	3
Sulphite of soda	..	..	..	2

Mix (a) and (b).

When using take 1 dr. of A to each 2 oz. of water; add a few drops of B, and continue adding until the image appears. The chemist making up this developer will find how large a profit is attached to such business.

With one more formula we will leave our "old friend pyro."—i.e., pyro.-soda:—

A.				
Pyro.	..	..	..	2 drachms
Sulphuric acid	..	..	..	10 drops
Water	..	..	..	16 oz.

B.				
Sodium sulphite	..	..	..	Oz. 3
Carbonate of soda (crystals)	..	..	..	2
Water	..	..	..	16

In use take 1 oz. of both A and B, and add 2 oz. of water. In using pyro.-potash or pyro.-soda the worker does not get worried with chemical fog or iridescent marking, as is too often the case, especially with the beginner, when using pyro.-ammonia.

Practically, the foregoing formula may be used with any brand of plates.

FERROUS OXALATE.

THE ferrous-oxalate developer is not now much used, except for bromide paper. It is quite easy to make up, but requires the greatest cleanliness, and is exceedingly sensitive to hypo.

HYDROQUINONE.

HYDROQUINONE, as a developing agent, has become exceedingly popular, although some consider it is better suited for the development of lantern-slides and transparencies than for negatives to be printed from.

Quoting again from Mr. C. H. Bothamley, the following two formulæ will be found thoroughly reliable. Many favour hydroquinone, because it does not stain the fingers and clothes as do the developers in which pyro. is an agent :—

<i>A.</i>					
Hydroquinone	..	..	..	80	grs.
Sodium sulphite	..	..	..	160	"
Water up to	..	..	..	10	oz.

<i>B.</i>					
Caustic soda (sticks)	..	..	..	40	grs.
Potassium bromide	..	..	..	20	"
Water up to	..	..	..	10	oz.

This should be mixed in equal volumes immediately before use.

In the second formula given by Mr. Bothamley the solutions are much stronger :—

<i>A.</i>					
Hydroquinone	..	..	..	Oz.	$\frac{1}{2}$
Sodium sulphite	..	..	..	..	1
Water up to	..	..	..	..	10

<i>B.</i>					
Caustic soda (sticks)	..	..	..	Oz.	1
Potassium bromide	..	..	..	..	$\frac{1}{2}$
Water up to	..	..	..	..	10

If the plate be correctly exposed, take 80 fluid grs. (or minims) of *A* and 20 fluid grs. (or minims) of *B*, and dilute to 1 oz. with water.

EIKONOGEN.

EIKONOGEN, which has been introduced about three years, as a developing agent, has quickly come into public favour, and is now used extensively by amateur photographers. It has quite recently been made up in cartridges, which are exceedingly handy for the tourist. In these cartridges the eikonogen is separated from the sulphite of soda and carbonate of soda by a wad. The cartridge has merely to be broken, and the contents dissolved in $3\frac{1}{2}$ oz. for the most rapid work, 7 oz. for slow shutter work, and 10 oz. for time-exposures. They are supplied by Messrs. R. W. Greeff & Co., 29 Mincing Lane, E.C., who are also wholesale agents for rodinal, to which reference will be made further on. There are several good eikonogen formulæ. The following may be used with almost any plates, but is particularly recommended for the "Mawson" plates :—

<i>A.</i>					
Eikonogen	..	..	..	200	grains
Sulphite of soda (recrystd.)	..	..	..	200	"
Distilled water to make	..	..	..	20	oz.

<i>B.</i>					
Carbonate of potass	..	..	..	2,400	grains
Sulphite of soda (recrystd.)	..	..	..	1,000	"
Distilled water to make	..	..	..	20	oz.

<i>C.</i>					
Caustic potass	..	..	..	800	grains
Sulphite of soda (recrystd.)	..	..	..	1,800	"
Distilled water to make	..	..	..	20	oz.

For use take 3 parts of *A* to 1 part of *B*. For instantaneous or under-exposed negatives use *C* instead of *B*. The *A* solution should be mixed with warm water. To correct over-exposure, add a few drops of 10-per-cent. sol. potass. bromide.

HOW TO CLEAN NEGATIVES.

MR. T. W. KIRBY, writing to the *British Journal of Photography*, says :—"The simplest way of removing the green or iridescent stain on the negative is by gently rubbing the surface with a tuft of cotton-wool, moistened with spirit, or it can be done directly after fixing by rubbing with the finger; of course it requires more care than with the spirit when the negative is dry."

HYDROQUINONE WITH EIKONOGEN.

AN easy-working formula for a "mixed hydroquinone and eikonogen developer" was given recently before the members of the Photographic Club of Paris :—

					Grammes
Sulphate of soda	..	..	..	..	100
Eikonogen	..	..	..	..	15
Hydroquinone	..	..	..	..	5

These ingredients are dissolved in 1 litre of hot water and, when cool, is added—

Carbonate of potash	50	grammes
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With this developer there is no veiling the shadows and it gives the characteristic strength obtainable with hydroquinone. Mr. J. T. Chapman, of Manchester, has introduced a similar developer which he sells as "Hydro-cum-Eiko."

RODINAL.

"RODINAL," which is almost the latest developing agent, is gaining ground quickly. It is a "one solution," a fact which will render it popular amongst those photographers (a large number) who like to work the easiest way. Exposures when working with this developer may be shorter than under other conditions. The patentees say "about half that given to pyro" To develop, mix as follows :—

					Parts
Rodinal	..	..	..	..	1
Water	..	..	..	..	24 to 30

As the image on under-exposed plates will appear rapidly, it is well to finish in a solution of 1-30. Should there be considerable under-exposure, add another 5 to 10 parts of water. With an over-exposed plate, working a 1-30 solution, the developer should have added to it the following by drops :—

					Parts
Bromide of potass	..	..	..	..	1
Water	..	..	..	..	3
Rodinal	..	..	..	..	3

The developer gives good density, and can be recommended to those requiring an easy working solution.

READY-MADE DEVELOPERS.

If space had permitted, formulæ would have been given for most of the brands of dry-plates in the market, but this cannot be done.

It is the practice of almost all makers to send out the formulæ they recommend with the plates, and it would lead to profitable business if, after having decided upon the brands of plates to stock, the makers' developers should be put up in bottles, which will permit of a very fair profit. From a casual glance at some price-lists, we find firms charging for—

Pyro-ammonia, 6-oz. bottles (3),	3s.
Pyro-potash, 20-oz. bottles (2),	4s.
Beach's, 2 solutions, per pint,	3s.
Hydroquinone, 20-oz. bottles (2),	3s.
Eikonogen, single solution, 1s.	6d.

The adoption of a special name for a developer has done much to popularise it, such as "Beach's," "Fumeaux," "Invicta," &c.

UTILISING OLD HYDROQUINONE DEVELOPERS.

If negatives are weak and require strengthening, use the following instead of intensification with bichloride of mercury :—

Old hydroquinone bath	..	..	..	..	55	c.c.
Citric acid	..	..	..	..	10	grains.
Red prussiate of potash solution, 10 per cent.	..	..	..	..	10	c.c.
Water	..	..	..	..	50	"

A negative immersed in this bath becomes dark in from two to three minutes; when the required degree of intensity is obtained the negative is washed and allowed to remain in the water for fifteen minutes. The same bath can be used for about thirty negatives—at least, so says A. Margin in *Les Annuaire des Photographiques*.

AN OLD HERBAL.

By C. C. BELL, Epworth.

TO the student of medicine and its history there are few more interesting books than an old herbal, and few old herbals have a greater claim upon the attention of Englishmen than Johnson's "Gerarde," or the still older and rarer work of Henry Lyte, the full title of which runs thus:—"A Nievve Herball or Historie of Plantes, wherein is containyed the whole discourse and perfect description of all sortes of Herbes and Plantes: their divers and sundry Kindes: their strange Figures, Fashions and Shapes: their Names, Natures, Operations and Vertues: and that not onely of those which are here growing in this our Countrie of Englande, but of all others also of forrayne Realmes, commonly used in Physicke. First set forth in the Doutche or Almaigne Tongue by that learned D. Rembert Dodoens, Phsyition to the Emperour: and nowe first translated out of French into English by Henry Lyte Esquier. At London, by me Gerard Dewes, dwelling in Pawles Church yarde, at the Signe of the Swanne. 1578." The title-page has a woodcut border representing the garden of the Hesperides and other subjects—the same in both the English and the French version, except that the former has a vase of flowers instead of the coat of arms, supposed by a writer in *Notes and Queries* (to whom I am indebted for some of the following particulars) to be that of Charles V. The last page has this colophon:—"Imrinted (sic) at Antwerpe by me Henry Loë, Bookeprinter, and are to be solde at London in Powel's Church Yarde by Gerard Dewes." The French version from which Lyte translated was that of Charles de l'Escluse (Clusius), the "Histoire des Plantés" (Anvers: Jean Loë, 1557, folio), with the same figures as Lyte's, which were reproductions from Dodoens's original "Cruydeboek," a work in Flemish, also printed by Jan van der Loe, in 1554—a great rarity now, only a few copies being known to exist.

Rembert Dodoens (or, to give him his Latinised name, Dodonæus) was born at Mechlin in 1517, and became in turn physician to the Emperors Maximilian and Rodolph II. Both he and his French translator, Clusius, are sufficiently familiar figures, but a few particulars concerning Lyte may not be out of place here. Anthony Wood says he was of the family of Lyte, of Lytes-Carey, Somerset; he was born in 1529 and died 1607. The only known original work of his that ever was printed is "The Light of Britayne: a Recorde of the honorable Originall and Antiquitie of Britaine" (London: 1588, 8vo), reprinted in 1814. He left, however, one or two works of a similar kind in MS., and copious MS. notes in a copy of Clusius's French version of Dodonæus. His own version of this work, now under review, is a thick, black-letter folio, of nearly 800 pages, enriched with a great number of excellent plates from the source already indicated—always one, frequently two, and sometimes three or four, to a chapter. There are 661 chapters in the six books which complete the history, and some of the matter is from another edition of Dodonæus, probably the Flemish one of 1563. So much for the origin of this work. But our debt to Dodonæus does not end here. In the year 1583* he collected into one volume all his former works, dividing it into thirty books, and enriching the whole with 1,305 plates; and this, through a translation by Dr. Priest, who died without publishing it, became the foundation of Gerarde's great work, though the fact was never suitably acknowledged by him. Indeed, in his preface, he very disingenuously refers to Priest's translation as if he knew it by hearsay only; and yet Johnson, in his edition of "Gerarde," asserts that the bulk of his material was stolen from Dodonæus, and that so clumsily as greatly to impair its value. A pretty close comparison of Lyte's translation of the first work of Dodonæus with Johnson's "Gerarde" proves that there was good ground for this charge. "Gerarde" is certainly fuller, and both his natural garrulity and his eager interest in his subject give much charm to his pages; but even in the amended edition his debt to the earlier writer is

evident, and many of his "figures" (or plates) are exactly copied from Dodonæus.

Lyte's book was not the first of its kind in England, but the only two earlier works that Johnson thought worthy of note were the "Stirpium Adversaria Nova" of Lobel and Pena, published in London in 1570, and the still earlier herbal of Dr. William Turner (1548), neither of which attained so wide a popularity or dealt so thoroughly with the subject. Dodonæus, moreover, was a man of wider culture than Turner, and was more practical than the authors of the "Adversaria"; and his work, as Lyte first gave it to us, may fairly be regarded as the foundation of most subsequent work of the kind in our country. Its immediate popularity was considerable, for within thirty years of its first appearance it was more than once reprinted,* though without the plates, and its success with the public was doubtless the reason for Priest's translation of its author's later volume. It is therefore not without reason that the poet Drayton in his "Polyolbion," mentions Dodonæus and Gerarde together:—

Of these most helpful herbs yet tell we but a few
To those unnumbered sort of samples here that grew;
What justly to set down even *Dodon* short doth fall,
Nor skilful *Gerarde* yet shall ever find them all.

It is quite true that neither of our authors exhausted the *materia medica* of the vegetable kingdom, but the number of more or less medicinal plants they describe, apparently to a great extent from their own knowledge, is amazing, nevertheless. Dodonæus has nearly 700, and Gerarde probably about half as many more; and what is still more amazing is the variety and range of their curative properties. It would seem to have been almost impossible for men to be long ailing, and out of the question that they should die, with such an armoury of weapons against disease. Their very names are virtues—all-good, all-heal, self-heal, poor man's treacle, the blessed herb, grace of God, master wort; how could any but the most heroic complaint so much as come within range of these?

It must be confessed that, learned as Dodonæus was for his time, his method appears now to have been curiously unscientific. His work is divided (as already said) into six books, of which the first purports to treat of "Sundry sorts of herbes and plantés," and this description, at least, is accurate enough, such diverse plants as comfrey, strawberry, fleabane, hemp, and southernwood being included in it. This book possibly comes first for the same reason that induced Dante to make Limbo the ante-room to his visionary world and place in it all whom he had a difficulty in otherwise classifying. The second book treats of "pleasant and sweet-smelling flowers, herbes, and weeds"; the third of "medicinal rootes and herbes that purge the body, also of noysome weedes and dangerous plantés" (amongst which is rhodium); the fourth of "corne, grayne, pulse, thistles, and suchelyke"; the fifth of "herbes, rootes, and fruites whiche are dayly used in meates"; the sixth of "trees, shrubbes, bushes, and other plantés of woody substance." Arbitrary as this division seems, it is by no means strictly adhered to, every book containing some plants which might have been placed with equal appropriateness elsewhere. These, however, are faults natural to the age, and do not seriously detract from the value of the work. It is, indeed, difficult to imagine a satisfactory classification where the principles which make classification possible are unknown. An almost equal difficulty in the way of these pioneers of botanical and medicinal science was the want of a scientific terminology. Admirably close and careful as their descriptions of plants, &c., frequently are, it is impossible to read them without a smile, and yet one is almost ashamed to smile at men whose labours have made science possible. Take, for example, this description of an orchis—the "foul standergrass" of Fletcher's *Clorin*:—

"The second is somewhat like to the aforesayde, but his leaves be narrower and playner, whereof some do compasse or embrace or clippe aboute the stalke; the spikie tuftie is

* Johnson, Preface to "Gerarde."

* 1586, 1595, 1600 (?), 1689 (?), are the dates given in *Notes and Queries*. There is also a so-called abridgment, really a different book altogether—"Ram's little Dodeon: a briefe Epitome of the New Herball or History of Plants, by William Ram, Gent. Imprinted at London by Simon Stafford, 1606." 4to. See *Notes and Queries*, 8th S., 1, 379.

short and thicke, with a number of floures, of a bright or white purple colour, and speckled on the inside with a great many purple spotted, and small dark lynes: fashioned also like to an open Hood or Helmet, out of which also there hang certayne thinges as it were small rabbets, or yong myse, or littell men without heades, with their armes and legges spread and cast abroad, in like manner as they were wonte to paynte little chyldren hanging out of Saturnes mouth: at the foot of the stalke are a couple of round buttons, as big as nutmegges: with certayne great hearie (hairy) stringes or thredes annexed or growing by them." Picturesque as this is, one can imagine a student who has to pack his knowledge closely going back to his Bentley or Balfour with less disrelish than of old for their "sesquipedalian epithets" and "preposterous appellatives."

Under the circumstances already referred to, comparison of Lyte with Gerarde is natural, and proves in many respects instructive, both their agreement and their differences having something to teach us. Thus it is noteworthy, in view of recent controversies, that neither of them has any mention of peppermint under that name, though each gives descriptions of above a dozen different "mints." It is, perhaps, rather curious than instructive to find them both attributing most marvellous ebolic properties to sowbread. Lyte says of it that women should not even plant it in their gardens, "for it will hinder them if they do but onely goe over it"; and Gerarde backs this opinion by fencing his bed of this plant with crossed sticks for fear ladies should venture too near it. The differences between our two writers relate chiefly to the names of plants. Thus Lyte's *Lavandula mas*, or "English spike," is Gerarde's "common lavender"; and Gerarde's "English spike" is Lyte's *Lavandula femina*. Again, Lyte's cuckoo-flower is a wild pink (or gilliflower); Gerarde's is the *Cardamine pratensis*, the flower we still know by this name. Lyte calls red malthes Passe flower; Gerarde, the field anemone. In this connection, Gerarde's note on oil of spike may be quoted:—"We have in our English gardens a small kind of lavender, which is altogether lesser than the other, and the flowers are of a more purple colour and grow in much less and shorter heads, yet have they a far more grateful smell; the leaves are also less and whiter than the ordinary sort, and this is called spike without addition and sometimes lavender spike, and of this by distillation is made that vulgarly known and used oile which is tearmed oleum spice, or oile of spike." It is in such particulars as this that Gerarde's greater interest lies for an English reader; but Lyte, within his own limits, is at least equally valuable, and, indeed, in some respects more so, his German author being certainly more learned and accurate than our Cheshire herborist. What is especially noticeable in Lyte is his freedom from many of the superstitions of his day. He does, indeed, occasionally notice the supposed magical properties of this or that herb, but it is almost always with the addition of some qualifying clause such as "as some have said," or (as in the case of the worms found in teasels as a charm against ague) "as Dioscorides writeth." He has, moreover, no mythical plants, though he is eager to welcome all novelties—such as "the Indian sunne," or "Golden floure of Perrowe" (our sunflower)—of which he gives an elaborate description and a very fine plate. Of the flower itself, he says:—"In the very top of the sayde hie stalke there groweth a very large and most excellent floure most liket to camomill or chrysanthemum, but much larger, and in quantitie almost like to a pretie broade hatte, so that oftentimes when the circuit or uttermost compasse of the sayde floure is measured, it is found to be of the breadth of half a foote." Tobacco came too late to be included in his book, but it is, of course, in "Gerarde." Lyte (following his author) is rather fond of classical fable and allusion, and this is almost his only departure from the path of strict utility. Thus he has the pretty myth that the violet (in Greek, *Ion*) was created by Jove for the food of Io when she was changed into a heifer; nor are the legends of Narcissus, Hyacinthus, and Adonis wanting in his pages. He is careful to tell us that moly is the herb whose virtue preserved Ulysses from the enchantments of Circe, and that Apuleius says that mullein was this self-same herb (differing therein from Dioscorides). He tells us that lillies, together with the stars in the Milky Way, are fabled to have sprung from the milk of Juno, spilt through heaven and earth alike when Jove snatched Hercules from

her breast; that roses drew their colour from the blood of Venus when she wounded herself for Adonis; that the crocus is so named after the maiden unwittingly "stroken in the head by Mercurie" as they played at throwing the hammer (or was it the hatchet?), and so on. These, however, are only diversions. The bulk of the book aims at practice, and that in a very straightforward and serious fashion. It is curious, by the way, to note that as a rule those herbs upon the virtues of which most stress is laid are precisely those which of all medicinal herbs are now least used, and *vice versa*. Thus twenty distinct paragraphs are devoted to the uses of rue, and twenty-four to those of laser (with which asafetida is included), and only nine to those of the poppy. Cyclamen's uses run to fourteen paragraphs, those of rhubarb to six only. These "uses" are not always purely medicinal, but refer sometimes to the value of the herbs as pot-herbs or in salads, or for other purposes. Amongst pot-herbs cowslips are included (cowslip tea is still a common drink in some neighbourhoods*), and hops are recommended as ingredients in a salad. Frequently too, of course, these notes are intended not for the professional *medicus*, but for the careful housewife, one of whose duties was to physic as well as to feed her household. They carry us back, in short, to the time when every garden contained not only "vegetables" and flowers, but "simples" as well; to such gardens as the one so prettily described by the Scottish poet Dunbar some seventy years before the date of Lyte's book—

Into your garthe this day I did persew,
Thair saw I flowris that fresche wer of hew;
Baith quhite and reid most lusty wer to seyne,
And halsum herbis vpon stalkis grene;
Yit leif nor flour fynd could I nane of Rew.

The last line must, of course, be taken metaphorically. Rue was surely there. Even yet it is common enough in country gardens to find beds devoted to such herbs as rue, marjoram, mercury, &c., which are cultivated for their medicinal virtues; and within a radius of three or four miles from the spot where these lines are written some half-dozen old women (of both sexes) could be found who not only cultivate such herbs, but are deeply learned in Culpeper, and "practise" amongst their neighbours, occasionally with queer results.

To such persons as these, our old "Herbal" would probably be of more use than to the professional pharmacist, yet even for the latter it is full both of instruction and entertainment. The chapter on "Cistus," with its account of the uses of "ladanum," is alone almost sufficient to explain the origin of the term *Laudanum*; that upon "Scammony" is conclusive as to the composition of diagridium, which, though some persist in considering it as scammony pure and simple, is really scammony digested or boiled with quinces. These are examples of the many points of practical utility that are scattered up and down its pages. Historically, it is most valuable, as has been already indicated, but from whatever point we regard it, this book of Master Henry Lyte's is well calculated to increase our respect both for the industry and the intelligence of our forerunners in medical science.

THE PROPAGATION OF NUTMEGS is decidedly on the increase in Jamaica, and there they thrive well far beyond 1,000 feet above the sea-level, in spite of Dr. Nichols' assertion in his "Text-book of Tropical Agriculture."

THIS SMART BIT OF RHYME we got from the advertisement pages of an American contemporary. There are ideas in it which are worth attention:—

Should the dandruff come to settle
'Neath the thatching of your
pate,
For the baldness of a friar
You will not have long to wait.

If your hair is slowly thinning,
It is time you turned about
To secure a safe prescription
And prevent its dropping out.

Dermatologists all tell us,
And undoubtedly 'tis true:
For a cranium's best int'rest
Once a week we must shampoo.

Just explore your polar regions
Using Mr. Thingumy's soap;
It will crown itself with glory,
And your head with hair and
hope.

* Lord Beaconsfield, as Primrose Day annually reminds us, considered primroses "excellent in a salad."

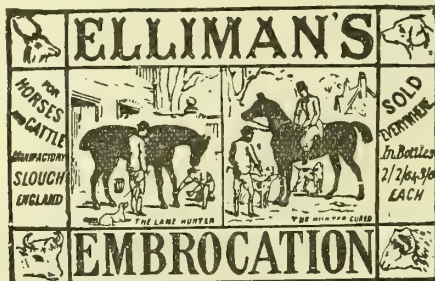
BE PREPARED!

CHOLERA is rampant in Eastern Europe, and has reached Paris. Here at home the mind of the public is already alarmed. "**SANITAS**" Disinfecting Fluid is the only Disinfectant that can be taken internally, and the "**SANITAS**" DISINFECTANTS and APPLIANCES have the Largest Sale in the World.

KEEP UP YOUR STOCKS AND BE PREPARED.
NEW PRICE LIST NOW READY.

THE SANITAS CO., LIM., BETHNAL GREEN, LONDON, E.

SHOW CARDS, 24 x 17 or 17 x 12,
Free to any address in the United Kingdom.

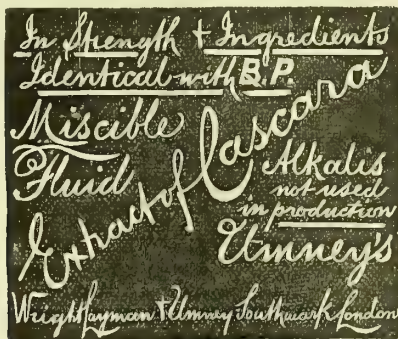


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

YOU CAN'T READ THIS WITHOUT YOUR SPECTACLES!

Day's Oil of the Night
Is an Embrocative Balm for the People, and a source of profit to the Retailer
1s. 1½d. and 2s. 9d. NO CUTTING.

DAY & SONS, CREWE.



SILICATED CARBON FILTERS

PATENT SELF-AERATING
MOVEABLE BLOCKS
WORKS, BATTERSEA LONDON. S.W.

MOSS'S Mixes with Water
Certain and Pleasant.

Not Nauseous.

"A great improvement."

"A very elegant preparation of this drug."

"Superior to anything yet introduced."

—Extracts from Letters.

See the Medical and Pharmaceutical Press.

In 1-lb. and 5-lb. bottles, through any Wholesale House, or from the only makers—

JOHN MOSS & COMPANY,
Galen Works, New Cross Road, LONDON, S.E.

IMPORTANT TO CHEMISTS.

NOVEL "COUNTER ADJUNCT" FOR AUGUST.

See page 133.

EVANS, LESCHER & WEBB, LONDON. | EVANS, SONS & CO., LIVERPOOL.

Savaresse's Sandal Wood Oil Capsules are now in White Enamelled Metal Boxes

MEDICAL ELECTRICITY.

EVERY DESCRIPTION OF

Galvanic, Faradaic, and Electro-Magnetic
Machines and Electrodes, Galvano-Cautery and
Lighting Instruments.



Lists Free. Descriptive Catalogue, 100 Illustrations,
32 pages, 4 stamps.

GENT & CO., LEICESTER.

Fletcher's Concentrated Liquors

TEN-GUINEA

Prize Competition.

See page 7.

Editorial Comments.

SALUTATORY.

WE take a special pride in submitting this number of THE CHEMIST AND DRUGGIST to subscribers. Such a mass of material, every page, every line of which, indeed, is of more or less direct concern to those for whose benefit it is compiled, cannot have been got together without a great deal of work. Since Monday of this week the machine department of one of the largest printing establishments in London has been throbbing out sheets of this journal by the mile. The type and blocks from which this issue has been printed weighed over four tons. Before all this matter came to the machines a great number of our good friends co-operated heartily with us, contributing both skill and money to make the Summer Number of THE CHEMIST AND DRUGGIST worthy of the trade and worthy of this bright summer. There is a lot of enterprise in the chemists' trade now; more in proportion to its extent, we should say, than in any other business. The labour, the skill, the artistic and literary merits of many of the announcements in this journal are most striking. We need not particularise them here, but we may be allowed to express our satisfaction at being honoured

with so large a measure of the confidence of eminent firms in conveying their messages to the trade.

The subscriber who gets this journal as one of fifty-two supplied to him for his ten shillings, besides the Diary, may reckon that the particular package which he holds in his hands this week has cost him something under twopence; and for that price we pay the carriage to him wherever on this earth he may reside. He can hardly complain of overcharge. If he will only make a fair business use of the contents the advertisers will be satisfied also, while we ourselves shall find a reward somewhere and somewhere. Anyway, neither subscribers nor advertisers need disturb themselves about us. This seems to be something like the Socialist ideal—we are all serving the community and all are doing fairly well at it.

The success of a trade journal and its practical usefulness depend more on co-operative goodwill than most other journals, though these would be none the worse for a little more of it. For a staff in a London office to attempt to teach chemists all over the world how to do their business would be supremely absurd, but we can collate from all sources such information as must be of service to the body generally, and we flatter ourselves that we do this with fair completeness. But we must look to good friends all over the world to furnish us with hints and items of value and interest to all.

The necessity of a trade journal need not be insisted upon nowadays. The size of this issue is, perhaps, the best proof that we fill an obvious want. A striking illustration of the value of a trade journal such as this occurred last week in the fourteen reports of legal cases, all of which had a bearing on the chemists' trade. With legislation fencing us around to such an extent as is now the case, it is essential that all engaged in the business should be kept acquainted with their risks and liabilities. This is only one side of our work. We do not wish to enlarge upon it. But we may ask those chemists who do not at present subscribe to this journal to give it a careful examination, and we hope we may also ask those who already do subscribe to help us as far as they can with advantage to themselves, by opening business relations with the firms who make use of our pages.

DISPENSING FOR DOCTORS.

If we may judge from the number of inquiries addressed to us in recent months in regard to the arrangements in force between doctors and druggists as to dispensing, there is a growing desire on the part of doctors to relegate to chemists and druggists this part of their practice. Anything which can be done to encourage this must be of general benefit, for as the medical curriculum is now shaped, the training in pharmacy is cut down to a three months' practical course, the greater part of which is devoted to galenical pharmacy, thus making the dispensing of prescriptions a purely secondary matter. In the old days of medical apprenticeships, there was ample opportunity for an efficient training in dispensing, and when the apprentices developed into full-blown practitioners, the dispensing of their own physic came natural to them. At that time, too, pharmacy was a trade without a qualification, and this condition favoured medical dispensing. Now that the position, so far as pharmacy is concerned, is reversed, it has been urged on behalf of chemists that dispensing ought to be entrusted to them. This is a perfectly legitimate demand, and that it will ultimately be granted is highly probable, but as the law allows doctors to do as they please in this matter, and the custom of their supplying their own medicines is so general

in England, the change will necessarily be a gradual one. Nothing can be expected from legislative interference. The direction from which help will most probably come is from doctors themselves and the changed method of their training. Many now starting in practice find it advantageous to associate themselves with chemists and druggists in their locality, and it is doubtless on account of the novelty of the thing that so many of our subscribers ask us how they should act in the circumstances. Three plans are commonly followed. The first is a recognition of the old custom that the doctor must supply the patient with medicine. It may be prejudice, but the fact remains that a large section of the public insist upon getting a bottle of something as a result of a consultation. It is to them the substantial return for the fee. To humour the notion doctors who dislike dispensing write prescriptions, and these are dispensed by a chemist, who charges the doctor. It is mainly in regard to this that we are asked advice. Charges vary according to circumstances. For example, some time ago a correspondent of the *Lancet* advocated a charge of 3d. to 3½d. per prescription where the number of doses does not exceed eight. This is an arrangement which exists and has proved satisfactory to doctor and druggist. It is certainly rather in favour of the former, and we prefer an arrangement wherein specific charges are made for different articles. The following are charges which are in force in some parts of the country:—

Mixtures: 1d. per oz.—minimum charge 4d.

Lotions: Half the price of mixtures.

Ointments: 2d. to 4d. per oz., according to their nature.

Pills: From stock, 2d. per doz.; from prescription, 3d. to 4d. per doz.

Powders: 4d. per doz.

These prices do not provide for expensive ingredients, and if these are prescribed in excess of the scale charges, a good rule is to price at the rate of 2d. per prescription for dispensing, and charge the drugs at a profit of 25 per cent. on the cost. Bottles and pots are in all cases an additional charge.

The foregoing arrangement, though a common one, is not altogether satisfactory for the chemist. It means a great deal of trouble for very little direct profit; but it is an advantage to a business to have one or two doctors send their patients to it for medicine, for other business of a more profitable character is likely to follow. In many instances the arrangement has gradually given place to another more directly profitable to the chemist. This is the system of giving doctors a commission on all prescriptions dispensed. It is not by any means rare, the fact being that its existence is generally kept quiet on the assumption that the arrangement is not an honourable one. From the business point of view it is quite a legitimate undertaking on the part of a chemist to offer to relieve a doctor of his dispensing, and to compensate him by sharing the profits. Such an arrangement is far better pecuniarily for the chemist than dispensing for the doctor at wholesale prices. It helps to foster in patients the desirable belief that the doctor is the person to diagnose and prescribe for disease, and the druggist the person to provide the remedy if it should be a medicinal one. But whatever the advantages of the commission arrangement may be it is distinctly unpopular in the trade, and few but the commercially-minded amongst medical men will listen to any proposal of the kind. There are other ways of recompensing doctors for their co-operation. Thus those who refuse commission may be supplied with chloroform, ergot, and other little medical necessities for use in their practice, while the posting of the account may be postponed *sine die*. This is the third plan which we know to be in use, and it is not

unfrequent in the trade, many chemists having the feeling that an honorarium of some sort is necessary. We shall grow out of that idea in time, doubtless; but meanwhile the fact has to be reckoned with that the old custom of doctors dispensing their own medicines exists, and experience shows that doctors like to be sure of some equivalent for it before they make a change. There are places where the old custom has been entirely superseded by the new one owing to chemists approaching doctors in a business-like way; and in view of the more favourable conditions now existing, chemists should lose no opportunity of cultivating relations with all who commence practice in their localities.

THE CHOLERA AND CARBOLIC ACID.

ONCE again the cholera epidemic is overlapping the bounds of its Central Asian home, and, spreading ruin throughout Russia, threatens to invade Western Europe. Among the famine-stricken Russian peasantry, the disease finds a congenial breeding-ground, and the panic-stricken efforts of Russian officialdom to cope with its progress are totally ineffective. By any well-organised Government the extreme probability of an invasion of the epidemic, always latent in the countries beyond the Caspian, into the Russian provinces, already decimated by the recent famine, would have been foreseen, and precautionary measures organised. Not so, however, in Russia. Now that the scourge is already within its gates, disinfectants, it is true, are hurried forward from Germany and England by trainfuls and shiploads; but it is quite possible that they will be too late to stamp out the disease, or even to arrest its progress.

It is almost incredible that, with the cholera raging in its midst, the Russian Government should permit the annual fair at Nijni-Novgorod to be held as if nothing abnormal had happened, yet such, it appears, is the case. To this fair, which will shortly open, traders from all parts of Central and Northern Asia and of Eastern Europe repair, and it is thence that large quantities of many Asiatic products, including a goodly quantity of drugs, find their way to the markets of the West. The annual turnover at this fair represents a value of about 20,000,000%, and this fact, no doubt, accounts for the decision of the Government to let it take its course, although exceptional sanitary measures are to be taken in respect to the disinfection of the city and its visitors.

Carbolic acid appears to be the chief, if not the only, disinfectant resorted to by the Russian officials. The Medical Department of State has ordered immense quantities of the acid from abroad, to be distributed at cost price to the local authorities, and it is said that one firm in Berlin received a telegraphic inquiry whether 200 tons of carbolic acid could be despatched at once to the suffering districts.

The first Russian orders for carbolic acid appear to have been placed in Germany, but as that country does not manufacture enough for its own requirements, almost the whole of the increased demand will have to be supplied by makers in Great Britain.

It is, therefore, the English market which has been chiefly affected by the sudden demand, and which is likely to profit most by it. To our manufacturers and dealers the re-animation of the carbolic-acid market has been a most welcome interruption of the unusual stagnancy of trade. The principal run has been upon the various qualities of liquid acid, and in this class of carbolic the rise has been very rapid, parcels which, six weeks ago, were being hawked

about in vain for 8½d. per gallon readily realising 1s. 4d. per gallon last week. Crystals have not advanced in quite the same proportion as liquid acid, but they also show a decidedly higher value, 4½d. per lb. having been paid already for 34–35°, while for 39–40° 5½d. per lb. has been conceded, and manufacturers are unwilling to sell anything more of this kind below 5½d. per lb.

The weak point in the position of the article is that the demand is limited to the summer months, and that no one believes that the figures now quoted can be maintained beyond the end of September. Before the present scare set in, carbolic acid of all descriptions had fallen to prices lower than had ever before been recorded, and several makers had ceased manufacturing. But they all have their plant ready to start again as soon as there is a prospect of better times, and the higher the present rise in prices, the sooner, therefore, will over-production set in again. The synthetic carbolic acid which was placed upon the market by a German firm of aniline-dye manufacturers a few years ago, and looked upon for awhile as likely to become a serious competitor to the coal-tar acid, has receded into obscurity, and not much is heard of it now in commercial circles. It was good, but much too dear. It is still possible, however, that it might make its reappearance under more favourable market conditions and prevent the coal-tar product from rising beyond a certain point.

Although the superiority of carbolic acid as a disinfectant has frequently been challenged, there is no doubt that it continues to hold the first place in popular favour, and no other disinfectant is so liable to sudden demand and rise in value. Within the last fifteen years there have been, at intervals, regular runs upon it during the summer months. Its price has been seriously affected in turns by yellow-fever epidemics in America, and by cholera epidemics in Japan, the East, Spain, and Russia. When any sudden demand sets in during the summer (which is also the season when the output is the smallest), it is no unusual thing to witness an advance in price of 50 or 100 per cent. within a couple of weeks; but it happens very rarely that this increase is prolonged beyond the autumn. In 1879 there was a sudden and somewhat sustained rise, as a result of an unusual demand from America and the far East. In 1884 the occurrence of cholera in the south of France, and in 1885 the fear of a renewed outbreak, caused prices to double within a few weeks. In 1886 there was a fresh recovery in price, which continued slowly until the spring of 1887, when carbolic had reached three times the value of its lowest point. Then came a good time for the manufacturers. The French Government set about to manufacture melinite. One of the principal ingredients of that explosive was picric acid, about two-thirds of which is carbolic acid, and the quantity of carbolic thus consumed was enormous. We cannot give reliable statistics to show even the approximate quantity of carbolic acid consumed in the manufacture of melinite, but some idea of it may be formed by the figures showing the increased imports of carbolic acid into Germany when the German Government followed the French in using the drug as an ingredient in the manufacture of its war-material. Previous to 1888 Germany imported from 800 to 1,000 tons of carbolic per year, in 1888 she took 1,200 tons, in 1889 2,400 tons, and in 1890 1,900 tons—the excess being all used, it is believed, in the manufacture of explosives. Since 1890 the continental demand has been decreasing rapidly, and the English makers, no longer able to dispose of their output abroad, have gradually been compelled to throw their surplus stock upon the home market. It is estimated that the total quantity of coal-tar converted into various commercial products is

about 820,000 tons per annum, of which over 600,000 tons fall to the share of this country, while France produces nearly one-half of the residue. Assuming that the production of carbolic acid is about one-twentieth part of the weight of the coal-tar converted, its total output in Europe would be about 41,000 tons a year, of which more than 30,000 tons are produced in this country.

CHEMISTS AND PHOTOGRAPHIC GOODS.

It is now accepted on all hands that a large part of the business of retailing photographic materials should be in the hands of the chemist. This is especially the case in the provinces. In London there are large emporiums where every kind of photographic apparatus and material may be purchased. Even these are not numerous, except that since the very successful formation of the Camera Club there has been a growing tendency for the larger dealers to go westward. Within certainly a radius of a mile and a half from the Club will be found the establishments of all the leading houses of this character. Outside this circle the dealers in photographic material are few and very far between.

The enormous advance in photography amongst amateurs makes it imperative that the articles of everyday requirement—such as chemicals, plates, and paper—shall be obtainable near home. In London alone there are now some forty photographic societies, whilst in the provinces no town of fair size and reputation can be found without such a society; and in every place, whether large or small, workers in numbers are sure to be found.

This growing popularity of photography as an art cultivated by amateurs makes it yearly more and more incumbent upon chemists to cater for photographers. The profits are considerable, and the wholesale houses will be only too glad to offer terms. It may not be wise for any but chemists with special opportunities to hold large stocks of apparatus, but it is to the benefit of the body generally that all should keep an assortment of chemicals required by photographers for making-up developers, toning-baths, &c. Developing-agents—such as pyrogallie acid, hydroquinone, eikonogen, rodinal—these may with advantage be made up ready for use or sold in a concentrated form, and, if properly pushed, will become a source of considerable revenue. In stocking dry plates, it is well not to attempt to keep all brands, but to select one or two well-known plates, and keep a small stock up to 10 × 8 size, and never allow the stock to run out. In printing-paper it would be well to have packets at uniform prices, varying *not the price* but the number of sheets, as the Eastman Company do with their new gelatino-chloride paper, made up in sizes and packed in specially labelled light-tight envelopes. The special papers issued by the Ilford Company—bromide, alpha, and the new gelatino-chloride printing-out paper—will find a ready sale as packed by them. The bromide paper of the Eastman Company and their gelatino-chloride paper are sure to go well. Then there is that excellently prepared paper supplied by the Platinotype Company, and their special developing solutions, for which there is a large call all over the Kingdom—quite a safe stock in small quantities. The Blackfriars Sensitising Company make a first-class albuminised paper, and their well-known “Celerotype” paper, which gives admirable results. In addition to these there is Jacoby’s paper, sold by O. Schözig, and his high-quality albuminised paper, Aristotype and Obernelter, both gelatino-chloride papers well known. All these are advertised extensively by the makers, but it is for the chemist to stock in small quantities, and to build up a

local connection. In apparatus a judicious selection of cheap goods, photographic kits ($\frac{1}{4}$ and $\frac{1}{2}$ plate size for beginners), hand cameras which retail at from 10s. 6d. to 2l. 2s., tripods, cases, developing-dishes, graduated glasses, scales, rockers, ruby mediums for covering-up windows, photographic books and journals—all these are in everyday demand. A part of the shop-window may with advantage be set aside for showing goods; the wholesale houses will supply showcards, specimen photographs, &c., which will help to brighten up the show, and a new branch will be added which has proved in many instances most important.

That it is worth while to meet local demands by keeping a fair stock of plates, papers, and chemicals, is unquestioned. But no chemist must expect to make a very appreciable addition to his income by nibbling at the trade in this way. Like every other department, this one, if it is to be developed into something of real value, demands knowledge, judgment, and courage to invest—to speculate is, perhaps, the better term. In localities where there are a good many resident photographers, or which are often visited by tourists, the investment ought to be worth making. But it must be on a fairly large scale. A good varied stock which will tempt the modern amateur means 200l. to 300l. planked down. It requires suitable space, and it wants to be managed by a man who is practically acquainted with both the art and science of photography. Given the right man, and the right place, the investment ought to bring in some 20 per cent. at least, which compares favourably with Consols.

INSUFFICIENT CAPITAL.

In a bankruptcy case reported by us last week, a chemist and druggist in Wandsworth appeared to have been carrying on business with “stock-in-trade, cost 18l., estimated to produce 4l.; trade fixtures, fittings, &c., estimated to produce 1l.; furniture, valued at 8l.; book-debts, good, 7l. 11s., doubtful and bad, 33l. 4s. 9d.—estimated to produce 1l. 10s.” The chemist’s total assets were returned at 35l. 1s., and this sum included 13l. cash deposited with solicitor for costs of petition. As a special reason for the failure the debtor gave “the long illness of his wife.”

We know nothing about this case, and the debtor has yet to be examined; but, on the face of it, what a melancholy picture these figures reveal! The bankrupt had started in business without any capital seven years ago, and had struggled along—hopelessly enough, we should think—all the time.

Glancing back at the failures of chemists reported this year, we find almost invariably that the debtors commenced business with a little borrowed money or with next to no capital. One had 7l. 10s. of his own, another 30l., another 40l. or 50l., one had 140l., and another 250l. Two state that their fathers gave them some money to start; but in almost all cases they have borrowed from friends and relatives. In view of the many instances we read of of men making great fortunes after starting with the traditional half-crown, it would be rash in the extreme to recommend hopeful young men never to start for themselves until they had a respectable capital to work with; but we would strongly urge them to be very sure of their ground before they begin on borrowed money.

COMMENTARY.

RADICAL OR RADICLE.—There are two ways in common use of spelling a word which seems to be going out of fashion in chemical literature, although its meaning is sig-

nificant enough and the word itself is useful. We mean the *radicle* of Watts's Dictionary, Fownes, Tilden, and Miller; but Attfeld, Dupré and Hake, Kolbe-Humpidge and Roscoe, have it *radical*. Which is it? We were inclined to give preference to *radicle*, on the supposition that the signification of the word was "a little root," but the matter having come before us for decision in proof-reading, we find that authorities, so far as we have referred to them above, are at variance, and that the true origin of the term is to be looked for not in "a little root," but in the more expressive adjectival expression "serving to originate." In this sense, according to Brande, it is "the base, as applied to acids, as sulphur is the radical of sulphuric acid." Prof. Attfeld, who is generally precise in matters of nomenclature, says "elements are termed *radicals*, each being the common root (*radix*) in a series of salts." Also, that "a few modern authors term these roots *radicles*, a word more usefully expressive of little roots or rootlets." The fact that *radicle* is still used in several of the best text-books shows that the matter has not had the attention which it deserves, and it would be well if we had an attempt at uniformity in the matter. We are for *radical*.

FLOWER-FARMING IN VICTORIA.—If the Victorians do not succeed in establishing perfume-farming firmly upon their soil, it will not be for the want of energy in trying. The Government scent-farm at Dunolly, to which we have already referred more than once, appears to be progressing satisfactorily, and to be appreciated by agriculturists for the information it disseminates. A correspondence upon the subject of flower-growing for perfumery purposes also breaks out at intervals in the columns of the Australian journals. In the *Melbourne Age* of July 24, Messrs. Blogg Brothers, perfumers, of Melbourne, call attention to the result of their experiments in flower-farming. Their experience, they say, leads them to the firm conviction that boronia and tuberose are the most prolific in flowers, the most easily treated, and the most saleable to the manufacturer when produced. The process they found most suitable, both for economy of labour and for obtaining the best results, is that known as "enfance" with olive-oil, prepared fat being too liable to turn rancid in the hot Victorian climate, and requiring a great deal of technical skill in its preparation. "For ourselves," Messrs. Blogg Brothers say, "we are steadily pursuing the policy of employing Australian-grown products in our manufactures of perfumery. Tuberose grows to better advantage in Victoria than elsewhere, and yield an abundant crop even in the first year. The scented oil is largely used as a base for other perfumes, and as an adjunct to the farming occupation its production can be safely recommended. The boronia will be found the most persistent of any flower-perfume ever produced, and the sale for it in foreign markets—as a purely Australian product—ought to insure it a permanent footing as a colonial industry." Meanwhile Indian pommade is also being imported into Europe in increasing quantities, and it is clear that the South of France people will have to recognise and respect their rivals before very long.

THE ORCHILLA-TRADE.—The United States Government has instructed its consuls in districts where orchilla-weed is collected to furnish particulars concerning the trade in that article. Several representatives have already sent in their replies, some of which contain interesting bits of information. Consul Viosca, of La Paz, Lower California, reports that in 1853 the discovery of a very superior variety of orchilla lichen on the Galapagos Islands, off the coast of Ecuador, created quite a sensation in the trade. Nineteen

years later, in 1872, the master of an American whaling-vessel, Mr. John Howard, discovered a new variety of orchilla, similar in quality to that of the Galapagos Islands, along Magdalena Bay, in Lower California. The news of this discovery soon spread, and ere long a fleet of vessels was landing orchilla-fishers all along the shores of the bay. A thriving industry grew up and lasted for several years, when a Mr. I. P. Hale, having obtained a concession of the entire belt of orchilla-lands from the Mexican Government, dislodged the whole of the other collectors and established a monopoly. Over three thousand men are employed in the orchilla-industry in California. The cost of placing orchilla upon the market in California is 43½ Mexican dollars per 2,000 lbs. The plant matures every two years. Upon the Canary islands about 120 tons of orchilla are gathered every year and sent to Lisbon. The cost of the drug to the exporter in the Canaries is estimated at 4½c. per lb. The lichen is plentiful throughout the islands, but difficult to obtain, as it grows by preference on the steep banks of precipices. On the Galapagos Islands the cost of orchilla is from \$8 to \$9 per quintal, export duty included. About 2,000 quintals are gathered annually now, the demand for the dye having greatly fallen off.

WE ARE NOT GOOD SAILORS.—The airs assumed by "good sailors" on ocean and Channel passages, their assurance that they "enjoy the motion," that they "never miss a meal," and the like, as they tramp around the couches where their helpless fellow-voyagers lie prostrate, have often stirred the powerless passion of Neptune's victims. There is a sweet morsel of revenge for the long-suffering ones in a letter in last week's *British Medical Journal*, by Mr. Arthur Stradling, M.R.C.S., who says he has travelled some half-million miles on the great passenger-steamers, and the one fact which he finds to be constant in regard to sea-sickness is "that persons affected with any form or degree of mental aberration are immune from the malady." He has compared notes with other sea-going surgeons, and finds that they have noticed the same thing. This is cheerful news indeed. When we next make for Calais or Ostend we shall hug the basin with the proud consciousness that it is the outward and visible sign of our intellectual superiority, and we shall measure at its correct value the self-satisfied smirks of those mentally aberrated passengers who have hitherto been the crown of our sufferings.

SULPHURETTED-HYDROGEN INSANITY.—The idea that insanity can be produced by the inhalation of sulphuretted hydrogen is somewhat alarming to those who spend days, weeks, and months in laboratories the atmosphere of which has been more or less contaminated with it. Dr. J. Wigglesworth, Medical Superintendent of the Rainhill Asylum, gives, in the *British Medical Journal*, particulars of two cases which have been under his care there—one, a man of 30, in whom the insanity lasted for upwards of a year, and the other, a man of 32, who was insane for five months. These men were "gassed" in alkali-works with sulphuretted hydrogen. There was no history of insanity in their families. Although Dr. Wigglesworth says it is very unusual for lasting or permanent effects to be produced by the gas upon the nervous system such as come under the designation of insanity, it does not appear to him matter of surprise that such effects should at times occur. That the gas has powerful narcotic properties is evidenced by the rapid insensibility it produces when inhaled in any quantity. Cases have been recorded by Savage and others in which insanity—generally taking the form of mania—has resulted from the inhalation of chloroform, ether, nitrous-oxide gas, and other similar agents, and the

cases described as produced by sulphuretted hydrogen seem to fall into line with these.

WELDON MUD.—Mr. Bernard Cail, of Gateshead, sends an interesting letter to the *Engineer* in regard to a personal experience of his own, showing how waste products in the chemical trade become of use when properly studied. The experience is a chapter in the life of Walter Weldon, who at first was a literary man. His publisher failed, and he was in poverty and bad health, and was not allowed to pursue his profession, and to divert his mind he took to chemistry. By-and-by he came to examine the manganese residue from chlorine stills, and conceived the idea of re-oxidising this residue or mud. He took out a patent for his process, and sold a part of it to people whom he had induced to believe in it. Newcastle chemical manufacturers had no faith in it or him. He called on Mr. Cail, who thought it feasible. Weldon had then never been in a chemical-works. Mr. Cail was an engineer and contractor and had built several large chemical-works, and only had a limited knowledge of chemistry. His partner was T. Bell, brother of Sir (then Mr.) Isaac Lowthian Bell. Neither Mr. T. Bell nor Mr. William Lash, then about ninety years old, looked upon the Weldon process favourably; and the same with Mr. Isaac L. Bell, who said it was against nature, and could not be done. These circumstances made it unpleasant for Walter Weldon and Mr. Cail. They experimented for some time and expended about 1,500*l.*, when it was voted a failure and given up, and Mr. Weldon took his patent to Widnes, where a more congenial manager, under Colonel Gamble, carried it out to perfection. Mr. Weldon had to part with nearly all his interest in the patent, and suffered dreadfully from the want of sympathy during the experiments which were made. This was the first great change in the alkali-trade from the Le Blanc process, brought from France to Walker by the before-named William Lash, at the termination of the great war. Previous to Mr. Weldon coming on the scene Mr. Cail had made a solution from the waste and took a small phial of it to London to disinfect the sewage the year the Thames was so foul, which it did perfectly, but nothing came of it. The changes made since the Weldon process have been numerous, and caused many works to be given up and dismantled; the first-established Walker Alkali-works being one. The first change after Weldon's process was making hydro-sulphate from soda or tank-waste by a patent taken out by Mr. S. Lash, a nephew of the original Mr. William Lash, reducing the price from 1*s.* per lb. to 16*l.* per ton, since to 5*l.* In the old Walker books soda was sold for 50*l.* per ton, now it is 2*l.* or 3*l.*

❖ REVIEWS ❖

AND

LITERARY NOTES.

Perfumes and their Preparation. By George William Askinson, Dr.Chem. London, 1892: E. & F. N. Spon. Large 8vo. Pp. viii. + 312. 12*s.* 6*d.*

THIS is an American translation of Isidor Furst's German work, by a manufacturing perfumer who has been fortunate in having Dr. Charles Rice associated with him in editing. Consequently, the book is remarkably free from the technical blunders which mar so many works of a similar character. It fairly covers the whole field of perfumery and toilet preparations, describing the collection and manufacture of the crude materials required in the recipes, which are numerous and of a practical character. We can recommend the book for use by chemists and druggists, but those in

England will note that the pint and quart mentioned in many of the formulæ are those used in the United States—viz., 16 oz. and 32 oz.

Watts's Dictionary of Chemistry. By H. Forster Morley, M.A., D.Sc., and M. M. Pattison Muir, M.A., F.R.S.E. New edition. Vol. III. 8vo. Pp. 868. London, 1892: Longmans, Green & Co. 2*l.* 10*s.*

BEGINNING with "indigo-carboxylic acid," the editors carry on their monumental work in the present volume to "phenyl-tetrazole carboxylic acid." The volume is 8*s.* dearer than the first two, as it contains nearly 100 pages more matter. On the inorganic side of chemistry we have in this volume such elements as iron, lithium, magnesium, mercury, nitrogen, and oxygen treated; and on the organic side methyl, paraffins, oxy-organic compounds, and phenols alone form a collection of material which only time can prove the true value of. The great bulk of the work falls upon the editors, and several clever young chemists who act for them as abstractors; but the present volume, like its predecessors, is distinguished by a number of special contributions which may yet take rank as historic monographs in chemical literature. The following are the articles of note now printed:—

ISOMERISM, by Professor H. E. Armstrong, Central Institution.

PERIODIC LAW, by Mr. Douglas Carnegie.

RARE METALS, by Mr. William Crookes, F.R.S.

LIGNONE, by Mr. C. F. Cross.

MINERALOGICAL CHEMISTRY, by Mr. L. Fletcher, British Museum.

MILK and MUSCLE, by Dr. W. D. Halliburton, King's College.

METALLURGICAL CHEMISTRY, by Professor A. K. Huntington, King's College.

ISOMORPHISM, by Dr. Arthur Hutchinson.

KETONES and LEPIDEN, by Professor Francis R. Japp, Aberdeen.

PARAFFIN and PETROLEUM, by Dr. Samuel Rideal.

OZONE, by Mr. W. A. Shenstone.

PENTINENE, by Professor William A. Tilden.

THEORIES OF MOLECULAR CONSTITUTION OF BODIES, by Professor J. J. Thomson.

Anything in the nature of criticism of these articles is impossible in the limits of a brief review, but we may call attention to those by Professor Armstrong, Mr. Crookes, and Dr. Halliburton. It was possible to make the first-mentioned monograph a very dull affair, and to ignore the work of men who were writing on isomerism a quarter of a century ago, since the researches and speculations of more recent times have somewhat overshadowed the earlier work. Happily, the catholicity of Professor Armstrong's mind has given us a really exquisite exposition of a most difficult subject, in which the evolution of modern isomerism is admirably conveyed. The milk article is a good one, in which greater regard than usual is given to the physiological side of the subject. Of course, the whole of the articles are not of equal merit; but they are all in line with present-day theories and knowledge. We have put the general text to test by frequent use during the past two months, which, after all, is really the only way in which such a bulky and comprehensive volume can be judged, and on no occasion have we been dissatisfied with the contents. The work has been thoroughly and intelligently done, and the editors are apparently determined that the Dictionary shall retain its place in chemical literature as one of the best books of reference. But why do they spell Mendeléef's name both ways—Mendelejeff and Mendeléef? He uses the latter form.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. Hale White, M.D. London, 1892: J. & A. Churchill. 12mo. Pp. vi. + 614. 7*s.* 6*d.*

THE author of this volume is lecturer on materia medica and therapeutics at Guy's Hospital, and is the author of a text-book of general therapeutics and of many papers on therapeutic subjects. In compiling the present volume he has apparently had in view a book of the nature of Dr. Lauder Brunton's well-known volume, but much less ambitious in detail and extent. Pharmacy forms a subsidiary part of it, consisting mainly of definitions with explanations and groupings of B.P. preparations, the whole taking up two dozen pages. Following this are nearly 100 pages in

which pharmacology and therapeutics are treated. In this section there is a chapter on prescribing, but it is the actions of the various classes of drugs which comprise the major part of the section. These are described in very instructive fashion, and apparently with the intention that students may obtain an intelligent grasp of the subject. Following this pharmacopoeial inorganic and organic materia medica are treated in natural groups, the pharmaceutical portion, dealing with the preparation and characters of galenicals, being treated much more carefully than is usual in text-books; following this the action, therapeutics, and, where applicable, the toxicology of each drug are adequately discussed. In an appendix non-pharmacopoeial remedies are treated in the same manner. There is a comprehensive index of the whole. It is a pleasure to handle such a book as this, for, in addition to its being of a size enabling it to be carried in the coat-pocket, the typography is clear and varied in such a way as to give prominence to important sections; and the binder has given a plain but elegant finish to the volume.

We take it that the book has been written for medical students, for in style it is well suited to their requirements; but it may also be read and used with profit by chemists and their assistants, since it describes, without too minute physiological detail, recent knowledge of the action of medicines, and the best manner for administering them in specific diseases, thus being of assistance in prescribing.

Kemp & Co's Prescriber's Pharmacopœia. Bombay and London: 1892. 32mo. Pp. xx. + 429. Rs. 2.8.

A REPRINT of the second edition of this Pharmacopœia, which was reviewed in these columns last year, has recently reached us. Apparently the greatly improved character of the work has met with approval, for the edition was exhausted within six months. The reprint is issued in limp cloth binding.

The Amateur Photographer's Annual. London: Hazell, Watson & Viney (Limited). 2s.

AMATEUR photographers are surely the pet children of journalism. They are most lavishly and cheaply catered for in this and other countries, and this volume just published surpasses, we think, any previous effort. It is a handsomely-bound book, contains over four hundred pages of literary matter, including an excellent summary of progress, a gazetteer of Great Britain for the amateur camerist, showing where plates, chemicals, and dark-rooms can be got, and often indicating interesting points for pictures, several original articles, and some hundred or more very interesting reproductions of scenery or studies. This makes the work attractive to readers who know nothing of the Black Art.

MESSRS. WILLIAM COOPER & NEPHEWS, of Berkhamsted, whose acquaintance with sheep must be "extensive and peculiar," have just published a very useful treatise on "Sheep-farming," which they sell at 1s. They give excellent illustrations of the principal varieties of sheep, discuss feeding, breeding, and shepherding questions generally, describe concisely (perhaps a little too concisely) the treatment of the ordinary diseases to which sheep are liable, and append a chapter on "Colonial Sheep-farming." There is a great deal of good original work in this treatise, and chemists with a connection among farmers might undertake the sale of it with advantage.

A SEVENTH EDITION of Martindale and Westcott's Extra Pharmacopœia has been lately published by Mr. H. K. Lewis, of 136 Gower Street. There has been an interval of two years between the publication of the sixth and the seventh editions of this popular work and through the progress of pharmacology, and largely in consequence of the introduction of new synthetic remedies, the authors have had to make over 300 new entries in their index. In this department, and in that of noting new uses for older medicines, the Extra Pharmacopœia is kept well up to date. The British Pharmacopœia "Additions," the third German Pharmacopœia, and a new Guy's Hospital Pharmacopœia are abstracted in this work.

NEW COMPANIES.

SILICATE PAINT COMPANY (LIMITED).—Capital, 100,000*l.*, in 5*l.* shares. Object: To acquire the business of manufacturers of and dealers in silicate paint and other paints and articles now carried on at Charlton, Kent, at one time by the Silicate Paint Company, and afterwards by J. B. Orr and others, and to deal in paints, colours, oils, chemicals, drugs, &c. There shall, in the first instance, be four directors, and the first are:—Major-General W. B. Barwell, F. S. Hunt, E. Masson, and R. E. Robertson-Ramsay. Qualification, 50*l.*; remuneration to be determined in general meeting.

GORDON MURRAY & CO. (LIMITED).—Capital, 10,000*l.*, in 1*l.* shares. Object: To carry on business as patent-medicine manufacturers, chemists and druggists, surgical and medical instrument dealers, &c., and to acquire the business of Gordon Murray & Co., and to develop and extend the same. The first subscribers (who take one share each) are: J. W. Wootton, 32 Stockwell Green, Surrey, clerk; C. de St. Croix, 12 Savoy Buildings, Strand, retired army officer; S. H. Smith, 6 Larcom Street, Walworth Road, printer; J. Gravestock, 14 Cologne Road, New Wandsworth, foreman; A. C. Hinds, 28 Duke Street, W.C., clerk; D. Early, 70 Stamford Street, housekeeper; and T. Young, 18 Dalryell Road, Stockwell, agent. There shall not be less than three nor more than seven directors, the first are to be elected by the signatories to the memorandum of association. Qualification: 100*l.* Remuneration, 50*l.* per annum, divisible. Registered office: 10 Adam Street, Strand, London.

JOHN BUCKLEY MINERAL-WATER AND BOTTLING COMPANY (LIMITED).—Capital, 1,500*l.*, in 5*l.* shares. Object: To acquire the business of a mineral-water manufacturer, hitherto carried on under the style of John Buckley, at Ancoats, Manchester, and to develop and extend the same. The first subscribers (who take one share each) are:—T. M. Cairns, Ardwick, innkeeper; T. A. Dunn, Oxford Street, Manchester, innkeeper; J. C. Emerson, St. James's Theatre, Manchester; G. Kitson, Scotch Hotel, Great Ancoats, innkeeper; J. George, 48 St. Andrew Street, Manchester, beer-dealer; J. F. Kitson, 21 Mather Street, Manchester, publican; and J. E. Hornby, Ryecroft, Ashton-under-Lyne, agent. There shall not be less than three nor more than seven directors. The first are T. M. Cairns and six others. Qualification, 25*l.* Remuneration to be determined by the company in general meeting.

Trade Notes.

MESSRS. LORIMER & Co are issuing a new edition of their cleverly-written pamphlet on modern medicines, in which they describe the various specialities prepared by them. They state that in 1891 they sent out six million bottles and packets of medicine.

THE Jeyes' Sanitary Compounds Company (Limited), 43 Cannon Street, E.C., are issuing very neat little envelope sized pamphlets on "Lano-Creolin," explaining the composition and virtues of this compound of creolin with lanoline, which they manufacture.

NOTHING nicer or purer in the way of sweets can be made than the "fruit tablets" of various flavours manufactured by Mr. James Pascall, of Valentine Place, Blackfriars Road. They are put up in square glass jars with screw capsules. In that style they are well suited for chemists' sale.

MESSRS. F. NEWBURY & SONS invite proprietors of patent medicines to tell them, for indication in their next catalogue, whether they label their preparations as poisons, or whether no scheduled poison is contained in the article. It will be very convenient to have this information clearly stated in the catalogue.

CHEMISTS thinking of embarking in the homœopathic-medicine business should study the four pages of advertisements published in this issue by Messrs. Keene & Ashwell, of

74 New Bond Street, who give illustrations of the show-cases which they supply, with opening orders, and also indicate the profit which the sale of these medicines bears.

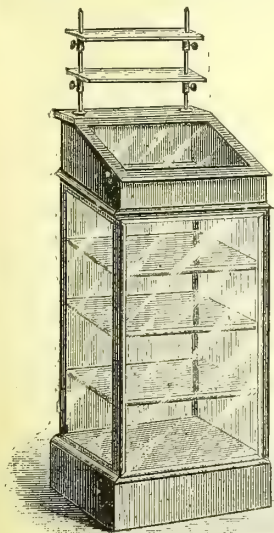
MESSRS. F. C. CALVERT & Co., of Manchester, are bringing out a number of new soaps for chemists' sale, to which they direct attention in their advertisement. These include a combination of carbolic acid and sulphur, a fuller's-earth soap, a pumice-stone soap, and a petrofinic soap for the hair. They supply effective showcards with these.

MESSRS. F. NEWBERRY & SON have been appointed sole agents in Great Britain for several of the dietetic and medicinal preparations manufactured by Messrs. Reed & Carnrick, of New York. These include kinnyogen, lacto-cereal food, lacto preparation, and pancrobinin preparations. They have sent us samples of these, and we shall report upon them later.

MR. H. SILVERLOCK brings under our notice a large number of labels of new design and text for most of the proprietary articles in ordinary sale on the chemist's counter. These labels, we understand, are all new within the past two years. They seem to us to be very skilfully worded, and the designs are in most cases admirable. Small lots of these stock labels are supplied with the chemist's own name printed on.

MESSRS. BLONDEAU ET CIE. have brought out "Flora Vinolia" soap in grey boxes lettered in silver, each holding three tablets, and retailing at 1s 6d. They will supply the tablets in single cartons as formerly, but as it is often as easy to sell a box of soap as a single tablet, chemists will no doubt greatly prefer the "Flora Vinolia" soap in boxes. The boxes are lined in pink, and are in every way quite in keeping with the other "Vinolia" preparations.

MESSRS. BURROUGHS, WELLCOME & Co. inform us that they are now willing to sell outright to chemists their showcases for 10%. This is less than half the price that the firm paid for these cases when they were first brought out; but the cases have become so popular now, and the demand so great, that the cost of production has been substantially reduced. In a letter to us, Messrs. Burroughs, Wellcome & Co. say that, although they have now sent out to different chemists some hundreds of these cabinets and desks, only one or two have been returned, and they have letters from many chemists stating that these form the handsomest piece of furniture in their pharmacy. The dimensions of the cabinet and showcase combined



are 4 feet high, and 20 inches wide and 20 inches deep. The size of the cabinet and doctor's desk is the same, except to the top of the standards of the desk it is 5 feet 4 inches high. It is the latter that we illustrate.

MESSRS. FLETCHER, FLETCHER & STEVENSON offer a prize of 10 guineas for the best half-dozen specimens of mixtures for simple ailments prepared from their "Concentrated Liquors." The competition is doubtless intended as an object-lesson in the special adaptability of the liquors for chemists' proprietary remedies. There can be no question that in a large number of such mixtures the proportion of spirit introduced in the form of tinctures, &c., is needlessly excessive. If, therefore, by the substitution of the "Concentrated Liquors" economy in this respect is effected without any sacrifice of therapeutical efficacy, the competition will yield instructive and useful results. Conditions are stated fully in Messrs. Fletcher's advertisement.

MESSRS. F. ROSENTHAL & Co., of 47 Minories, are bringing before chemists in this journal their penny packets of "Grace Darling Memorial Starch." We do not know exactly why the name of Grace Darling should be specially associated with starch, but her name and heroism are certainly well worth keeping in mind by any means in this sea-girt island. To that end the popular journalist "Dagonet" has advocated a national memorial to be raised to her on the occasion of the fiftieth anniversary of her death, which will occur on October 20 next. In their circular issued with this number Messrs. Rosenthal & Co. reprint "Dagonet's" article, and undertake themselves to contribute 500*l.* to such a memorial in the form of a life-boat or some other foundation if (this seems a rather large "if") they can sell eighteen millions of their penny boxes of starch before the end of this year. They point out that starch is not an article universally sold by chemists, who can, therefore, if they will, by taking up this business, add to their own profits and help in glorifying the memory of one of the bravest of Englishwomen. The packets of starch contain the record of her heroism, and it is expected that Englishwomen will have pleasure in assisting this memorial.

THE proprietor of "Singleton's Eye Ointment," Mr. Stephen Green, of 210 Lambeth Green, is putting up his very well tried remedy in a somewhat new form. The quaint old pots are still used, but they are not now wrapped up in the old handbill with which they have been heretofore enveloped, and they are now supplied in half-dozen boxes for counter display, as shown in the engraving. "Singleton's Golden Eye Ointment" is, perhaps, the oldest proprietary remedy which is still in popular sale. According to a history of the article which is set forth in a little booklet recently published, it was first made known in the year 1596, in the reign of Queen Elizabeth, by a Dr. Johnson, of Vauxhall. Dr. Johnson bequeathed the recipe to George Hind, who left it to his son William. William Hind's daughter married a Thomas



Singleton, and it was their grandson, William Singleton, who first pushed the article extensively. From him it came to his only child, Selina, who married Timothy Folgham. Their daughter Selina married Mr. Stephen Green, and took a fifth share of the property to him as her marriage portion. The other shares were held by her brothers and sisters. Stephen Green bought up the rights of the other children, and became sole proprietor. He died in 1874, and the business is now in the possession of Mr. Stephen Green, his grandnephew and namesake. The pamphlet from which we have obtained these curious particulars has been compiled by Mr. F. W. Sears, advertisement contractor, of 138 Fleet Street. It is effectively got up, and, we presume, is offered to chemists for circulation. Mr. Sears, who aims to cultivate an advertising connection with chemists and medicine advertisers, informs us that, besides undertaking the advertising of "Singleton's Eye Ointment," he at present has commissions for arranging and publishing advertisements for Messrs. Hockin, Wilson & Co., Corbyn, Stacey & Co., Oppenheimer & Co., The Anteczema Company, and Johnson, Johnson & Co., the tea merchants.

Legal Reports.

QUININE BITTERS COMPANY (LIMITED) v. DAVIES.

In the Chancery Division of the High Courts of Justice, London, on Friday last week, before Mr. Justice Stirling, the motion at the instance of the Quinine Bitters Company (Limited), Llanelly, to restrain by injunction until the trial of the action or further order the defendant, John Davies, chemist and druggist, 30 High Street, Swansea, from infringing the plaintiff company's trade-mark and from selling the quinine bitters manufactured by him as or for the goods of the plaintiffs, again came on for hearing. As was reported in our last issue, his Lordship decided that he could not, on the evidence before him on this motion, regard the matter as one of infringement; but he indicated disapproval of the following words at the foot of the defendant's label:—"Prepared at the Quinine Bitters Manufactory, Swansea," as too closely resembling the words in a similar position on the plaintiffs' label, "Prepared by the Quinine Bitters Manufacturing Company (Limited), Llanelly." To enable the defendant to consider what change he would be prepared to offer, the motion stood over for a week. On being reached on July 22,

Mr. Buckley, Q.C., for the defendant, said that after his Lordship's suggestion the solicitor for the defendant wrote to the plaintiffs repeating what he had said on June 2, that his client, to avoid litigation, would make any reasonable alteration on the labels or bottles. He had drafted a new label, which he submitted. If the alteration were approved, he was prepared to cease using the old label and to bear his own costs in the action. The proposed label would have at the head simply the words "The Welsh" before "Quinine Bitters"; then, "a favourite tonic, purely vegetable," which effectually altered the form; and, as regarded the matter principally dwelt upon, it was proposed to substitute these words: "Prepared only at the Welsh Quinine Bitters Laboratory, Swansea," and at the foot, "Ask for Welsh Quinine Bitters." In reply to that offer his client received a letter from the plaintiffs' solicitors stating that the plaintiffs did not think the defendant could be serious in asking them to entertain the new label which had been suggested; that the new label was as much an infringement as the other; that passing off would certainly occur, and that they thought, when his Lordship saw the alteration, he would take the same view. The plaintiffs' solicitors followed that letter by another, dated July 20, in which they said that their clients wished, if possible, to avoid litigation, and desired to refer the defendant's labels to two gentlemen as arbiters, with the leader of the Chancery Bar as umpire. Mr. Buckley submitted that the alterations suggested by his client met all the objections in the case.

Mr. Graham Hastings, Q.C. (for the plaintiffs), said that the defendant's offer was a compromise; and the plaintiffs had made an offer, which the defendant had refused.

Mr. Buckley said they certainly refused to do what was suggested by the plaintiffs, but he was willing to do anything reasonable. The plaintiffs did not say, even now, what they wanted. They did not say it in June, when the defendant offered to do what was reasonable. The defendant had shown a *bona-fide* intention to meet the reasonable wishes of the plaintiffs; and now he simply invited his Lordship's judgment on the motion.

Mr. Ashton Cross (with Mr. Buckley for the defendant) argued that the only question was, "Was the defendant's label so made up that an ignorant person would mistake the defendant's preparation for the plaintiffs'?"

His Lordship: Do you represent your preparation to be made at the "Quinine Bitters Manufactory"?

Mr. Ashton Cross: Yes.

His Lordship: The plaintiffs' preparation is "Prepared by the Quinine Bitters Manufacturing Company." Is not that calculated to deceive?

Mr. Ashton Cross submitted that it was only a very small portion at the foot of the label, which otherwise was wholly different in colour and in composition. Anyone, whether he could read or not, could see in a moment the various differences in colour and design on the label. In the plaintiffs'

first letter they said their trade-mark was infringed. The defendant, in his first letter, said he would be happy to make an alteration, and as soon as his Lordship made the suggestion they proposed an altered label.

His Lordship: I do not think your alteration meets the point. What I should want would be an undertaking from you to discontinue the use of the words "Quinine Bitters Manufactory," or anything like that. Call it something else—"Druidical Laboratory." Why "Quinine Bitters"?

Mr. Ashton Cross: Because that is the stuff we are making.

Mr. Buckley: But we are quite prepared to do what your Lordship suggests.

Mr. Ashton Cross said that with regard to putting the defendant's name on the labels there was a great difficulty, because there were five "John Davieses" chemists in Swansea. (Laughter.)

His Lordship: Is that the difficulty? I thought it was that other chemists would not sell it if the name of the manufacturing chemist was there.

Mr. Ashton Cross: Yes, that is another reason.

His Lordship: If you will undertake to discontinue the use of "Quinine Bitters Manufactory" on the label, I think, on the present stage, it ought not to go further.

Mr. Ashton Cross: We have proposed at least seven different names. Your Lordship wants the word "manufactory" out, and also "Quinine Bitters."

His Lordship: I want you to remove anything which could be mistaken for the plaintiffs' name. The plaintiffs' name is "The Quinine Bitters Manufacturing Company," and you put, exactly on the place on the label where that occurs, the words "Quinine Bitters Manufactory."

Mr. Buckley: I am prepared to undertake this—to substitute these words, "Prepared only at the Laboratory, 30 High Street, Swansea."

His Lordship: Yes; if you give that undertaking till the trial of the action, then I do not think I ought to interfere further at this stage.

Mr. Graham Hastings: Why should the defendant not add his own name on his label?

His Lordship: If he puts "Laboratory" with his address, I think I ought not to impose upon him the necessity of putting his own name on the label.

Mr. Graham Hastings submitted formally the point as to the name. The defendant's own story was that he made up his label from a number of labels, in every one of which the maker's name appeared. Defendant's first reason for not putting his name on his labels was that nobody would sell the bitters, and now the excuse given was that there were so many "John Davieses." But if the defendant gave his address there could be no confusion, and it was important that his name should appear. Everyone put his name on his goods, and why should this man do otherwise? He (Mr. Hastings) would be satisfied with the undertaking now offered, leaving the rest to be dealt with at the trial; but surely the defendant ought to put his name on the label. Every other label which had been produced had the maker's name on.

His Lordship: Yes.

Mr. Graham Hastings, continuing, said that the plaintiffs put the name of their company on their label. Everybody else did so. Could the defendant suggest any honest reason why he should not put his name on his label? He said there were five John Davieses. Well, suppose there were a hundred—what did it matter? He had his address, and that would be enough with the name.

His Lordship then gave judgment on the motion. He said this case rested on a comparison of what had been called the "get up" of two preparations, and particularly on a comparison of the labels. The application came very late, because in his evidence the plaintiffs' secretary said he knew of all this a long time ago. But the main point rested on a comparison of the labels. There were a number of matters complained of which might at the trial be established so as to induce the Court to come to the conclusion that the defendant was really trying to take the benefit of the reputation gained by the plaintiff company. He was not at present satisfied as to that. But there was on the plaintiffs' label, "Prepared only by the Quinine Bitters Manufacturing Company (Limited), Llanelly, South Wales," and on the defendant's label there was, "Prepared only at the Quinine Bitters Manufactory, Swansea." That seemed to him to

come very near indeed to the line, and to be very like an infringement of the plaintiff's trade-name, and he certainly was much struck with it when, in the previous week, the motion was first brought before him. Mr. Buckley now offered an undertaking on the part of the defendant to discontinue that, and to use the words, "Prepared only at the Laboratory, 30 High Street, Swansea." In that state of affairs, and looking at all the circumstances of the case, his Lordship thought that, without prejudicing the trial of the action, that undertaking would be at present sufficient, and he did not think it necessary to exact from the defendant an undertaking to put his own name on the label. On the undertaking given by Mr. Buckley, therefore, there would be no order on the motion, except that the costs be costs in the action.

ANILINE-DYE AGENCY DISPUTE.

IN the Chancery Division of the High Court, on Friday, July 22, before Mr. Justice Chitty, Mr. Rigby, Q.C., asked for an injunction to restrain Alfred Schott and Philipp Segner, carrying on business at Manchester under the style of Schott, Segner & Co., from dealing in chemical colours or other products manufactured by the Badische Anilin und Soda Fabrik, and for an injunction to restrain the defendants from carrying on business under the above style. The defendants had for fourteen years acted as agents in the North of England for the plaintiff company. The defendants gave notice, and the agreement, so far as it constituted the defendants agents for the plaintiff company, was determined on June 30 last. The agreement provided that Messrs. Alfred Schott and Philipp Segner should bind themselves, in the event of one or other or both retiring from the agreement, or after the contract had come to be determined, not to enter into any like or similar business, nor to give information of any kind about the business, for a period of three years from June 30, 1892. Any breach of this clause was to be visited by a penalty of 2,500*l.* each. It also provided that the style of the firm—Schott, Segner & Co.—should remain the property of the plaintiff company after the dissolution of the agency contract, and that they should be at liberty to continue the business in that name. The defendants were paid partly by salary and partly by commission. There was no doubt about the breach of the contract; but the objection was taken that the agreement was invalid as being against public policy. His Lordship would, therefore, have to decide upon the construction of the agreement. On the determination of the contract the defendants had sent round to their customers, and the customers of the Fabrik, a circular stating that their contract with the company had expired, and that they would no longer continue to act as their agents. They stated further that they would continue to carry on business in aniline colours, tar products, &c., and solicited a continuance of favours.

Mr. Channell, Q.C., who represented the defendants, said he argued that a man could sell his own name, but the question was, whether this had been done in the present instance. Without going further into that matter, he offered to cut off " & Co." from the present style of the firm, reserving only the names of Schott and Segner.

Mr. Farwell, for the plaintiffs, said he would accept that if the names were transposed.

Mr. Channell said that his clients had not considered that point; but, to pass to the substantial question, he agreed at once that if the clause prohibiting the defendants from carrying on business for three years from the determination of the contracts was confined to the Manchester and northern district it would have been a valid agreement. But the contract was much wider than was necessary for the protection of the plaintiffs, as not only did it fix no limit, but it prevented the defendants from exercising their talents in a business with which they were intimately acquainted.

His Lordship reserved judgment.

CLAIM FOR GOODS SUPPLIED AFTER BANKRUPTCY.

IN the Westminster County Court, on July 22, before Judge Bayley, the case of Chapple v. Baker, remitted from the High Court, was heard.

The plaintiff, a fancy-goods dealer of Villiers Street,

Strand, sought to recover 25*l.* 18*s.* 6*d.* in respect of goods supplied to the defendant, who formerly carried on business as a chemist and druggist at 283 Regent Street, W.

Mr. Moyes, for the plaintiff, said he did not think it would be disputed that the goods had been sold and delivered, and had not been paid for; but the defence which he understood was to be raised was that the defendant had paid a composition to his creditors, under an order of the Bankruptcy Court, and that, as the plaintiff did not go in with the other creditors, he was not now entitled to sue for the money. He submitted that it was for the defendant to prove this defence.

Mr. Horace Williams, for the defence, said the defendant was formerly proprietor of a chemist and druggist's business in Regent Street, and the goods in question were supplied to him in January, 1890. In August of the same year a receiving order was made against him, and on September 13 he was adjudged a bankrupt. In the following December a composition of 5*s.* in the pound was offered, and the whole of the creditors, with the exception of the plaintiff, took advantage of it. In February, 1891, an order of the Court was made, approving of the scheme and annulling the bankruptcy. It was true that the defendant had, by an oversight, omitted to schedule the plaintiff's claim in the list of creditors supplied to the Official Receiver; but this was a pure accident. Since the bankruptcy proceedings the defendant had actually volunteered to pay the plaintiff 10*s.* in the pound; but he absolutely declined to accept anything less than the full amount of his claim.

The plaintiff, Mr. John Chapple, gave evidence as to supplying the goods, and said he never heard anything of the subsequent arrangement to pay the creditors a composition or he would have accepted the offer.

The defendant also gave evidence and was cross-examined by Mr. Moyes, who elicited that he had previously been made a bankrupt, and that his losses had been brought about by Stock Exchange speculations. There was only a lapse of six months between the two bankruptcies, the previous one having taken place when he was a chemist at Regent Street.

Mr. Moyes, in addressing the Court, asserted that the defendant had been guilty of a deliberate fraud in not having scheduled the plaintiff's debt in his list of creditors, and if the case failed on that point, he would submit that the defendant had still been guilty of fraud in obtaining the plaintiff's forbearance. He should ask his Honour to say that the defendant was liable, and to give judgment for the plaintiff for the full amount of his claim.

Mr. Williams said it was nonsense to try and go behind the order of the Bankruptcy Court. If the defendant had been guilty of any fraud the plaintiff had his remedy.

The learned Judge said he did not think there was any evidence of deliberate fraud on the part of the defendant, and therefore the bankruptcy proceedings must be a bar to the present proceedings, and judgment would be for the defendant, with costs.

THE TARTARIC AND CITRIC ACID CASES.

AT the Woolwich Police Court, on Wednesday afternoon, the adjourned summons came on for hearing before Mr. Kennedy, against Mr. George Mence Smith, oilman, of Woolwich, Plumstead, and elsewhere, for selling tartaric acid containing .0026 per cent. of lead, equivalent to 0.18 grain of lead in the lb. He was also summoned for selling citric acid containing 0.037 per cent. of lead, equivalent to 2.59 grains of lead in the lb.

Colonel Hughes, M.P., solicitor to the Woolwich Local Board of Health, appeared to prosecute, and Mr. Blanchard Wontner appeared for the defence.

There were also adjourned summonses for hearing against Mr. Benjamin Harwood, chemist, of 69 New Road, Woolwich, for selling tartaric acid containing .028 per cent. of lead, equivalent to 1.96 grain of lead in the lb., the same being injurious to health; and for selling citric acid containing .035 per cent. of lead, equivalent to 2.45 grains of lead in the lb.

Further summonses were down for hearing against Clara Brook Smith, chemist, of 16 High Street, North Woolwich, for selling citric acid containing .0112 per cent. of lead, equivalent to 0.78 grain per lb., and for selling tartaric acid

containing 0.176 per cent., equivalent to 1.23 grain of lead per lb.

On the case being called on, Mr. Wontner asked permission to say a few words. The matter had been under the consideration of the Chemical Section of the Chamber of Commerce, and had been fully discussed, with the result that it was thought that further evidence should be called if necessary. He had now present Dr. Stevenson, analyst to the Home Office.

Mr. Kennedy told Mr. Wontner that he was at present very much in his favour, and he did not think any further evidence need be called for the defence. He asked under what section the case was taken.

Mr. Wontner: Section 6.

Mr. Kennedy: Then what have we to say as to the article being injurious to health?

Mr. Wontner said the summons stated "to the prejudice of the purchaser."

Mr. Kennedy said it also stated that the same was injurious to health.

Mr. Hughes said it was injurious to health.

Mr. Kennedy said that, seeing the section under which the case was brought, they might have dispensed with Dr. Muter's evidence. Were there any more witnesses for the prosecution?

Mr. Hughes said he thought that the case was closed. If it was necessary he could prove that lead was a poison. It was said it was unavoidably mixed in the manufacture, but it was not so, except to cheapen the manufacture, for platinum could be used. He handed the magistrate a copy of the British Pharmacopoeia to read on this point.

Mr. Wontner: That is a guide to medicine, and not to grocers.

Mr. Hughes said that it was a most interesting case, whichever way it should be decided. There was no doubt that lead was a poison, but it was a question of degree what quantity was required to be injurious to health. What amount would be injurious?

Mr. Wontner said it had been stated that fifty-seven bottles of lemonade a day for six months would be enough to injure health.

Mr. Kennedy said the evidence showed that the quantity of lead was infinitesimal, and he had come to the conclusion that it was unavoidably mixed with the acid in the process of manufacture. He dismissed the summons, but agreed to grant a case to the Quarter Sessions.

The other summonses were, at Mr. Hughes' request, adjourned *sine die*, and it was agreed that a number of similar summonses taken out by the Plumstead Board of Works should be also adjourned.

Mr. Wontner said it was only fair to say that Dr. Stevenson, the greatest living authority, would have borne out the evidence of Dr. Muter, and would say that people might continue to drink lemonade, although he would not advise them to drink twenty-five or fifty-seven bottles a day. (Laughter.)

IMITATION OF ENGLISH SPECIALITIES IN FRANCE.

YOU can scarcely realise across the Channel, writes one of our French correspondents, the extent to which many well-known English specialities are imitated in France. Directly an article becomes popular, and its merits (coupled with those of the advertising expert) create a demand, an imitation of that article is sure to appear.

It is not so much the actual imitation of the bottle or wrapper of which one has to complain, although only unscrupulous persons would go so far as that; it is the appropriation of the name of the original inventor and textual copy of his address. Moreover, the British Government stamp is also imitated and affixed in the ordinary way over the cork. This precaution is naturally intended to guarantee the purchaser that the article is genuine. Unfortunately, here, as in England, the public do not realise that the "stamp implies no Government caution."

These counterfeit stamps are supplied to chemists at 1s. per doz (1½d. size). The engraving is well done, and the spurious stamp is an exact copy of the original.

Amongst the English specialities most in demand by

French customers are Henry's calcined magnesia. Steers opodeldoc (Newbery), Parrish's chemical food (Squire), alkaram, Morison's pills, &c.

Being called on last week by the traveller of the house in Paris which makes a speciality of imitating specialities, I was somewhat interested in seeing amongst his samples a bottle of Henry's magnesia. The traveller did not attempt to conceal the fact that the article was a counterfeit. The price he asked was 6f. (= 4s. 10d.) per doz. He coolly informed me that he had taken an order from a wholesale house the same morning for 300 bottles. In course of conversation, he mentioned that the magnesia was really of English manufacture, giving the name of the firm who supplied it. On examining carefully the label on the wrapper, and comparing it with an original one, I observed that the following words were omitted: "Trade-mark. Henry's calcined magnesia." I attempted to point out to the *commis voyageur* that his firm was acting most dishonestly towards Messrs. Henry, and unfairly with respect to myself and other honourable chemists, as we naturally cannot compete with our neighbours who sell a spurious article. I could not, however, convince him that he was doing an injustice no anyone.

"Parrish's chemical food, prepared by Squire," so says the label, is supplied by one of my neighbours, an Italian. I have not seen the preparation, but I was assured by an old assistant of mine, who afterwards went to live with this person, that he had a quantity of labels printed with the name and address of Squire, and that he was also in possession of a "seal," turned to imitate that used at 413 Oxford Street. It would be interesting to hear the opinion of some of your readers as to the best means to adopt in order to put a stop to this unfair system of trading. Would it not be well to lay the matter before the English ambassador in Paris, and invite him to use his influence with the French Government? The Minister of Commerce would probably be the person whose attention should be drawn to the subject; he would then, doubtless, refer the question to the School of Medicine.

The authorities at Somerset House ought to afford their support and assist specialists who may decide to check the abuse practised so publicly.

It would be a very simple matter for anyone who wished to defraud the British Government to buy up a supply of the imitation stamps referred to, and dispose of them at 50 per cent. less than the price of the genuine. The makers of these preparations, as well as the engravers, argue that French medicines are imitated in a similar way in London. I do not know if this statement is correct. I trust not, for the sake of the reputation of my own countrymen.

"TEETH PAINLESSLY EXTRACTED."

A VERY comforting and tempting announcement, truly, to many miserable sufferers, but one which is by no means always justified. Except with one agent, the pretension is, in a majority of cases, little better than a fraud. I have had a considerable experience at both ends of the forceps of the so-called painless methods of extraction, and perhaps my reminiscences may be useful.

Years ago, to begin *ab initio*, when a young junior with more spare cash than sense, I conceived it to be a grand *conservative* idea to submit my mouth at periodical intervals to the inspection and tender care of a dentist. From that time I date all my dental troubles. There was always some little spot which the man of forceps would discover, explore, excavate, and fill, until at last my mouth became like a piece of tenement property, with inmates troublesome and undesirable, many of whom had, after shorter or longer trouble, to be summarily evicted.

Cocaine and caloric fluids are by no means certain. One can produce insensibility of the gum with cocaine, but even if injected far into the tissues it fails. Having an extremely loose lower incisor, I applied cocaine in 20-per-cent. solution. This enabled me to cut with a lancet, and painlessly, far down into the gum all round the tooth—in fact, to the alveolar ridge. The tooth was now, of course, very loose, but any attempt to remove it was exceedingly painful. A grain

of cocaine citrate was pushed as far down to this ridge as possible, and injections made to the extreme end of the fang. After a minute or so the tooth was twisted out, a pull being very painful; but the operation was not performed without a sharp pain. It was a useful experiment since tried on two similar teeth in my own head, and I would not hesitate again to resort to the method. But few dentists would take all this trouble, nor use anything like the same quantity of obtundent for their patients. One can be very brave over other people's teeth. The usual plan is to inject a solution of cocaine on each side of the tooth, and then, after the proper interval, extract the offender. It is at best a painful operation.

Caloric fluids are applied on cotton wool, a saturated piece of the wool being held by finger and thumb to the neck of the tooth and gum. In many cases of front teeth and bicuspsids this proves a fair success, but it is unwise in the interests of strict veracity to take the word of patients in all cases. They are only too glad to be relieved of their pain, which is soon forgotten, and they at the time say they felt nothing, would not mind it in future, and so on; but when the time arrives for them to submit again to the operation, they hesitate and shrink no less than before. The sensation, with these single-fang teeth under the most favourable circumstances, is something like one would imagine to be produced by the forcible detachment of a pneumatic ball from a tender and delicate surface.

Nitrous-oxide gas is by far the best anæsthetic for extractions. I have inhaled it many times: have given it frequently, and would never hesitate to take it myself. But here, again, we are at the mercy of the operator. Give enough of the gas, and the operation is painless and not unpleasant; but now and then operators do not give enough. Then the sensation can only be described as diabolic. Experience again. You feel, say in the case of a lower molar, as if you were being thrust through the floor of the room, head, trunk, and limbs all in one indiscriminate mass; this is, of course, when the forceps are being applied. You then feel yourself hauled up again in the same manner, and finally, with your head swinging round and a buzzing in the ears, you find yourself expectorating sanguinary matter in the handsome receptacle kept for the purpose.

Just recently, after two or three weeks of tic and neuralgia, culminating in alveolar abscess, first of a central and then of a lateral incisor, I was persuaded by a brother dentist to try the "newest thing out," "far better than gas," "quite painless," "marvellous thing," "will knock gas into a cocked hat," and so on. The agent was ethyl chloride. This compound is prepared in glass tubes, one end of which is drawn to a fine curved or straight point and hermetically sealed. This fine point is snipped off, and the tube being held in the hand, a fine spray is projected on the parts to be anæsthetised—i.e., to the gums on each side of the tooth, the mucous membrane being carefully wiped prior to commencing. So far, good; the sensation was not bad—far better than ether spray ordinarily used. The application of the forceps caused no pain, but the removal of the tooth or teeth was just as painful and unpleasant as it always is with anything but "gas." There was a feeling as if all the processes of the mouth, teeth, and jaws were holding tight in one direction and the operator hauling in another, until something gave way with a snap (very disagreeable this), and away flew the tooth.

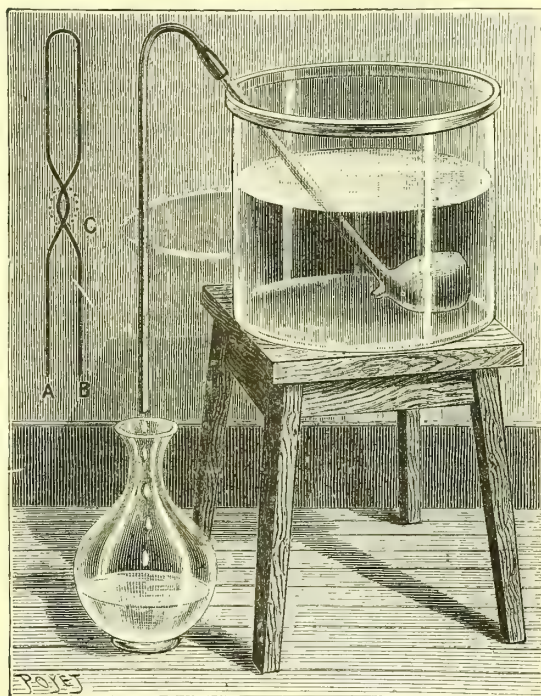
There is plenty of room for further experiment; the ideal anæsthetic has not yet been discovered. In the meantime, however, nitrous-oxide gas is first and the rest nowhere, and the opposition to it in many quarters is to me inexplicable.

AN ADVERTISEMENT reads:—"Wanted, a young man to be partly outdoor and partly behind the counter"; and we ask, "What will be the result when the door slams?"

MR. BENJAMIN DAY, of Rosario, to whose projected "London and River Plate Pharmaceutical Company" we referred a few months ago, is now in London on business of his company, and may be addressed 24 Montague Place, Russell Square, W.C. He reports that the company's shares have been freely taken up in Argentina, and that buildings for the use of the company are being erected at Rosario.

A SIMPLE WATER-FILTER.

THE filter shown in the accompanying illustration may be set in operation with a minimum of cost and trouble. The ingredients required for its preparation are a large-bowled clay pipe, an indiarubber tube, some charcoal, a plug of wadding, and a cork. The wadding should be put at the bottom of the pipe-bowl, which is then filled with small



pieces of charcoal, the interstices between the pieces being well plugged with charcoal powder. The cork is then used to close the mouth of the bowl and keep the charcoal in its place. Having affixed your indiarubber tube to the end of the pipe-stem, your apparatus is now in working order. Care should be taken, however, that the tail-piece of the indiarubber tube is at a lower level than the bowl of the pipe. By twisting a hairpin into the shape shown in the illustration and fastening the indiarubber tube through the opening C, you may cut off the flow of filtered water at your convenience.

SHE UNDERSTOOD CHILDREN.—Probably one of the most startlingly unanticipated replies on record was that of the "mother's help," a young lady versed in all present-day female attainments, who, in reply to the address, "I want a person of some experience in the nursery; do you know much about children?" cheerfully retorted, "Oh, dear, yes; I've dissected a baby."

ECHO ANSWERS, "WHEN?"—"When to be a pharmacist is equivalent to being considered by the community to be a learned man, an upright man, a man of unflinching integrity and unswerving honesty, then there will be no one to dispute our right or title to be called the profession of pharmacy." Professor Otto A. Wall recently said so in a valedictory address to the graduates of the St. Louis College of Pharmacy.

A CURIOUS case is reported from America. A negro child swallowed a hard piece of beef, with cartilage adherent. It stuck in the œsophagus, and attempts to remove it only resulted in fixing it more firmly a few inches above the cardiac orifice. For six days neither food nor water could enter the stomach. The child was then given a dose of artificial gastric juice, and in a few hours the piece of beef was partly rejected by vomiting and partly passed on into the stomach.

SUPPLEMENTS IN THE SUMMER NUMBER.

FORTY-TWO has been the mystic number lately. It has for many years been an important number in pharmacy, because the great organ of the trade has been published at "FORTY-TWO." But just lately all the newspapers and all the men in the street have been talking about FORTY-TWO. What have they referred to? Mr. Gladstone's majority? To some extent, perhaps, yes. But the great fact to which the newspapers and the men in the street were unconsciously pointing, and of which the recent elections were typical, was that FORTY-TWO was to be the number of the supplements inserted in the 1892 Summer Number of THE CHEMIST AND DRUGGIST. They are a very interesting lot. May we ask subscribers to give them the attention they deserve?

Messrs. Armbrucht, Nelson & Co., in a circular on their coca wine, repeat some of the illustrations which were found to be so popular in our last DIARY, and from which may be gathered how successful this valuable preparation has been.

Messrs. Armour & Co., the great hog-killing Chicago firm, claim that their enormous opportunities of obtaining pepsin and other digestive ferments ensures that pre-eminence in this manufacture which they consider belongs to them.

A number of remarkable testimonials of Benger's Food are given in the supplement inserted by F. B. Benger & Co. (Limited), of Manchester.

Messrs. Blondeau & Cie. insert a circular of unusual interest. It gives an account of their factory, with a large number of photographic reproductions, showing the various departments. This description of a business which has grown to a very large one in but a few years will be read with considerable interest. Appended to this are beautifully produced representations of the elegant style in which Messrs. Blondeau & Cie. present their goods to the public.

Bovril (Limited) is another of the great companies which are adopting a system of protecting retail prices. The company announce a special line of Bovril for invalids, to be supplied only to chemists and druggists, and to those only in that trade who will undertake to sell it at marked prices.

Mr. Charles Bromley, of Liverpool, in a cleverly-drawn article, gives full details of the non-cutting agreement which he offers to make with chemists who will stock his gout and rheumatic pills. Note the cheque.

Brunner, Mond & Co. (Limited) submit to the trade very forcible arguments in favour of the use of bicarbonate of soda instead of whiting for the production of carbonic-acid gas in the manufacture of aerated waters.

Mr. James Burrough, the distiller, of Chelsea, directs attention to his manufactures of S.V.R., S.V.M., and to his wines.

Messrs. Burroughs, Wellcome & Co. insert an illustrated trade price-list of their very numerous pharmaceutical manufactures. This price-list, which may be said to comprehend the whole range of modern elegant pharmacy, should be carefully preserved, as it will often be found to contain particulars of medicines called for by the medical profession. Messrs. Burroughs, Wellcome & Co. have bound their list in extremely attractive covers, giving perfectly accurate representations of their laboratories at Dartford and of their City offices.

A Lanoline showcard is inserted by Messrs. Burroughs, Wellcome & Co., which, besides giving representations of the form in which the Lanoline preparations are put up, bears a most artistic design suggesting the popularity of this product all round the world.

Messrs. Cantrell & Cochrane, of Dublin and Belfast, publish some details of the successes which their productions have attained, and especially of their aromatic ginger-ale, which they not unjustly claim to be a beverage for the world.

Messrs. Carter & Wright, of Bristol, represent the style in which they put up their concentrated syrups, and they give a full price-list of their many concentrated essences for

aerated waters. A testimonial to their lemon-syrup from the Bishop of Gloucester and Bristol is added.

The Chemists' Aerated and Mineral Waters Association (Limited) give their price-list, and also direct attention to the advantages which they claim to offer as a co-operative manufacturing concern.

The Chemists' Association (Limited), which, as we have previously stated, has taken over the business of Messrs. Thompson, Walters, Hole & Co., insert their prospectus in our foreign issue only, they having reserved a certain proportion of shares for allotment to chemists in the colonies.

Messrs. George Curling & Co. give a price-list of the articles they prepare for exportation. This appears in our foreign edition only.

A very interesting supplement is that inserted by Messrs. Evans, Lescher & Webb, who take the opportunity, while announcing the addition of another building to their already extensive warehouse in Bartholomew Close, of presenting a brief history of their firm, and to this they have attached excellent portraits of the partners.

A. D. Fleming & Co. (Limited) publish an amusing circular in regard to their patent solidified oil. This oil, it appears, has a multitude of virtues and only one defect, which is that "it will not fry fish."

The Godes-berger Company bring forward a large number of flattering testimonials to the purity and pleasantness of their Godes-berger water, and make prominent the fact that they supply it to Queen Victoria.

Messrs. Harrington Bros., of Cork, publish a list of the chemicals which they manufacture, and which they claim as specialities.

Messrs. Hockin, Wilson & Co. give particulars of their numerous chemists' specialities, and call attention to some very useful counter-fooleries, including a puff-case and a perfume-stand, designed to promote trade.

Messrs. Julius Hülsen & Co., of Newcastle-on-Tyne, direct prominent attention to solidified sulphuric acid, which they sell under the name of super-sulphate of soda, and which they recommend as an especially convenient way of exporting vitriol.

A useful price list with coloured illustrations of the very attractive pleated-paper bottle-caps, known as "Hunt's," is inserted by Mansell, Hunt, Gatty & Co. (Limited).

The Jobannis Co. (Limited) give a price-list of their famous aerated water which they entitle the "King of Natural Table-waters," and they show by a list of their special appointments the popularity the article has obtained.

Frederick King & Co. (Limited), Belfast and London, the manufacturers of Edwards's desiccated soup, now give particulars of their Gravina, and good reasons "why we should use it."

Under the title of "Practical Hints for the Dispensing Chemist," one of the supplements gives useful suggestions in regard to the employment of Lanoline in pharmacy and in the preparation of toilet articles. An excellent typical formula for a Lanoline ointment will be found in this circular.

Messrs. Leath & Ross contribute in their supplement very full particulars of the homœopathic-medicine trade, and they show illustrations of their cases, give a concise list of the uses of the principal medicines, and an alphabetical list of the more usual complaints and the medicines suitable for these.

Loft's Patent Check-till Company (Limited), of Cambridge, give illustrations of their popular check-tills, and of their latest improved patent bottle washing and rinsing machine.

The largest supplement we have ever had the honour of distributing to the trade is that published with this number by Messrs. May, Roberts & Co. It is a fully illustrated and complete net price-list, revised to the latest day, of druggists' sundries and proprietary medicines. We hope Messrs. May, Roberts & Co. will find their vigorous enterprise well rewarded.

Messrs. W. Meadowcroft & Son, of Blackburn and Glasgow, give useful particulars of their aerated water machinery and of their concentrated essences for use in the manufacture of ginger, lemon, and other aerated beverages.

Messrs. Newball & Mason, of Nottingham, keep to the front with their now very numerous preparations for the production of temperance beverages, besides their "Mason's Extract of Herbs"; and give a long list of wine essences and botanic extracts.

Messrs. Osborne, Bauer & Cheeseman, of Golden Square, directed attention to their many toilet specialities, some of which are very happily named.

A very strikingly printed circular is that inserted by Mr. James Pascall, of Blackfriars Road, advertising his "Golden Maltex" and other confectionery products.

Messrs. A. & F. Pears, besides giving the trade terms for their famous soap, present a collection of four book-markers to every subscriber.

The Phoenix Hardware Company, of Liverpool, bring before the trade an illustration and description of their alarm cash-till, of which they say half a million are now in use in the United States.

Price's Patent Candle Co. (Limited) very justifiably keep before the trade the especial purity of their glycerine, guaranteed free from arsenic and all other impurities.

Mr. J. L. Rosenkranz, of Frankfort-on-Main, sends a circular with illustrations of his manufacture of clinical thermometers, dispensing-bottles, saccharometers, and numerous surgical inventions. This appears in our foreign edition only.

Messrs. F. Rosenthal & Co. bring before chemists details of their proposal to contribute a handsome sum to the Grace Darling National Memorial by means of the sale of their "Grace Darling Starch." This is their invitation to the trade to co-operate.

Messrs. J. F. Shew & Co., the manufacturers of photographic apparatus, provide a well-illustrated list of novelties in cameras, hand-cameras, and other adjuncts of the photographic business. There is a growing number of chemists to whom this circular should be useful.

Messrs. Sozio & Andrioli again give their very useful report of the flower and essential-oil productions of the South of France. There are many good hints to buyers in this supplement.

A very charmingly coloured lithographed circular is inserted by Messrs. Spottiswoode & Co. in order to show advertising firms what they can do in the way of fine-art publications.

"Doggie" chemists will certainly be interested in the attractive illustrations which are given in the supplement inserted by Spratts Patent (Limited).

Messrs. William R. Warner & Co., of Philadelphia, give a price-list of their sugar-coated pills, and illustrations of the vases in which they send them out through their agents, Messrs. Newbery & Sons.



The following applications for Patents have been registered at the Patent office.

SPECIFICATIONS PUBLISHED.

Copies of the following may be obtained from the Patent Office, Southampton Buildings, Chancery Lane, E.C., for the prices mentioned, and 1d. extra for postage if required.

Acetic Acid.—12,660.—July 9, 1892.—C. Lowe. Derivatives.

Bath Glove.—9,784.—May 23, 1892.—W. E. Playfair and H. E. Warren. A loofah bath and friction glove.

Blight-killer.—12,088.—June 29, 1892.—J. Bond and C. Ballinger.

Cattle-cakes, &c.—9,667.—May 21, 1892.—J. Bibby. Composite cakes for cattle-feeding and the like.

Cattle-medicines.—9,328.—May 17, 1892.—A. J. Boulton.

Chemicals.—10,326.—May 31, 1892.—C. Négrier. Sulphate of iron and sulphate of copper.—10,450.—June 1, 1892.—E. J. Barbier. Neutral sulphate of soda and sulphuric acid from bisulphate of soda.—11,889.—June 25, 1892.—P. Römer. Production of potassium carbonate from potassium sulphate.—12,275.—July 2, 1892.—G. W. Sharp. Caustic soda or potash.—12,294.—July 2, 1892.—H. W. Wallis. Chlorine.

Corn, &c., Protector.—12,240.—July 1, 1892.—R. Glover.

Dextrin.—12,586.—July 8, 1892.—T. Bayley.

Disinfectant.—12,433.—July 5, 1892.—E. O. Storr. New medical compound for disinfecting and fumigating purposes.

Dispensing-apparatus.—12,038.—June 28, 1892.—W. M. Fowler.

Feeding bottles.—9,462.—May 20, 1892.—G. I. Thomson.

Feeding-bottle Requisites.—10,181.—May 28, 1892.—H. Jack, trading as M. Bailey & Co. Serrated or corrugated feeding-bottle teat-cleaner.—11,689.—June 22, 1892.—A. M. Small. Babies' teats or nipples for use with babies' bottles or without bottles, also in the means of supply of food to babies.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BICE—WILLCOCKS.—On July 19, at the parish church, St. Austell, by the Rev. A. P. Willway, James Bice, chemist and druggist, of St. Austell, to Jessie, only daughter of Phillip Willcocks, Pentewan, St. Austell.

CLEELAND—MCALLA.—On July 14, at Westbourne Presbyterian Church, Belfast, by the Rev. J. W. Gibson, M.A., Robert Henry Cleeland, chemist and druggist, eldest son of R. Cleeland, M.A., Belfast, to Mary, youngest daughter of John McCalla, Ballywoolen, Killyleagh, co. Down.

DEATHS.

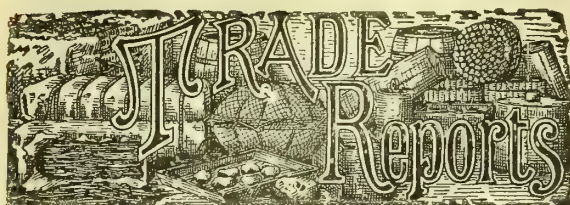
BALKWILL.—On July 11, very suddenly, at 14 Old Cavendish Street, Cavendish Square, London, William Edward Balkwill, M.D., eldest son of the late William Hancock Balkwill, chemist, of Kingsbridge, Devon. Aged 43.

BROWN.—The death is announced of Mr. Lewis Brown, who was for over forty-five years connected with the firm of Messrs. Crafton & Sons, chemists, High Street, Croydon. Mr. Brown died last week, at the age of 82 years.

EVANS.—At Biggleswade, on Sunday, July 24, John Evans, pharmaceutical chemist, senior partner in the firm of Messrs. Evans & Son, chemists and druggists, Biggleswade. The deceased gentleman was taken ill suddenly at dinner, death resulting in a few minutes. Mr. Evans was one of the oldest and most respected inhabitants of the town.

MASON.—On July 19, at Johnstone, N.B., Robert Mason, chemist and druggist, suddenly.

TATE.—The death took place, somewhat unexpectedly, on July 22, of Mr. A. Norman Tate, the well-known analytical chemist, of Liverpool. The deceased was born at Wells, Somerset, on February 24, 1837, and after his scholastic education he became a pupil of Dr. Sheridan Muspratt. His pupillage over, he became an assistant chemist to Messrs. Hutchinson & Co., of Widnes, but he had only held this position a few months when he was promoted to be chief chemist. After a few years of this work Mr. Tate commenced practice in Liverpool as an analytical and consulting chemist, giving special attention to the engineering side of his profession, and in this capacity he made for himself a high reputation. As a teacher and writer he also distinguished himself, and his figure was familiar in pharmaceutical circles. He was an authority on petroleum, and published a work entitled "Petroleum and its Products," of which French and German translations have appeared.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., July 27.

The London Markets.

London. Almost everybody in the drug-trade complains of the quietness of business, although the number of those who profess increasing hopefulness of a good time coming, and to come shortly, is on the increase. There is no denying, however, that at present trade is abnormally slack. In drugs the article which has attracted the principal share of attention is tonquin beans, which have been moving upward with considerable rapidity. New York and Liverpool seem to have given this drug a start, the cause of the advance being the alleged capture of the bulk of the season's crop while on its way from Ciudad Bolivar to the coast by one of the two parties that have been fighting for the mastery in Venezuela. This report may be true or not, but at any rate it has provisionally served the ends of the bull operators. Tamarinds, which were abnormally low in price, have also recovered slightly; gum kino is scarce and high in price, and higher prices are also asked for ergot of rye, of which the new crop is now almost in sight. Opium has received more attention, and cinchona, of which very little was offered at auction, sold very well. There has been a stiffish rise in Japanese peppermint oil, while menthol and HGH peppermint are also firm. Damiana-leaves are reported dearer from America, and it is said that there is more business doing in spermaceti. Saffron has recovered somewhat, but new chamomiles are coming down in price, and insect-flowers are also rather weaker. Otto of rose keeps firm, but the price has not yet been fixed. French essential oils of lavender, thyme, and spike are rising. Mexican sarsaparilla is advancing in America, but Honduras has sold cheaper here privately. Oil of star-anise is also somewhat lower.

In fine chemicals, changes are few and unimportant. Camphor keeps steady, and quinine is utterly neglected, though the tendency inclines, perhaps, in favour of buyers. Cream of tartar and chlorate of potash are the turn easier; tartaric and citric acids, to all appearance, absolutely devoid of backbone. In products allied to the drug and chemical business the tendency is mostly downwards, the only exceptions being turmeric, which is slightly dearer, and East Indian indigo, in which there is a lively boom. Potato spirit is coming down like a stick; white pepper, tapioca, nutmegs, cloves, and ginger are easier; shellac irregular, but tending lower; and gambier cheaper.

In fixed oils business is very quiet, and there are no changes of importance to record in this department. The Bank rate remains at 2 per cent.; bar silver is only worth 39½d. per oz. to day; and Mexican dollars 38½d. The foreign exchanges are going from bad to worse: Bombay is 1s. 2½d.; Calcutta, 1s. 2½d.; Hong-Kong, 2s. 9½d.; and Shanghai, 3s. 10½d.

Liverpool. In the Liverpool market, our correspondent there tells us, unusual quietude prevails. Balsam copaiba still remains firm, in spite of arrivals; castor oil is lower and depressed; quillaria keeps coming down; canary-seed is now firmly held, large sales having been made

this week; tonquin beans have had a good spurt; and Chilian honey and African ginger are firmly held. Calabar beans are still selling at very low figures.

America. Our correspondent in New York, writing under date of July 16, reports that the drug market, so far as export business is concerned, has been quite dead for some time, and that the country demand is now also becoming exceedingly limited. In balsam copaiba the market is very quiet, the only kind at all in demand being Central American, at 34 to 36 cents. Peru balsam is also sluggish of sale, at \$1.10 to \$1.20 per lb. Bromide of potassium is held at 20 cents for foreign, and from 21 to 22 cents for domestic; the position of the article remains *in statu quo*. Chinese cantharides show greater firmness, and several lots have been withdrawn by the holders, who have discovered the stock to be much smaller than was supposed. Cubebs are rather neglected, excepting for hand-to-mouth sale in the country. Ergot of rye is weak and neglected, at 38 to 40 cents for German; the quotations for Spanish are quite nominal. Camphor and gamboge are firmly held and inquired for; but all other gums are neglected. Guarana has been reduced to \$1.25 and \$1.30 per lb., but this reduction in price has not improved the demand in the least. Damiana-leaves are scarce and dearer, and pilocarpine is also higher, on account of the scarcity of raw material. Mexican sarsaparilla has advanced to 12 or 12½ cents per lb., and jalap also keeps steady at the recent improvement. Ipecacuanha is being offered "to arrive" at \$1.65 per lb. The demand for spermaceti shows no improvement, and the market remains dull and nominal.

Terminal Trading in Pepper in Amsterdam.

A terminal market for pepper has been established in Amsterdam under the auspices of the Amsterdam Bank of Liquidation. Only contracts concluded by brokers approved of by the bank are admitted. Three forms of contract are admissible—viz., the Lampong contract (in fulfilment of which all other East Indian varieties, provided they are equal to the standard in quality, may be tendered), the Singapore contract, and the white-pepper contract, Singapore Basis, in fulfilment of which usual good-quality Penang pepper may also be tendered at a reduction of 5 per cent. upon the contract price. The contract-units are: Lampong contract, 200 bales, or net 10 tons; Singapore and white-pepper contracts, 100 bales, or net 6 tons.

ACID (CITRIC).—Dull, and tending easier. The spot price to-day is from 1s. 4¾d. to 1s. 5d. per lb., according to brand.

ACID (TARTARIC).—Very dull at 11½d. to 12d. per lb. on the spot, according to brand.

ALCOHOL.—German potato spirit is very much lower, and may to-day be had at 8½d. per proof gallon net, c.i.f. terms, for quantities. This price is still more than ½d. above the lowest point known in the article.

ANISE.—The Russian crop of anise, as we have had occasion to point out before, is expected to be very small this season. The stocks of *Star-anise* in China are said to be very small and of exceedingly poor quality.

ANTIMONY.—The market for crude Japanese remains firm, and business is reported on the spot at 27½ per ton.

ARSENIC.—Prices are rather easier. Best white powder is quoted at 12½ to 12½ 5s. per ton, landed terms.

BALSAM (COPAIBA).—The market is steady, but very quiet. Good bright *Bahia* balsam is worth 1s. 7d. to 1s. 7½d. per lb.; ordinary ditto, 1s. 4d. to 1s. 5d. per lb. Fair to good bright thick *Maranhão* and *Pará* may be had from 1s. 7d. to 1s. 10d. per lb.

BALSAM (TOLU).—Very slow of sale at 1s. 2d. per lb. for good quality.

BLEACHING-POWDER keeps very firm, at 7½ 10s. per ton, either f.o.b. on the Tyne, or on rail at the works in Lancashire.

BORAX.—A quiet market. Powder is quoted at 30s., while crystals may be had at 29s. per cwt.

CALABAR BEANS.—Sales are reported from Liverpool at 2d. per lb.

CAMPHOR (REFINED).—The German and French refiners are firm; 1s. 5½d. is the price for Grossmann's bells, and French refined camphor stands at the same figure.

CARAWAY-SEED.—The new crop of Dutch seed has begun to arrive upon the markets. It is not likely to be a large one, however, as the acreage under caraway has been much reduced this season. At auction to-day 140 bags Dutch seed, rather small, but of fair quality, sold at 20s. per cwt.

CARDAMOMS.—The following figures show the exports of cardamoms from Ceylon between January 1 and July 4:—1892, 195,018 lbs.; 1891, 166,820 lbs.; 1890, 184,236 lbs.; 1889, 157,804 lbs.

CASTOR-SEED.—One of the principal features of the market this week has been the sale by public auction on Tuesday of about 1,800 bags of East Indian castor-seed. The whole of this was sold to seed-crushers who paid 8l. 2s. 6d. per ton for it. This, we believe, is the first occasion upon which castor-seed has been sent over from India in such a large quantity for crushing in this country.

CHAMOMILES.—Belgian chamomiles are distinctly cheaper in price. Sales have been made of fair white to small flowers at 5l. 15s., and that price must still be conceded for any available parcels; fair to small and somewhat dark flowers of the new crop are offering, however, at from 103s. to 105s. for shipment in about a fortnight.

CINCHONA.—The periodical auctions on Tuesday were exceedingly light. Only seven sales had been declared, and one of this number was at the last moment withdrawn, leaving less than one-half an average quantity to be competed for. The catalogues included:—

	Packages	Packages	
Ceylon cinchona	564 of which	548	were sold
East Indian cinchona ..	383	340	"
South American cinchona ..	295	175	"
	1,242	1,063	

The assortment of bark was a fairly good one, with, perhaps a rather larger proportion of *Officinalis* and *Ledger* than ordinarily. Competition was not very keen, and the unit value shows no change—1½d. per lb. being about the average value. Most of the buyers called the prices "firm." The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	92,219
" Frankfort o/M. and Stuttgart works ..	42,116
" Brunswick works	37,963
" American and Italian works	23,202
" Paris factory	20,319
" Auerbach factory	9,610
Messrs. Howards & Sons	8,720
Sundry druggists	9,840
Total quantity sold	173,989
Bought in or withdrawn	36,280
Total quantity offered	210,269

It should be well understood that the quantity of bark bought gives no indication of the quinine value represented by it; some firms who buy large quantities of bark often take the poorer lots, while their competitors, who may buy less bulk, secure parcels of higher test.

The following are the prices paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary dull and dark to good quilly chips, 1½d. to 2½d.; fair quilly twigs and chips, 2d.; fair, partly bold, but dusty root, 1½d. to 2½d. per lb. Grey varieties: Fair to good strong quilly stem and branch chips, 3½d. to 4d. (for a good parcel a bid of 5½d. per lb. was refused); fair root, 4½d. per lb. Yellow stem and branch chips, fair to good bright quilly, 4½d. to 6½d. per lb. Hybrid chips, 3½d. per lb. *Renewed:* Red chips, ordinary thin and dull to fine bright stout and quilly stem and branch chips, 2½d. to 4d.; fair to good bright quilly grey chips, 4½d. to 6d. per lb.

EAST INDIAN CINCHONA.—*Original.*—Red varieties: Ordinary small to fair bright quilly stem and branch chips, 1½d. to 3½d. per lb. Grey varieties: Ordinary to fair stem and branch chips, 2d. to 3½d.; dull to good root, 2½d. to 4½d. per lb. Yellow varieties: Small to fair stem and branch

chips, 2½d. to 3½d. per lb.; root, 4½d. per lb. *Renewed.*—Red stem and branch chips, 2½d. to 3d.; grey ditto, 4½d. to 6d. per lb.

SOUTH AMERICAN CINCHONA.—Fair partly broken cultivated Bolivian *Calisaya* quill, 5d. to 6½d. per lb.; damaged ditto, 4½d. to 6d. per lb.

The following figures represent the exports of cinchona from Java during the eleven months ending on May 31:—

	1891-92	1890-91	1889-90	1888-89	1887-88
	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.
Government plan- tations	578,845	491,325	475,699	723,491	575,986
Private planta- tions	6,590,117	6,032,495	4,221,042	3,124,354	2,563,210
Total	7,168,962	6,523,820	4,696,741	3,847,845	3,139,196

From Ceylon, the exports in the periods between January 1 and July 4 have been:—1892, 3,175,137 lbs.; 1891, 2,696,550 lbs.; 1890, 4,229,329 lbs.; 1889, 4,933,965 lbs.

CLOVES are cheaper, and of 200 bales Zanzibar offered to-day, part sold at 2½d. to 2¾d. per lb. for ordinary to fair quality.

COCA-LEAVES.—The market is steady, and bright green *Truxillo* are not being offered at all. Good strong *Huanoco* leaves are held for 1s. 6d. per lb., which is above the present market value. A bid was recently made of 1s. for 5,000 lbs., but this was rejected.

COCHINEAL.—The market is quiet but steady, with small sales of common to fair black Teneriffe at 10d. to 11d. per lb. For fine silver, 1s. per lb., and for ditto black and grey-black, 1s. 3d. per lb., is wanted.

COPPER (SULPHATE) is still held at 15l. for good brands in London, and from 15l. 5s. to 15l. 10s. on the spot in Liverpool. For forward delivery 15l. 10s. is asked in Liverpool.

CREAM OF TARTAR—Very dull of sale at 84s. 6d. for best white French crystals, and 86s. 6d. per cwt. for powder.

CUBEBS.—The shipments of cubebs from Java are heavy. In the month of May alone they were 409 piculs, most of which went to Singapore, and from July 1 to May 31, they have been: In 1891-92, 1,724 piculs; in 1890-91, 1,227 piculs; in 1889-90, 1,148 piculs; in 1888-89, 959 piculs.

DAMIANA.—The price in New York, owing to great scarcity, has been raised to 1s. per lb., c.i.f. terms.

ERGOT OF RYE.—There have been some arrivals from Spain, which are believed to be the first parcels of the new crop. Good German and Russian ergot (old crop) is now offering at 2s. 2d. to 2s. 3d. per lb., c.i.f. terms, but sellers cannot succeed in placing contracts at that figure. For new Spanish ergot from 2s. 3d. to 2s. 4d. per lb. is asked.

GALLS—Holders of *China* galls are asking more money, 50s. per cwt. being their present price on the spot.

GAMBIER is again lower, sales of 250 tons being reported for shipment at 17s. 6d. per cwt. for July-August and August-September.

GINGER.—*Cochin* ginger remains dull of sale, a few lots ordinary small rough and ends sold at 43s. per cwt. at auction to-day. *Jamaica*, sluggish, and saleable only at lower rates. A few lots sold at auction to-day at 48s. 6d. for common lean to 59s. 6d. for medium dull washed.

GUM KINO is exceedingly scarce. We understand the sales have been made at 80s. and at 85s. per cwt. for fair quality, and that the principal holders require 95s. per cwt. now.

GUM OLIBANUM.—At last Friday's auctions only about 50 packages, being less than 8 per cent. of the total quantity offered, sold at lower rates, reddish and pale drop at 23s. 6d. to 24s., and garblings at from 10s. to 14s. per cwt., according to quality.

HONEY.—*Chilian* is arriving freely.

INDIGO.—The public sales of Central American indigo, which were held on Wednesday last, reflected the advance established at the recent East Indian auctions. Of 250 serons offered, 150 sold at an advance of from 2d. to 3d. per lb. on good, and 4d. to 6d. per lb. on ordinary qualities. Common to good *Cortes* realised from 3s. 1d. to 4s.; common to ordinary *Sobres* from 3s. 3d. to 4s. 3d. per lb. *Flores* were not offered. Ordinary qualities were rather scarce. The market for *East Indian* indigo is very active, and business is reported to have taken place privately at an advance upon the last auction rates. The latest mail news from India (dated July 5) is contradictory, but upon the whole unfavourable. In the Behar district the crop will be at least three weeks late, and the prospects are very indifferent. In the North-West the crop outlook is exceedingly poor, and rain is badly needed. The produce which has been turned out in Bengal thus far is of indifferent quality. The statistical position of Indigo in London is said to be favourable, the stock now held here being the smallest on record. News with regard to the Madras crop is that it is going to be a very large one.

ISINGLASS.—At last Friday's public auctions a supply of 556 packages came up for sale. Although this quantity was barely half of that offered at the previous sales, it was still much in excess of the demand, and holders who wished to sell had mostly to accept lower prices, although Bombay cake was disposed of readily at 1d. per lb. advance. The following are the present values: *Pará*—common dark to fair pale lump, 1s. 10d. to 2s. 8d.; low thin to good pale tongue, 1s. 2d. to 4s. 4d. per lb. *Maranham*—common to good ordinary red lump, 1s. 10d. to 2s. 5d.; ordinary to medium tongue, 1s. 11d. to 2s. 6d.; ordinary dark to fair yellow and red *West Indian*, 1s. 11d. to 2s. 3d. per lb. *Saigon*—good medium to fine stout yellowish leaf, 3s. 10d. to 4s. 4d. per lb. *Penang*—common small to fine stout leaf, 1s. 10d. to 4s. 4d.; ordinary red to good pale tongue, 1s. 9d. to 3s. 7d. per lb. *Bombay* and *Kurachee*—skinny to medium yellow tongue, 8d. to 2s. 3d.; ordinary red and dark to good stout leaf, 1s. 3d. to 3s.; ordinary to fine bright heavy bold cake, 6d. to 1s. 7d.; low to small *Manila* kind, 4d. to 7d. per lb.

JALAP.—For good sound Vera Cruz root offers of 1s. 4d. per lb. have been rejected. The owner will not sell under 1s. 6d. per lb.

LIME-JUICE.—The market is very firm. Fair quality Jamaica is held for 1s. 10½d. per gallon.

MORPHIA.—There is no alteration in the price of this article. Powder is at present held at 3s. 1d. per oz. for *hydrochlorate*.

OILS (ESSENTIAL).—It is stated (upon American authority) that the total output of HGH *Peppermint oil* has been 2,372 cases in 1890, 1,270 in 1891, and 1,150 cases in 1892. The average annual consumption of this oil is said to be about 1,500 cases. In London HGH oil is still obtainable at 13s. 4½d. per lb., but the tone of the market is decidedly firmer. *Menthol* is also dearer, and held for 9s. 9d. to 10s. per lb. for good to fine white crystals. Business has been done at 9s. 6d., but it is doubtful whether that price would now be taken. The price of the new *Otto of rose* has not yet been fixed, but meanwhile the market remains exceedingly firm, and for any parcels now purchased an advance of from 5s. to 6s. per oz. from the lowest point must be paid. From the South of France we hear that oils of *Lavender*, *Thyme*, and *Spike* will be very scarce this season. It is feared, in fact, that some of the contractors will not be able to keep their engagements. Oil of *Bergamot* is slightly firmer in Italy. Oil of *Lemongrass* is dull of sale, at 1½d. per oz., and *Citronella* is also neglected at 11d. per lb., c.i.f. terms.

OPIUM.—London has exhibited a very much better tone this week. Limits are generally higher, and a number of parcels have been taken out of the market. This change has chiefly been brought about in consequence of the more favourable news from Persia and China. Both the Persian and the Turkish crops, it is said now, have been over-estimated. Our quotations are:—Good to fine Persian, 9s. 6d. to 10s.; for soft shipping (this has been least touched by the improved position), 8s. 6½d. to 9s.; fine druggists', 6s. 6d. to 7s.; second druggists', 6s. 3d. to 6s. 6d. per lb. The particular business this week has been

in ordinary qualities ranging between 6s. and 7s. per lb. Our correspondent writes from Smyrna, under date of July 16:—"Very little business has been done this month; the whole of it does not amount to more than forty cases tale quale at a reduction of about 2d. per lb. upon the June prices. The new opium is now beginning to arrive in quantity—the figures up to date being 567 baskets, against 634 last year. Notwithstanding the present very low opium prices, consumers are still refusing to touch the drug."

PATCHOULY.—Another arrival of fifteen bags West African patchouly-leaves has recently come to hand from Akassa per *Angola*.

PEPPER.—Dull and again lower for white. At auction to-day good *black* Singapore sold at 3d.; good to fine *white* ditto at 4½d. to 5d.; and fair *white* Penang at 3½d. per lb.

POPPYHEADS.—This year's crop has been rather small both on the Continent and here. Large Belgian poppyheads have been sold at 12s. 6d. to 13s., and medium-sized ditto at 9s. per 1,000.

POTASH SALTS.—*Chlorate* is rather easier, and may be had at 6½d. per lb. f.o.b. Liverpool, for delivery from now till the end of the year, or at 6¾d. per lb. for immediate delivery; *binowalate* is held for 4½d. to 4¾d. per lb. for crystals, and 4½d. to 5½d. per lb. for powder; neutral *ovalate*, 4½d. to 4¾d. per lb.; *permanganate* in small crystals at 62s. 6d. to 65s., in large ditto at 67s. 6d. to 70s. per lb.; red *prussiate* may be had at 1s. 6d. per lb., and yellow English at 10½d. to 10¾d. per lb. Refined *saltpetre* is quoted at 20s. 9d. to 21s. 9d. for British, and 20s. 6d. to 21s. 3d. for German; *bichromate*, 4½d. per lb.

QUASSIA-WOOD.—Dull and stagnant market; 4l. 10s. to 4l. 15s. for new Jamaica logs.

QUICKSILVER.—The importers' price remains 7l. 2s. 6d.; while second-hand sellers are offering at 6l. 18s. per bottle.

QUILLAIA is still arriving in quantity, and prices continue to come down.

QUININE.—The last business reported consisted of about 15,000 oz. of secondhand German bulk quinine at 8½d. to 8¾d. per oz. The manufacturers now quote as follows:—Howards & Sons, 1s. 1d. to 1s. 2d. in bulk, 1s. 2d. to 1s. 3d. per oz. in vials; *Whiffen*, 1s. 0½d. in bulk, 1s. 2d. per oz. in vials; *Milen*, 11d. in bulk, 1s. 1d. in vials; *Zimmer & Jobst*, 11d.; and *Mannheim, Auerbach*, and *Brunswick*, 10½d. in bulk. *Pelletier's* quinine, in 1 oz. vials is held for 1s. 7d. per oz.

ROSE FLOWERS.—The crop both in Belgium and Holland is plentiful, but the quality is reported to be very indifferent. Sales have been made already, according to quality, at from 2s. 1d. to 3s. per lb.

SAFFRON.—There has recently been a very heavy fall in this article, and best *Valencia* came down as low as 20s. 10d. f.o.b.; since then, however, there has been a slight recovery, and we close at 22s., f.o.b., for this quality.

SARSAPARILLA.—According to advices from New York Mexican sarsaparilla is very firmly held there. A small parcel of 10 bales arrived recently, but was almost immediately sold. There are orders for over 100 bales in the market, which could not be filled for want of supply. *Honduras* sarsaparilla is lower in London, having sold privately recently at 1s. 4d. per lb. for "Crown" brand.

SEEDLAC.—Thirteen packages clean bold red *Madras* sold at auction at 87s. 6d. per cwt.

SHELLAC.—The market, both on the spot and for speculation, opened quietly, but with a steady feeling, this week. Eight hundred and ninety-six cases were offered at auction on Tuesday. The market was languid, and, with some difficulty, 581 cases sold at irregular rates, *Second orange* being about 1s. per cwt. below the highest private rates of the week, while *Garnet* lac showed no change. The following prices were paid:—*Second orange*: Unworked, good to fine pale, slightly out of condition, 83s. to 85s.; ditto, cakey and livery to good bright flat, 75s. to 79s.; shivered livery, worked, 77s. to 78s. per cwt. *Garnet*: Rather curly and cakey unworked AC, 72s. per cwt. *Button* lac: Resinous block, third to first, unworked, 52s. to 76s. per cwt.

SODA SALTS.—*Nitrate* keeps fairly steady at 8s. 7½d. to 9s. per cwt., according to quality. *Soda Crystals* are worth 70s.

per ton landed here, or 67s. 6d. ex ship. The London makers ask from 67s. 6d., less 2½ per cent., and on the Tyne the price is 60s. f.o.b. For *Salicylate* in powder from 4s. 11d. to 3d., and in crystals from 6s. 9d. to 7s. 1d. per lb. is 5s. asked. *Bicarbonate* in kegs is worth 7l. 5s. per ton ex warehouse, or from 6l. 5s. to 6l. 15s. f.o.b. Liverpool, according to packing. *Bichromate of Soda* is held for 3¼d. per lb. *Caustic Soda*, 70-per-cent. is dull at 10l. 10s. on the spot, and 10l. 5s. f.o.b. Liverpool or Tyne; 60-per-cent. is quoted 9l. 2s. 6d. in Liverpool, and 76-77-per-cent., 11l. 10s. f.o.b. on the Tyne.

SPERMACELE.—The market is reported rather better, with a fair amount of business among the candle-makers; 1s. 5d. per lb. is now asked for good refined.

SULPHUR.—Foreign flowers are worth 8s., roll 7s. per cwt., best thirds being offered at 93s. to 94s. c.i.f. terms. On the Tyne the quotation is 97s. 6d., f.o.b.

TAMARINDS.—There has been a further advance in new Barbadoes tamarinds, which were sold privately this week at 10s. 6d. per cwt. against 10s. per cwt. last week.

TONQUIN BEANS.—There has been something like a run upon this article during the last few days. It set in in Liverpool about a week ago, when speculators commenced buying up all the cheap *Pará* beans they could find. About 50 cases changed hands within a few days at rising prices—viz., from 1s. 4d. to 1s. 8d. for common foxy, and 1s. 9d. to 2s. 6d. for fair black to good frosted. The market closes with much higher prices, all the available lots in importers' hands having been cleared. New York also quotes higher rates; foxy *Pará* beans are held there at 1s. 10d. to 2s.; fair black and good frosted at 2s. 6d. to 3s. 6d.; while for fine genuine *Angostura* beans, 8s. c.i.f., and for mixed qualities 7s. is asked. Reports have been received to the effect that the new crop of Tonquin beans will not exceed 60,000 lbs., which is very much below the average. Of this quantity 15,000 lbs. have arrived in New York, and are held there at \$2.50 per lb. for *Angostura*. The remainder is reported to have been lost in the recent disturbances in Venezuela.

TURMERIC.—Sales of *Bengal* root are reported for arrival at 18s. per cwt., while the spot price is now 19s. 6d. to 20s. For fair to bright *Madras* finger, 30s. to 32s. is wanted, and in *China* turmeric sales are reported at 18s. per cwt. The market is firm and higher. At auction on Tuesday these rates were well maintained, and of 297 bags offered, 41 good split *Cochin* bulbs sold at 8s. 6d. per cwt. Most of the *Bengal* root is held by one firm.

WAX (CARNAUBA).—Quiet and dull of sale, common grey and dark to good bright yellow being quoted at 45s. to 65s. per cwt.

WAX (JAPAN) keeps exceedingly dull. Sales of good pale squares are reported at 38s. 6d. per cwt. At auction on Tuesday a parcel was bought in at a nominal price.

THE LIVERPOOL MARKET.

BALSAM (COPAIBA).—There is a further arrival of *Maranham*; it is firmly held.

CANARY-SEED.—Large sales have been made at prices ranging from 50s. to 55s. There are now no more sellers at the latter price.

GINGER.—*African* is held firmly at 31s. to 34s. per cwt.

HONEY.—Some holders of *Chilian* are asking rather better prices.

IRISH MOSS.—The new crop is arriving, and selling freely at 8l. 10s. to 13l., according to quality.

OIL (CASTOR).—Further arrivals have taken place. The market is depressed at 2½d. to 2¼d. per lb. for fine *Calcutta* seconds.

QUILLATA.—Sales are reported at 16l. 10s. per ton.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, July 27.

The position of the market is uncertain. Sales have been made this week of 15 cases of old crop current tale quale at 6s. 3d. per lb. f.o.b. The new Turkey crop is now expected to yield 8,000 cases.

BRITISH AND FOREIGN CONSULS' REPORTS.

BRAZIL.

A British Drug Company.

Two manufactories (says our Consul at Rio Grande do Sul) are in course of construction in this city, one for the conversion of the fat produced in the country into soap, candles, oils, &c., and the other for using up the horns and bones of cattle in making combs, brushbacks, knife handles, &c.

The large and old-established English house of Hallawell & Company, wholesale and retail chemists and druggists, of Rio Grande and Porto Alegre, was turned into a Brazilian limited liability company in 1891 with a company of 500,000 milreis (about 25,000l. actual, or 58,000l. nominal, value). New branches are to be opened in Pelotas and other towns in the State, and factories of chemicals, &c., are to be erected.

JAPAN.

The Drug Business.

Yokohama imported 137,524l. worth of "Western" medicines and drugs in 1891, and 143,235l. worth in 1890. Among the chemicals and drugs imported the principal are bicarbonate of soda, caustic soda, soda ash, paraffin wax, bichromate of potash, chlorate of potash, carbolic acid, antifebrin, cocaine, bismuth, iodoform, iodide of potassium, quinine, &c.

Demand likely to continue.

Chemicals are likely to continue in demand. It is true that trials have been made to manufacture various chemicals, such as bicarbonate of soda, caustic soda, paraffin wax, &c., in Japan, but in most of these cases the cost of production has been too great to render the trials successful.

Soda crystals and bleaching powder only can be manufactured at a cost which is prohibitive of competition by the imported articles; but there are not many other articles at present imported in which competition from Japanese manufacture is likely to be felt—at least, in the near future.

The importation of chemicals is, for the most part, a venture of the foreign import merchant, Japanese dealers preferring to purchase from stock rather than run the risk of making purchases on contract.

Want of Care!

Carbolic acid is now imported mostly in tins or large zinc bottles, and it is found preferable to import quinine also in bulk, instead of bottles, owing to the saving effected in freight.

The greater part of the drugs imported now come from Germany. The loss of much of this trade to the British manufacturer can undoubtedly be traced to a want of care in packing, from which loss by breakage results, and to the fact that his get-up of the goods, in the matter of bottles and labels used, is neither so good nor so attractive as the Continental.

Some difficulty has been experienced, occasionally, in getting medicines passed by the Government analyst, on the ground that these are not chemically pure, although perfectly suitable for medicinal use, and such as would be passed in Europe. It may be hoped that longer experience may lead to more common-sense views in these matters.

MEXICO.

Chemicals. The industry of chemical products is not yet a large one in Mexico, considering that products like muriatic acid are so necessary. In the whole of Mexico there are not more than two factories of chemicals. One kilogram of native sulphuric acid sells at 14 cents, and it costs the Mexican manufacturer not more than 5 to 6 cents. The raw material is found in great abundance in the vicinity of the volcanoes.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Principals and Assistants.

SIR,—On account of the lengthy correspondence and discussion in your columns on this subject, we have arranged for one of the meetings of this Association to be devoted to it during the coming session. A friendly discussion, to which all principals and assistants interested are invited, will be opened on Thursday, October 27.

We are, Sir, yours truly,

E. F. HARRISON,

E. J. PARRY,

Hon. Secs. Chemists' Assistants' Association.

A Trade Society.

SIR,—Well done, "gallant little Wales"! It is time, indeed, something was attempted, something done.

If I am not much mistaken, you some time since gave it as your opinion that "it was too late in the day to talk about protection." I do not agree with you, Sir, and I believe with "Wales" that, if a circular, setting forth our just claims, was submitted to every M.P., we should succeed in obtaining the sole right to vend drugs and chemicals—a right to which we are certainly entitled.

We are strong enough to carry such a measure through the House if we are but united, &c. I thank another of your correspondents for his suggestion that we should form a trade society which could easily and effectively bring about the above and other reforms. As matters stand, the Pharmaceutical Society is mainly representative of the "profession," and scarcely at all of the rank-and-file of the trade, as is proved by the said rank-and-file for the most part (about two-thirds of the whole, I think) boycotting the Society which, when appealed to on "early closing," distinctly stated "it did not take up trade questions."

As a unit I shall be glad to join and subscribe to such a movement, which may not be antagonistic to, but rather a help to, the Pharmaceutical Society, which by such means would be brought into touch with the bulk of the trade that at present feels itself unrepresented by the magnates of Bloomsbury Square.

I shall be glad to see these practical suggestions taken up, and to observe that a preliminary meeting is called to discuss them on an early date.

I am, Sir, your obedient servant,

2 Malvern Road, Kilburn,

July 26.

W. M. BELL.

Lead in Tartaric Acid.

SIR,—Referring to the admirable report in your last number of the proceedings that took place at the Woolwich Police Court with regard to tartaric acid, and to your editorial remarks under the heading of "Lessons from the Law Courts," I would venture to point out that you are inaccurate in using the terms "adulterated," or "adulteration." This is altogether apart from the merits of the case (which, as it is *sub judice*, I refrain from discussing); but it is quite certain that the presence of an ingredient, clearly

shown and admitted to be brought about in the recognised course of manufacture, cannot be called an "adulteration," and I would ask you to kindly correct this in your next issue, as the term is likely to give rise to misapprehension.

Yours truly,

1 Fenchurch Avenue,
London, E.C.,
July 26.

CHARLES WIGHTMAN,
Chairman of Chemical Section,
London Chamber of Commerce.

Reduction in Patent-fees.

SIR,—Those of your readers who are interested in patents for inventions will be glad to know that, by virtue of a recent order of the Board of Trade, on and after October 1 next the following reduced fees will be payable in connection with the renewal of patents:—

On certificate of renewal:

Before expiration of	4th year	5l.	instead of	10l.
"	"	5th	"	10l.
"	"	6th	"	10l.
"	"	7th	"	10l.
"	"	8th	"	15l.
"	"	9th	"	16l.
"	"	10th	"	20l.
"	"	11th	"	20l.
"	"	12th	"	20l.
"	"	13th	"	20l.

On enlargement of time for payment of renewal fees:

Not exceeding	1 month,	1l.	instead of	3l.
"	"	2	"	7l.
"	"	3	"	10l.

Yours faithfully,

Monument Chambers,
King William Street, E.C.,
July 27.

REGINALD W. BARKER, R.P.A.

English Assistants in Switzerland.

SIR,—Mr. Cave, in your last issue, informs your readers that the hours of English assistants in Switzerland are from 7 A.M. to 9 P.M., but out of that there is half an hour for breakfast, one hour for dinner, and the same for supper, to be subtracted from that time, which is not even mentioned in Mr. Cave's letter. Nor does he mention the usual weekly half-holiday. With regard to salaries he is about correct. But of what use is an English assistant in Switzerland for the first nine months if he cannot speak either French or German? Can he expect to take the same salary as in England?

Why do German assistants work for board and lodging only? Simply because it is a cheap and comfortable way of acquiring a language, and when they speak it fluently they leave the country in most cases, and do the same thing in England, if they are fortunate enough to find a situation.

In answer to the latter part of Mr. Cave's letter, concerning the average weekly hours, I refer him to Mr. Wilkie's letter from his neighbouring town, and which is nearer the mark; but ninety hours weekly is too absurd to criticise. Having been in daily contact with Swiss assistants for the past four years, I am in a position to bear out what I have said in this letter.

I am, Sir, yours truly.

PORC-ÉPIC.

81/15. *S. Harris*.—The action of ferrous sulphate on Sewage is to precipitate the matter held in suspension. It is also a feeble antiseptic, but it is its power as a precipitant which has made it valuable.

110/13. *Boom-de-Ay*.—(1) The mixture is the better for filtration, as the sediment does not contain any active ingredient. But the fact that it has been filtered should be noted in the prescription. (2) The vermin-killer does contain strychnine, but how much we do not know.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5. For stamp duties, licences, Customs regulations, &c., see the DIARY pp. 161-9.

75/34 *Rhei*.—There is nothing illegal in your having a set of troy weights on your premises, if they are stamped. If not, the inspector may seize them, and summon you. If found in a shop, the law assumes that they are there for trade purposes, though it might be possible for you to satisfy a Court that this was not so.

75/28. *Nebo*.—If you form the partnership you propose, your unqualified partner will be liable to a penalty. Limited companies must be registered, and fees paid at Somerset House. The forms are obtainable from law-stationers. Effingham, Wilson & Co., Royal Exchange, London, publish a handbook on joint-stock companies law at 1s. 6d.

76/27. *Memo*.—The holder of the apothecary's qualification is entitled to sell scheduled poisons. This does not apply to the holder of the assistant's certificate, granted by the Society of Apothecaries.

73/71. *Thormin*.—A beverage containing over 2 per cent. of proof spirit becomes liable to Excise duty. There is no formula for the cordial on the page you refer us to.

77/61. *J. M.*—We do not know the rat poison you name. If it contains a scheduled poison it is illegal for unregistered persons to sell it. The same answer applies to the patent medicine named. But it is only the Pharmaceutical Council which can take action in regard to any such infringement of the Act.

77/59. *Opposition asks*:—"Can a physician and surgeon (American diploma) keep open shop in England for the sale of laudanum and other poisons?" The exemption of medical men from the restricting provisions of the Pharmacy Act applies only to those who have been registered as legally qualified practitioners. We presume the intention was to refer to registration in the United Kingdom. The American practitioner might claim that he had been registered as a legally qualified practitioner, and the Court might admit such a claim.

79/71. *W. H.*—You are liable to a penalty of 5*l.* under the Patents, &c., Act, if you represent that any article sold by you is a patented article when no patent has been granted for the same. (46 & 47 Vict. c. 57, s. 105)

79/66. *Palmerston* asks whether his cough-mixture, which contains a small quantity of aq. laurocerasi, but no other poisonous ingredient, needs to be labelled "Poison." Our correspondent points out that the water can scarcely be called a preparation of prussic acid, and that it is not so regarded legally is to some extent confirmed by the circumstance that essential oil of almonds containing prussic acid is specifically named. We think it could not be held that aq. laurocerasi is a preparation of prussic acid, though the case of ol. amygd. ess. is not conclusive, because that and "prussic acid" were named in the original schedule, while "preparations of prussic acid" were only added afterwards. But though aq. laurocerasi may not be a preparation of prussic acid, it is possible that the cough-mixture containing it is. The case is so doubtful, however, that "Palmerston" might reasonably take his chances if he is sure that his mixture is a fairly safe one.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

69/7. *Subscriber*.—(1) Animal charcoal will Descolorise Perfumes, and it is quite possible that it may remove or change the odour as well as the colour. (2) Lilac Perfume:—

Vanillin	4 grains
Essential oil of violets..	1 minim
Extrait of orange flowers ..	8 oz.
" jasmine	8 "
" tuberose	4 "
" cassie	2 "
Tincture of storax	$\frac{1}{2}$ "
Oil of citron	10 minims
" bergamot	10 "
Essence of bitter almonds (1 in 23) ..	4 "

Mix.

73/17. *Thorium*.—To Clean Dirty Castor-oil and Turpentine Bottles add 1 lb. of washing-soda to 10 gallons or so of boiling water, and soak the bottles in it for several hours, keeping the water warm. Use the brush well in cleaning. Make the second water warm, and add a few ounces of washing soda to 10 gallons, and finish off with cold water. The secret is to soak well in the first instance.

70/3. *Nemo*.—Try the Cement of litharge and glycerine for the stoneware jar-taps. Rub the litharge to fine powder, make into a paste with the glycerine, and use at once. It sets in a few hours.

72/64. *Antipyrin*.—The Use of Cocaine hypodermically in dental operations is sometimes followed by collapse of the patient. Nitrite of amyl to inhale and brandy to drink are the stimulants employed when this unhappy result ensues, and it is the wise men who are always ready for anything of the kind. The amount of cocaine hydrochlorate used is $\frac{3}{4}$ grain dissolved in 8 minims of water. See THE CHEMISTS' AND DRUGGISTS' DIARY, 1890, under "Dentistry for Druggists," for particulars as to how it should be used.

72/68. *Bunsen*.—Essence of Herbs.—We presume that you mean by this an extract for making Herb Beer. The following formula has previously been published:—

(1)	
Fresh orange-peel	6 oz.
Ginger	1 "
Boiling water	4 pints

Infuse for an hour, and strain.

(2)	
Treacle	4 lbs.
Burnt sugar	1 "
Conc. infusion of chiretta	12 oz.
Salicylic acid	2 dracms
Oil of bergamot	10 drops
Rectified spirit	1 oz.

Mix the first three ingredients and the last three separately, add the latter to the former, make up to the gallon with the infusion, and set aside for a week to clear.

74/71. *F. A.*—The best Evanescent Ink is solution of iodine used on well-glazed paper.

74/28. *Iolo*.—We have published similar recipes to yours, which is good.

75/72. *J. P. R.*—Tincture of cudbear is a good and harmless colouring for medicated wine.

75/71. *R. A. M.*—See the list of books in the DIARY.

75/17. *Chlorine.*—You will find particulars in back volumes. Prices are sometimes peculiar.

75/5. *Pet (Ontario).*—(1) A Sachet-powder such as the following is good for use in gentlemen's wardrobes:—

Powdered orris	3viij.
" cassia	3i.
" musk	gr. ij.
Oil of lavender	5i.
Oil of rose	gtt. x.
Oil of ylang-ylang	gtt. v.

Mix well.

We have published many others of a similar nature. (2) The best way to hide the bad smell of old bank-notes would be to sprinkle blotting-paper with the following mixture, put the notes between the sheets of paper, and keep there overnight:—

Camphor	5i.
Thymol	5i.
Lavender-water	5ij.

M.

75/13. *Jason.*—An ounce of coca-leaves to the pint of Malaga is the proportion generally followed in making Coca Wine. Keep for a month at least before filtering.

76/36. *M. R.*—Silver is Recovered from Sensitised Paper by incinerating the paper and heating the ash strongly, adding a little carbonate of potash to ensure that the silver compound is completely oxidised. Wash the residue with water when cold, and dissolve the silver residue in nitric acid, and crystallise. Your customer (an amateur photographer) should first consider whether his scraps of paper are worth working up. He must have a few bushels of the scraps before he begins.

76/33. *Carbon Bisulph.*—If you follow the B.P. process for spt. æther. nit. up to the point of collecting the 14 oz. of distillate, it is obvious that you will get a sol. æther. nit. 1 3. But why "for veterinary purposes"? You may not mix the sol. æther. nit. with methylated spirit

76/25. *Rusticus.*—What have the stains in the black marble been caused by, and what do they look like?

76/16. *Spirits.*—Spiritus Odocratus is eau de Cologne or anything like it.

72/43. *J. S.*—Your Musk Sachet-perfume is simply ground rice perfumed with an alcoholic solution of artificial musk (musc Baur). The simplest way to make Penny Sachets of any perfume (heliotrope, white rose, &c.) is to make ground rice or bran the basis, and add a sufficiency of the respective essences. See our DIARY for 1891 for a collection of perfume formulae.

73/20. *Voltas.*—Get Hargreaves' book on diseases of the generative organs (Kimpton, 5s.). See also DIARY for 1892, page 326.

73/38. *G. D. Coy.*—(1) Very full directions for Making Homœopathic Medicines are given in the British Homœopathic Pharmacopœia (Gould). This, or "Keene & Ashwell's Companion," you will find generally useful in homœopathic matters. (2) See December 20, 1890, page 833. New formulae are always welcome, and we should be glad to have yours.

73/47. *Chlorine* would like to have the opinion of our readers regarding the making of Acet. Scillæ. The B.P. gives no direction as to whether, after filtering, you should make up to a pint or not, in the absence of directions. He has not altered the quantity after filtering, but as he finds the quantity of filtrate varies he would like to know what is generally done. Attention has already been called to this point. See THE CHEMIST AND DRUGGIST, January 26, 1889, page 105. We shall be glad, however, if a number of our subscribers who are making acetum scillæ during the next fortnight would each send us a postcard with the following particulars:—

Quantity of acetum made.
Volume of the filtered acetum.

Also, if possible—

Specific gravity of the acid, acetic, dil. employed.
" " of the filtered acetum scillæ.

This will give nice practice to senior apprentices, and if their masters are good enough to overlook them and check the results the postcard inquiry should prove very interesting.

(2) For 2 drachms of magnesium citrate take 110 grains of citric acid and 76 grains of light carbonate of magnesia. (3) The action of the excess of alkali in the liq. sodæ chlorinat. on the organic matter of the filter may have caused the yellowish coloration, or it may be due to a trace of iron. It is better to decant.

197/92. *G. Y.*—Coca Wine.—The Excise authorities have stated that they do not regard a wine containing less than 1 grain of cocaine per oz. to be medicinal, but it is probable that a wine which is distinctly unpalatable would be passed if made from the leaves, although it contained less than 1 grain of cocaine per oz. The authorities apparently put cocaine and quinine on the same footing. We presume that by vin. cinchon. Malaga you mean a wine made from cinchona. If such a wine contained 1 grain of alkaloids per oz. it would probably be passed by the Excise as one which can be sold without a licence, but this is a point upon which you should communicate with Somerset House.

81/66. *Patent.*—The most commonly sold soothing-powder is one composed of—

Hydrarg. subchlorid.	gr. j.
Sacch. alb.	gr. j.

M.

This for a child of twelve months, and a half for one between three months and nine months. This powder is an aperient; for simply cooling the best powder is—

Pulv. potas. chlorat.	gr. iss.
" sacch. alb.	gr. iss.
" glycyrrhiz.	gr. ss.

M.

81/8. *Pacific.*—(1) Bismuthous oxide, Bi₂O₃, is a yellowish powder; bismuthic oxide, Bi₂O₅, a red. Salts of the higher oxide are unstable and rare. (2 and 3) Read the paper on volumetric analysis in our issue of September 26, 1891, page 479. All the information which you want is given there.

80/66. *Gingerine.*—Yes; the British Pharmacopœia directs syrup of ginger to be made up to a pint. But why not refer to the book itself for questions of that nature? It is a pity to waste your stamps and our time.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

81/56. What is gum ivy?

81/81. Kehotah tea: where obtainable?

79/16. Who makes May's Salvaline?

79/52. Nap haline in rolls or tablets—where obtainable?



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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

WE print a portrait of the late Professor Bedford, of New York, and give some particulars of his life.

BARON V. ROSENBERG writes from Madras urging the advantages of the proposed cinchona syndicate, and expressing his confidence in its success.

WE print the results of the pharmaceutical examinations held last month. The failures in the Major and Minor in London were exceptionally heavy.

WE give a report of the annual meeting of the South African Pharmaceutical Association, at which there was a discussion of trade matters in the Colony.

A PRELIMINARY list of papers to be read at the Pharmaceutical Conference in Edinburgh has been issued, and will be found in our Commentary. It is somewhat short.

WE devote several pages to a report of the meeting of the American Pharmaceutical Association, which includes the decision in regard to cutting, abstracts of the more important papers, and a portrait of the President.

WE comment upon Sir Archibald Geikie's presidential address to the British Association, which was in a large part devoted to a discussion of the geological and physical theories regarding the age of the earth.

UNDER "Medical Progress" we group some of the thoughts from addresses given to the British Medical Association. It will also be noticed that the exhibitors at the museum had some hundreds of medical men as their guests at a smoking-concert, when Mr. Lawson Tait made some notable utterances from the chair.

THE National Association of Medical Herbalists held their held their annual meeting at Liverpool last week, whereat Mr. A. R. Fox, of Sheffield, the President, detailed the steps which have been taken to maintain the integrity of the body, and, in the course of debate, members expressed themselves determined to show that they have no connection with quackery.

OUR Legal Reports include an important Inland Revenue case, heard at Stockport on Wednesday. A chemist was charged with the use of iodine liniment made with methylated spirit, but, on the ground that the evidence only proved possession, the case was dismissed. An important judgment on contracts "in restraint of trade," a question of aerated-water empties, and an application of the Indecent Advertisements Act to a nervous-debility announcement are also among the cases reported.

PRINCIPALLY routine business, mainly in reference to educational matters, was transacted by the Pharmaceutical Council on Wednesday. Mr. H. A. D. Jowett, the Bell scholar, comes out well with several school medals, the Pereira medal, and the Redwood research scholarship. The Research Laboratory has got 150% from the Royal Society. It was announced that the Society had proceeded against a large firm, not chemists, in regard to the sale of chlorodyne, and that penalties had been paid. The Council will send out a circular referring to this case to chemists and others.

POPULAR BOOKS FOR CHEMISTS.—The following are published at the offices of this journal, and may be obtained from most of the wholesale houses at the published prices:—

"The Art of Dispensing," 3s. 6d.; by post, 3s. 10d.
Alpe's "Handy-book of Medicine-stamp Duty," 2s. 6d.; by post, 2s. 9d.

Proctor's "Pharmaceutical Testing," 2s. 6d.; by post, 2s. 9d.

"Veterinary Counter-practice," 3s. 6d.; by post, 3s. 9d.

These books have been written for daily use, and their successful publication has proved their value to business men.

PHARMACISTS ORGANISE IN TURKEY.—After a ten-years' interval the Pharmaceutical Society of Constantinople has been revived, with a membership-roll containing 210 names—a number which, considering Turkish conditions, argues well for success. Bonkowski Bey is president, M. Andrié Lefaki vice-president, and Dr. Pierre Apéry general secretary of the Association. The former organisation died for want of interest.

SOAP-ADULTERATION IN GERMANY.—The executive of the German union of soap-makers have called the attention of the Prussian Minister of Industry and Commerce to the growing frequency with which adulterated soaps are now advertised. The most common adulterants are said to be starch-flour, tallow, heavy spar, kieselsüß, common salt, mineral lubricating-oil, and water. The Minister has asked the executive to submit proposals for the abatement of the evil.

English News.

Dyspepsia and Chlorodyne.

At an inquest regarding the death of Mr. L. B. Hackman, a professor of music at Wimbledon, held last week, it transpired that deceased had suffered from dyspepsia and had left a letter which indicated suicide. Dr. O. W. Berry stated that deceased was of a highly nervous disposition. He had found him partially unconscious from the effects of what he afterwards discovered to be an overdose of chlorodyne. The Coroner said that under a recent decision bottles containing chlorodyne had to be labelled "Poison," and it was apparent that the deceased must have made up the mixture himself, as the medicine-bottle produced bore no label. Verdict, suicide whilst temporarily insane.

Claim for Dilapidations.

Mr. Arthur Hill, chemist, Cheltenham, has succeeded in an action against one of his tenants, a commercial traveller, for dilapidations in a house which he rented from Mr. Hill. The claim was for 4*l.* 5*s.*, and defendant paid 1*l.* 9*s.* 6*d.* into court. Judge Ellicott gave judgment for plaintiff for 3*l.* 2*s.* 9*d.*, or 1*l.* 13*s.* 3*d.* over and above that paid into court.

Dividend.

The directors of the Sanitas Company (Limited) have declared an interim dividend for the six months ended June 30, at the rate of 10 per cent. per annum.

The Wrong Bottle.

At Southsea, near Wrexham, a man has died from the effects of belladonna liniment, which he drank, thinking that it was for internal use. "No blame was attached to anyone," said the Coroner's jury.

At Tyldesley, last Friday, Ada Marsh, two-year-old daughter of a spinner, mistook a bottle of spirits of ammonia for water, and drank a portion of the contents, dying in great agony.

Poison in the Teapot.

At the Leeds Assizes on Thursday, July 28, Martha King, 35, a married woman, was sentenced to 18 months' hard labour for attempting to poison her daughter, a child of seven, with carbolic acid, which she said was tea, but the child was too 'cute for her and did not taste it.

Harriet Rayment, a domestic servant, has been committed for trial at Maldon for attempting to poison her mistress, a Miss Jane Bulley, who found that the tea which accused served had a very peculiar odour. The teapot was taken to Mr. Arthur W. Heaver, chemist, who stated that it contained phosphorus paste. He had also supplied prisoner with a pennyworth of rat-poison, and gave evidence to that effect at the Petty Sessions.

Pharmaceutical Education in Newcastle.

A meeting of the Council of the North of England Pharmaceutical Association was held in the Durham College of Science on Wednesday, July 27, when the reports of the Professors of Botany and Chemistry and the Lecturer on Materia Medica for the session 1891-92, were received and adopted. The reports stated that the attendance of students had been satisfactory, and that good work had been done, especially in the practical botany class. The prize in botany was recommended to be awarded to Mr. Thomas Fell, and the prize in materia medica to Mr. John Harrison. The chemistry prize was merged into the general college prizes. A syllabus of lectures for the session 1892-93 was drawn up and approved, and will be published before the commencement of the session in October next.

National Association of Medical Herbalists.

The annual conference of the National Association of Medical Herbalists of Great Britain was held last week in the Imperial Hotel, Liverpool, the President (Mr. A. Russell Fox, Sheffield) in the chair. The other members present were:—Messrs. S. Halliday (Cleckheaton), W. H. Blunt (Birmingham), T. Ogden (Dewsbury), F. W. Crick (Bedford),

W. Parker (Sheffield), secretary; Alfred Thornton (Bradford), W. H. Parry (Liverpool), Job Mansell (West Bromwich), H. Potter (London), C. Darlington (Sheffield), W. H. Webb (Southport), G. T. Stubbs (Stockport), C. Burden (Worcester), J. C. Stott (Barnsley), R. Newell (Todmorden), J. Rayner (Hull), Clayton (Middlesbrough), Tildesley (Rotherham), E. Haigh (Wakefield), J. S. Ward (Sheffield), H. Hanson (Halifax), Howshall (Longton), Thornton (Wakefield), G. Rotherham (Liverpool), E. Cross (Birmingham), J. White (Blackburn), Thomas Butterfield (Dewsbury), W. Derby (Chowbent), and C. Darlington (Sheffield). The President, in the course of his address, said the first two objects of their Association were (1) to promote and encourage the study of the vegetable kingdom in its application to public health, and (2) the diffusion of a knowledge of the therapeutical properties of plants. What they asked was that the medical rights of the people should be confirmed, and that whoever they (the people) should call in to attend them should have a legal right to do so, irrespective of school, professional caste, or therapeutic belief. Having referred approvingly to the organisation of the Medical Botanic Training College of Great Britain, he alluded to the recommendation of the Royal Commission on Vaccination to do away with the imposition of cumulative penalties in respect of the same child. This he regarded as a step in the right direction. Further, referring to the extent to which the penal clauses of the Apothecaries Act affected them, he said his researches had led him to believe that those penal clauses never had applied to herbalists so long as they practised without the assumption of medical titles. What they must do was to procure for themselves the same liberty and privileges which the allopaths enjoyed. This would not be done by petitions for the repeal of old Acts, but by showing the Government that they were promoting such schemes of education and providing, by means of colleges, such an education that their students would be able to compete with the allopaths in properly carrying out their system of medicine. The Secretary then read the parliamentary report, which stated the progress that had been made in the matter of registering the Association, and on the motion of Mr. Potter, seconded by Mr. Parry, the thanks of the Conference were awarded to those members of Parliament who had expressed themselves favourably to the plans of the Association for registration and their right to practise as medical herbalists. Mr. Parry moved, Mr. Ezra Thornton seconded, and it was resolved, that it was not advisable for members to use medical titles, unless the said titles were English and the members were legally entitled to them, until they were registered and recognised by Parliament. In the course of the discussion, the quacks who practise under the assumed name of herbalists were indignantly denounced, and the disgrace which they sometimes brought on the profession was pointed out.

Mr. A. Russell Fox was then re-elected, for the third time, President, and the other officers were also reappointed. It was decided that the next annual conference should be held at Derby.

Free Fly-papers.

Some chemists in Birmingham have adopted what a local paper considers a questionable method of advertising their business—namely, the free distribution of fly-papers bearing their names and addresses. These papers are conspicuously marked "Poison" and "To be kept out of the way of children and domestic animals." The fly-papers may or may not be dangerous, but it is hardly wise of chemists to set an example of recklessness in the distribution of poisons.

A Chemist's Apprentice Killed in his Business.

A young man named James Foster Butterfield, aged 19, apprenticed with Mr. Gatenby, chemist, of Bridlington, has died in a very sad manner. On July 18 he was dissolving some resin and turpentine in a pan over the fire in the scullery. The compound got on fire, and deceased, fearing that the house might be set on fire, carried the pan across the scullery and threw it into the yard. In trying to shut the door his foot slipped, and he fell forward amongst the burning liquid. Prompt assistance was rendered, and the flames speedily extinguished, but not before the young man had been most shockingly burned. For some time he progressed satisfactorily, but on the 29th, owing to ulceration of the wounds

on the left arm, one of the veins commenced to bleed copiously. The poor fellow became utterly exhausted, and succumbed about 6 A.M. on Saturday.

Women in Medicine.

The British Medical Association almost unanimously resolved last week to expunge from its by-laws the words, "No female shall be eligible for election as a member of the Association." The motion was submitted by Dr. Galton, and seconded by Mrs. Garrett Anderson. How the second happens to be a member of the Association we cannot tell. Perhaps she got in before 1878, when the rule was passed with enthusiasm. Mrs. Anderson's name has been on the Medical Register since 1866.

Trips and Treats.

On the invitation of Mr. Alderman Cox, J.P., the head of the firm of original pill-coaters, the members of the Brighton Junior Association of Pharmacy had a trip on the Arun, in Mr. Cox's steam-yacht the *Sissie*, on Wednesday of last week. The party left Brighton at 10.15 A.M. by train, and joined the yacht at Ford Junction. The weather was charming, and the trip up the river was much enjoyed. Lunch was provided at Ambsley, and dinner at the Bridge Hotel, Arundel. Mr. Alderman Cox occupied the chair, and Mr. A. E. Coleman, President of the Association, was in the vice-chair. Cordial speeches were made, and hearty thanks to the Alderman for his kindness. The party got back to Brighton about 11 P.M.

A party of Messrs. F. Darton & Co.'s employes, numbering about fifty, had dinner at the King's Head, Rochester, on Saturday, July 30. There were sports in the morning, and a drive by coaches to Basley in the afternoon. Messrs. F. A. Darton and F. G. Phillips, the partners in the firm, were present, and the speeches made after the dinner showed how cordial were the relations between them and their staff.

The Druggists Fête the Doctors.

A smoking-concert was organised during the meeting of British Medical Association at Nottingham by the representatives of the exhibitors at the Museum, the medical visitors being invited. The Holborn Restaurant in St. James's Street was lent for the purpose by Mr. Johnson, the proprietor, who had turned the handsome hall into a flower-garden by the time the large company assembled. Mr. Samuel Stevens, the popular chief constable of the town, was announced to occupy the chair, but in his unavoidable absence the honorary secretary of the Concert Committee was chosen for the post. This was Mr. H. Booth-Fuller, the representative of Messrs. Lynch & Co., of Aldersgate Street, London. Among the singers were the Chairman, Mr. Lane (a son of Messrs. S. Maw, Son & Thompson's representative), Mr. A. J. Maple (Jeyes' Sanitary Company), and Mr. Ingram (Seabury & Johnson). When the concert had proceeded well on its way, Mr. Lawson Tait, the eminent surgeon, of Birmingham, with Professor Hingston, of Montreal, and several other well-known members of the profession, arrived from a dinner. Mr. Fuller vacated the chair for Mr. Tait, who was received with the utmost cordiality. Altogether the attendance numbered between 400 and 500, mostly doctors, though there was a fair sprinkling of the chemists of Nottingham present. Mr. Charles Lauder, of Mr. Wilson Barrett's company, also came in during the evening, and gave a couple of recitations in splendid style. Mr. Lawson Tait, in proposing thanks to the stewards, made a witty speech on the progress in pharmacy. There was no chance now, he said, for the mixture and pill; people would have tablets, and he was always pleased to have a visit from Burroughs & Wellcome's traveller, who, he thought, must be a very happy fellow. He had an inclination himself of abandoning the profession and applying for a post as their representative. People nowadays had tablets and tablet triturates so very pleasant that it was really a treat to be ill. He remembered landing some years ago at Montreal, and the first thing he came across was those abominable peptonising-powders of Fairchild, which had been so efficient in the treatment of dyspepsia that medical attendance was not now a necessity. He thought Messrs. Lynch & Co. were quite as useful as Burroughs, Wellcome & Co. He took great interest in their business, for they made such capital

scissors and instruments. Mr. Fuller was called upon to reply, and Professor Hingston and other doctors also made speeches.

A Transfer Agency Case.

In the Westminster County Court on July 28, before his Honour Judge Bayley, Mr. Turner, a medical transfer agent of the Strand, sought to recover £1 19s. for out-of-pocket expenses in endeavouring to obtain a partner for Mr. Purkiss, a dispensing doctor at Brentford. The plaintiff's case was that in June last year the defendant called upon him and gave him instructions to procure a partner. It was agreed that if the matter was carried through the plaintiff should have the usual commission, and that if he was unsuccessful he should be paid a fee of a couple of guineas. After several months the plaintiff introduced a gentleman named Sinclair, who was willing to become a partner on certain terms. Several meetings took place, and ultimately a draft agreement was drawn up by the plaintiff's solicitor, but it was objected to by the proposed partner; and a second was prepared, but that also was objected to, and subsequently the whole matter fell through. By that time solicitors' costs to the extent of 4s. 17s. had been incurred, and it was for that and the two guineas' fee that the present action was brought. For the defence, it was admitted that a promise of two guineas had been made to the plaintiff for his services in the matter, and that sum had been tendered to him, but he declined to take it, and it was now paid into court. It was contended that there never was any promise to pay any charges beyond the fee of two guineas. His Honour said he totally failed to understand how it became necessary to have an agreement prepared and incur solicitors' costs before the transaction was completed. The plaintiff was engaged to find a partner, and if the matter had been completed he would have been paid the usual commission, but as no partnership was brought about he was not entitled to sue for any solicitors' costs in the matter. He gave judgment for the defendant with costs, but there would be an order for the two guineas which had been paid into court to be paid out to the plaintiff.

The Norwich Arson Case.

At the Norwich Assizes, a lad named Green pleaded guilty to an indictment charging him with having set fire to a shop of his employer, Mr. J. C. Pentney, chemist, Norwich. The Judge sentenced the prisoner to one month's imprisonment, and expressed a hope that the governor of the prison would keep him as much as possible from the other prisoners.

Damaging Belladonna-plants.

At Midhurst Petty Sessions, Benjamin Sylvester and Henry Pink were charged with damaging belladonna-plants growing in Uppark, to the amount of 2s. It was proved that a third of a ton of the plants had been partly cut and partly pulled up. Defendants pleaded guilty, and were each fined 1s. 18s.

The Weekly Half-Holiday.

Eleven chemists of Barnsley have agreed to close their establishments on Thursday afternoons at 1 o'clock.

A New Belt Remedy.

At the Ottery St. Mary Petty Sessions on Thursday of last week, William Henry Hillman, an old man residing in the town, was charged with obtaining 12s. by false pretences from William Street on April 9. The evidence showed that the latter was ill, and his wife, hearing of defendant's "doctoring," went to him, and he offered to cure her husband for 12s. Twelve shillings was paid on account, and defendant gave some papers, which the sick man was to wear in a belt around his body, as "a certain cure." The husband not getting better, defendant supplied him with medicines and powders, which the patient threw away. Defendant then stated that seven witches were working against the sick man, and that a neighbour was keeping him from being cured by "working on the moon." The defendant was committed for trial, bail being allowed.

A Chemist Charged with Theft.

At Carlisle Town Hall on Friday, John Ferguson, chemist, of Henry Street, was charged with stealing six plates, five

glasses, six forks, four knives and two mustard-pots from the Citadel railway station on July 21, value 5s. A signalman named Macdonald said he saw the prisoner several times lift up the lids of some lurcher-baskets which were standing on the platform, take something out and put under his coat. The policeman subsequently found the articles mentioned at prisoner's house. For the defence, Dr. Hair deposed that the accused had suffered from heart-disease, sleeplessness, violent pains in the head, and right-side paralysis. He was very eccentric, very excitable, and very erratic in his conduct. Witness had warned prisoner's relations about his peculiar way. He was quite satisfied that he did not know what he was doing on the night in question. Prisoner pleaded guilty, and added that he did not know what he was doing at the time; and the Justices, after a consultation, dismissed the information because of the trifling character of the offence. Mr. Ferguson was, however, ordered to pay the costs, which amounted to 4l. 5s.

Burglaries.

On Friday evening of last week a robbery of a daring character was perpetrated at the shop of Mr. S. W. Evans, chemist, Middleton. In the afternoon a respectably-dressed young fellow entered the shop and asked for a draught, in payment for which he tendered half a sovereign. Having received his change the man left the shop, but returned almost immediately and stated that he had dropped a two-shilling piece down a trapdoor which leads from the pavement into the cellar. Mr. Evans at once went into the cellar to regain the coin, the man continuing to stand over the trapdoor whilst Mr. Evans looked for it. After searching for some few minutes the man exclaimed, "Oh, how stupid; I have the two-shilling piece in my hand." The sequel was at closing-time, when Mr. Evans discovered that his cash-box was missing. It contained about 9l. and some documents, and was afterwards found with the contents (minus the cash) in a hayfield at Stennicliffe.

The shop of Messrs. A. & J. R. Power, chemists, of High Street, Tonbridge, has been broken into, but, fortunately, the thieves were disappointed of a large haul, as the contents of the till did not amount to more than 20s. which had been left for change, and the other property in the shop did not appear tempting enough to purloin. In the wine and spirit department, however, the marauders levied on two bottles of the best spirits and two boxes of cigars, as well as helping themselves to what spirits they found in the decanters.

Pharmaceutical Competitions in Manchester.

As stated in our Supplement last week, the Council of the Manchester Pharmaceutical Association announce that, through the kindness of the treasurer to the Society, Mr. William Stones, they are enabled to offer for competition among the apprentices and assistants of Manchester and district a number of *Herbaria* of medicinal plants, each containing sixty specimens. It is proposed to hold two examinations—one for apprentices and assistants under 21 years of age, and one for assistants over 21 years of age—an award being made to every competitor obtaining more than a certain percentage of marks. The competitions will be open to all apprentices and assistants whose masters are members of the Manchester Pharmaceutical Association. They will be held during the first week in October, 1892, and intending competitors are requested to send in their names to the Secretary (Mr. A. Blackburn) not later than September 19. The examinations will consist of written papers on the following subjects:—*Junior Examination*—Elementary Chemistry, embracing the chief characters of the Metals and Non-Metals and their Salts, the commoner Compounds of Carbon, and the principal Laws of Chemistry; Elementary Botany, including Morphology and the chief facts in Vegetable Physiology; Pharmaceutical Latin—Translation of Prescriptions and Extracts from Pharmacopœias; the Metric System of Weights and Measures; an Essay of about 250 words upon a selected popular topic. *Senior Examination*—The Translation of Latin and English Prescriptions, and a description of the best methods of dispensing them; Pharmacy: The modes of Preparation, Characters, and Composition of the *Aqua*, *Glycerini*, *Linimenta*, and *Unguenta* of the British Pharmacopœia; Posology: The Doses of the Poisons scheduled in the Pharmacy Act, 1868, and of their Official Preparations.

Irish News.

The Office of the Registrar of the Pharmaceutical Society of Ireland will be closed from August 5 to August 21 inclusive.

The Beautifying Electric Cure.

A voluminous advertisement has appeared in the Dublin papers announcing, with considerable lack of modesty, that Professor Moross, M.E., is about to favour Dublin with his presence, and, to use the terms of his advertisement, to display "his powers as a human salamander."

The Professor announces that his plan differs from the usual electric system as follows:—

"I receive in my own person the poisonous products of the electricity, the sulphuric acid and the bichromate of potash, while the patient receives only its healing virtues. These acids are 'beautified' in my body."

One of the Dublin evening papers has raked up the previous history of the Professor, who has in consequence suddenly disappeared.

Pharmaceutical Assistants' Examination.

The following were the questions set in the examination conducted in July by Mr. J. J. Bernard, M.P.S.I.

1. What is glycerine? Give the preparations in the Pharmacopœia into which it enters.
2. State accurately how mist. sennæ comp., pil ferri (Blaud's), tinct. strophanthi, and ungt. conii are prepared, and give ingredients in each.
3. Mention the liniments which do not contain camphor, and give ingredients and instructions for preparing lin. sinapis co., lin. potass. iodid. c. sapone.
4. Enumerate the pills, powders and tinctures of the Pharmacopœia which contain opium. Give strength and dose of each.
5. Give the maximum dose of oil of savin, extract of belladonna, arsenii acid, arsenii iodidum, extract of stramonium, elaterium, phosphorus, liquor trinitrini.

The Council Election.

The druggist and pharmacist parties are already beginning to circularise the voters in regard to the next Council election in October. One circular, signed by Mr. W. F. Wells, jun., has come into our hands. It intimates that a strong effort is being made by a wholesale firm in Dublin to put off the six pharmaceutical chemists who retire, and to put in their place six druggists. If this is done, Mr. Wells says, it will give the control of pharmacy very largely into the hands of those whose trade interests are quite opposed to the best interests of pharmacy. The present Council have done good work to protect the qualified men and to advance the Society. He urges pharmaceutical licentiates to join the Society and so strengthen the hands of the Council, otherwise the druggists may be returned.

Changes on the Council.

At the meeting of the Council on Wednesday, Mr. W. Robinson, M.P.S.I., of Kingstown, Vice-President of the Society, having resigned his seat on the Council, was unanimously elected examiner in practical pharmacy. There were eight other candidates. Mr. R. J. Downes, of Lower Baggot Street, Dublin, was elected a member of the Council in the place of Mr. Robinson, resigned. Mr. G. D. Beggs, of Dalkey, was elected Vice-President in the place of Mr. Robinson, resigned. As the result of the whip by the druggist division of the Council, fifty druggists were proposed as associates of the Society. Only four or five pharmaceutical chemists were proposed as members.

Scotch News.

Dundee.

It is understood that the Scotch University Commissioners are to recommend that the whole of the St. Andrews University

medical course should be given at University College, Dundee, which is affiliated to the University. The Chair of Medicine at St. Andrews will be removed to Dundee. The effect of the change will be to extend the present partial medical course at Dundee University College to a complete one, but considerable endowments will be necessary before this is fully effected.

Mr. William Doig, chemist, High Street, an ex-bailie of the town, is the subject of a biographical sketch in a local weekly. Mr. Doig has been in business in the town for thirty-one years.

Jaunts.

That is Scotch for "beanfeasts," and there are two to record this week. The employés of Messrs. W. Paterson & Sons, Aberdeen, drove to the foot of Benachie the other Saturday and went to the top after luncheon, although it was "sumptuous." A very enjoyable day was spent. A Forfar correspondent, in a naïve note written on July 27, tells us that the chemists of the town (with one exception) agreed to close at 10 A.M. (day not stated) in order to give their employés a day's holiday. They went to the Den of Airlie, a famous place for pleasure, and took dinner and a photograph there, then visited the Slugs of Achrannie, returning to the Den for tea. The drinks were D. F. & Co.'s and Smith's waters, the gift of the makers, who were remembered with three cheers before the party started for home. Mr. A. H. Simpson piloted the affair, which was quite a success.

Glasgow Parish Medicines.

The yearly accounts for the Glasgow City Parochial Board were submitted to the Board on Tuesday. They show that the parish medical expenditure was 3589*l.* 18*s.* 6*d.*, an increase of 500*l.* odd over the previous year. Medicines and medical appliances cost for indoor 664*l.* 7*s.* 1*d.*, and for outdoor poor 284*l.* 7*s.* 1½*d.*; the salaries for medical officers came to 1,180*l.*, and the apothecary and his assistants were paid 190*l.* 9*s.* 4*d.* (Mr. John R. Peacock, the chief apothecary, gets 135*l.*). During the past month 6220 prescriptions were dispensed in the Parliamentary Road, while other 259 were made up as follows:—The Glasgow Apothecaries' Company, 136; Messrs. J. & R. Rodman, 63; and Mr. D. P. Walker, 55. Mr. Peacock and his assistants are to get a holiday, and during their absence a qualified druggist will be put in charge.

Children Poisoned by Valonia-nuts.

Last week four children, residing in the vicinity of the harbour of Glasgow, whose ages ranged from two to nine years, consumed a quantity of valonia-nuts, which they had picked up at one of the berths, and two of them have since died.

A Chemist Charged with Attempted Murder.

Mr. Aquila Waterhouse, chemist and druggist, Sauchiehall Street, Glasgow, and formerly of Chapel Place, Ramsgate, Huddersfield, Westtown (Dewsbury), and Bradford, has been arrested on a charge of shooting with intent to kill David Henry Hirst, grocer, of Lindley. It appears that Mr. Hirst for a long time managed the affairs of prisoner's uncle, who, when he died, left the whole of his property to him, subject to life-annuities to be paid to the testator's sisters. This gave great offence to the prisoner, who called on Mr. Hirst, and made proposals that the property should be divided, so that he (the prisoner) should have a share. Mr. Hirst, however, refused to do this, whereupon the prisoner took a revolver from his coat-pocket, and fired at Mr. Hirst, but, fortunately, missed him. Mr. Hirst and the prisoner then closed, and in the struggle the revolver was wrested from the prisoner who fled, and was subsequently arrested in Glasgow. The affair distressed Mr. Hirst to such an extent that he afterwards committed suicide by cutting his throat.

M. PASTEUR was the lion of the last meeting of the Academy of Sciences. He assured inquirers that his rest at Garches had done him good, and that the various maladies which the Parisian press had "so generously lent him" only existed in "the fertile imagination of MM. les journalistes." THE CHEMIST AND DRUGGIST was alone among English journals in reporting that his illness was not serious.

French Pharmaceutical News.

(From our Paris Correspondent.)

SANITARY PRECAUTIONS.—The Paris Municipal Laboratory has supplied packets of sulphate of copper to every police-station in the city. This is to be used in disinfecting premises where cases of choleric diarrhoea have been reported by the nocturnal medical inspector to have occurred during the night.

HONOURS TO "PHARMACIE CENTRALE" EMPLOYÉS.—Two of the employés of the Pharmacie Centrale de France, Mme. Marie Angélique Lagares, aged 71, and M. Louis Elenne Girerd, aged 53, were among the recipients of Government medals for long and faithful service to private employers at the annual distribution of these awards by the head of the French Ministry of Commerce on July 11 last. Mme. Lagares has been thirty-one years, and M. Girerd thirty-three years, with the Pharmacie.

THE HYGIENIC COUNCIL of the Seine Department are vigorously taking up the matter of purity of ice sold for alimentary purposes. Certain ponds have been inspected, and either condemned or ordered to be deepened, &c., to prevent stagnation. It was likewise resolved to approach the Prefect of the Seine on the question of a rigorous inquiry, aided, if necessary, by analysis, as to the sources from which the Paris purveyors of mineral waters, &c., draw their supplies. An analysis of ice sold for consumption was also considered desirable.

FRENCH COLONIAL MUSEUMS.—Each French colony is to be furnished with samples of the commercial products of the mother-country, to form a museum in charge of a competent official, who will do his best to make the articles known, and thus to keep out foreign manufactures and assure that "trade shall follow the flag." Perfumers, brewers, and others have sent samples, showcards, catalogues, and price-lists to the dépôt (Permanent Colonial Exhibition, Palais de l'Industrie), and they are now packed and ready for despatch. It should be noted that the expenses of delivery and exhibition abroad are defrayed by the Government.

HONOURS TO PHARMACISTS.—M. Pons, a pharmacist at the Marseilles Military Hospital, has been promoted Officer of the Legion of Honour. M. Cambriels, pharmacist-major at Algiers, and M. Puig, who holds a similar position at Constantine, have been nominated Chevaliers. M. Cquelut-Boissier, pharmacist at Nérès-les-Bains, who formed a botanic garden at his own expense and is the author of numerous scientific works, has received the Order of Agricultural Merit. M. Debogues, pharmacist of Chatellerault, and Director of the School of Grafting, shares the same honour. M. Théophile Michel, pharmacist at Troyes, has just been awarded a silver medal by the Minister of the Interior for gallant conduct in rescuing a child from drowning. M. Barillé, pharmacist-major at the Vincennes Military Hospital, has been appointed to the Marseilles Hospital. His place at Vincennes is to be taken by M. Masson, chief pharmacist of the second class.

PHARMACISTS IN TROUBLE.—A pharmacist at Valenciennes, convicted of illegal medical practice and adulteration of medicaments, has been sentenced to a fine of 500*l.* and fifteen days' imprisonment. M. Carré, the pharmacist at Le Mans who supplied the strychnine with which the youthful Madame Bardel so nearly succeeded in poisoning her husband, has just been put on trial. His avowal was frank and outspoken. "I sold Madame Bardel 2 grammes of strychnine last February," said he, "without a doctor's prescription, under the following circumstances: The first time she sent her maid for strychnine without stating the use to which the drug was to be put. I sent her back, saying I could not deliver poison without an order from a doctor or the Mayor. The servant returned an hour later with a note from Madame Bardel, in which she asked for a franc's worth of strychnine to preserve stuffed birds. I considered that I ought to satisfy her demand, and in all good faith I gave the girl two grammes of strychnine." M. Carré's short address evidently convinced the magistrates that he was above any connivance in Madame Bardel's fiendish scheme, but the formal offence was punished by a fine of 200*l.*

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE usual monthly Council meeting was held at 16 Bloomsbury Square on Wednesday. The following members were present:—Messrs. Abraham, Atkins, Bottle, Carteighe, Cross, Greenish, Grose, Hampson, Harrison, Hills, Johnston, Martin, Martindale, Newsholme, Schacht, Santhall, and Storarr. Mr. Carteighe presided, and Mr. Cross occupied the vice-chair. The first business was with reference to the

SUBSTITUTION OF AN EXAMINER.

The PRESIDENT, in explanation, said that the examination for the Council Prizes was conducted by Mr. Shenston and Mr. G. C. Druce, of Oxford, the latter having taken the place of Mr. Bowen, in consequence of one of that gentleman's staff taking part in the competition, thus making it rather difficult for him to undertake the examination. He would ask the Council to accept the results of the examination later on, notwithstanding the fact that Mr. Druce acted in the place of the gentleman appointed by the Council. The President also mentioned that they had received, since the last meeting, the remaining acknowledgments from the newly-appointed

CORRESPONDING MEMBERS.

expressing thanks for the honour conferred upon them, sending congratulations, and promising to do all they could to further pharmacy in all parts of the world, and not to forget the Society of which they were corresponding members.

NEW MEMBERS AND ASSOCIATES.

The Society's roll of members was increased by the following numbers, the individuals having paid subscriptions and otherwise complied with the regulations: 12 elected members, after passing the Major examination; 5 as associates in business, having passed the Minor; and 45 as associates; 10 elected as students, having passed the first examination; 2 as members of the Society, having been in business prior to 1868; and 2 were restored to their former status. It was also resolved that 20 persons, having been duly registered as pharmaceutical chemists, should be granted the diploma of the Society.

FINANCE.

The Finance Committee reported that the General Fund account showed a balance brought forward of 3,807*l.* 6*s.* 8*d.*, which was increased by the monthly receipts to 4,651*l.*; from this June payments—2,126*l.* 9*s.* 10*d.*—were deducted, leaving a balance in hand of 2,524*l.* 18*s.* 8*d.* The Benevolent Fund account had a balance brought forward of 1,095*l.* 12*s.* 10*d.* This was augmented by receipts to 1,154*l.* 6*s.* 10*d.*, and after deducting 411*l.* 15*s.* 2*d.* for payments, a balance in hand remained of 742*l.* 11*s.* 10*d.* The Donation account of 35*l.* 7*s.* 6*d.* was increased to 60*l.* 12*s.* 6*d.* by two donations of 20*l.* and 5*l.* 5*s.* respectively. The report was adopted.

BENEVOLENT FUND.

Six cases were considered, of which two were deferred. The grants agreed to were three of 5*l.* each and one of 20*l.* A draft scheme for the disposal of the Hills bequest had also been laid before the committee, but its consideration had been postponed.

GROUND-RENT INVESTMENTS.

The PRESIDENT said that since the last meeting of the Council the Ground-rents Committee had to meet, and an offer had been made by them for certain ground rents which would take a considerable portion of the sum now invested in Consols on behalf of the Benevolent Fund. If they were able to secure the ground-rents they would make a good financial bargain. As the Council did not meet again until October, they wished to ask for authority to affix the seal of the Society to a power of attorney for the purpose of enabling them to sell out the Consols. They had, too, pro-

perties in view for the purpose of the investment, and one they had already closed with.

Mr. CROSS: What is the amount of the Consols?

The PRESIDENT: 4,750*l.*—practically all that we have got, the rest having been previously invested in ground-rents.

Mr. SOUTHALL: Are we keeping on investing in ground-rents and nothing else—ought we not to have a change?

The PRESIDENT: At present ground-rents are a good investment, notwithstanding what has been said about them. Our chief difficulty is to get them.

(A short discussion was then entered upon in committee as to the advisability of investing in ground rents, but at the end matters appeared to be *in statu quo.*)

The PRESIDENT put the resolution to the Council for the sale of stock amounting to 4,750*l.*, and it was carried without objection.

Mr. CROSS, in moving the adoption of the report and recommendations of the Benevolent Fund Committee, said that, besides those amounts above mentioned, they had given a sum of 10*l.* 10*s.* towards the election of a child named Cook to an orphanage, and he was glad to report that they had been successful in getting the election the first time. The report was adopted.

LIBRARY MUSEUM AND SCHOOL REPORTS.

The members of this Committee reported that the attendance at the library for the past month during the day was 585, and evening 148. The number of books circulated was 233, of which 138 were for London and 95 for the country. The Curator of the Museum reported an attendance during the day of 507, and evening 97. The Committee recommended that the President should be asked to give the sessional address to the school on October 5 next, and further that the inaugural meeting should be held at 3 o'clock of that day, instead of in the evening as heretofore. Payments were also recommended for alterations which had been carried out in the schools and laboratory, and it was further recommended that the school prospectus should be sent to each member, associate, and student of the Society. It was also thought desirable to appoint a

PROFESSOR OF MATERIA MEDICA,

but in the meantime Mr. H. G. Greenish was requested to continue as hitherto as lecturer on materia medica.

The PRESIDENT, in moving the adoption of the report, said, regarding the request that the President should be invited to give the sessional address, that the committee came to that conclusion on the strong recommendation of the school staff, that next October being the Jubilee of the school, it was desirable that an old student should give it. The time of the inaugural meeting was altered, as it was thought a greater number of their London colleagues were freer in the afternoon than in the evening. It would also give an opportunity for visitors and friends to inspect the school and the Society's building generally. The report was adopted without comment.

RESEARCH COMMITTEE.

The PRESIDENT, continuing, said that several applications had been made for the Research Fellowship, and the Committee now recommended Mr. T. S. Dymond for election by the Council. Several gentlemen had applied whose training was unexceptional, but who hardly fulfilled the qualification as to original work. With reference to the

REDWOOD SCHOLARSHIP.

They would remember it was resolved last year that the Redwood scholarship should be associated with research work, with the consent and at the request of the late Emeritus Professor Redwood, made to the Council before he died, and acting on this, the Council decided that it should be left to the Research Committee to receive applications from candidates, and to determine as to what extent they should be examined. There had been one application only, because, when it became known that Mr. H. A. D. Jowett, who stood head and shoulders taller than everybody else in the school, had applied, all the rest simply did not apply. They recommended Mr. H. A. D. Jowett, who was not only an industrious and very capable student, but a man who was strong physically, and one who, he (the President) thought,

would do himself and them as great credit as Redwood scholar as he had done as a Bell scholar.

Mr. MARTIN, in seconding the report, said he congratulated Mr. Dymond on the distinction which his appointment as Research Fellow would confer upon him, and also congratulated the Society on the fact that one who was so closely connected with them should be the first to gain the right to use the title. He understood, however, that a very strong point in the matter was that the candidates should give evidence of training, and the power of original investigation. So far as he could see from the paper before him, there was one paper that had been done by Mr. Dymond alone, the others being in conjunction with Professor Dunstan. For his part, dual originality was a thing he had very little faith in. Mr. Dymond appeared to be elected on the question of training, and on one paper that he had written. However, he had no doubt that Mr. Dymond was capable of being the official holder of the Fellowship; and if the same standard were observed the Research Fellowship would be sought after, and would confer distinction on the individual and on the Society.

Mr. HILLS, referring to Mr. Jowett, said it was a happy coincidence that he should have been also a Bell scholar, once more connecting the names of Bell and Redwood, who were so closely associated in their work with the Society. (Hear, hear.)

The resolutions appointing Mr. T. S. Dymond to be Research Fellow of the Society, and Mr. H. A. D. Jowett to be Redwood Scholar, were then put and carried.

The PRESIDENT intimated that the Research Committee had received from the Royal Society a grant of 100% and 50% for the prosecution of the researches into aconites and hyponitrites respectively.

JACOB BELL SCHOLARSHIP.

The Committee reported that 27 candidates competed, and the successful ones were: Thomas Tickle, Devon, and Ernest Goulding, London. A vote of thanks was passed to the examiners for their trouble.

CONFERENCE DELEGATES.

The following gentlemen were then elected to represent the Council as delegates to the British Pharmaceutical Conference to be held in Edinburgh on August 22 and following days:—Messrs. Atkins, Cross, Grose, Harrison, Johnston, Marshall Leigh, Martin, Martindale, Newsholme, Southall and Storrar. The Secretary, Editor, and Sub-editor were also requested to attend.

INTERNATIONAL BOTANICAL CONGRESS.

The PRESIDENT next stated that there was to be an International Botanical Congress at Genoa in the first week of September, and they had received an invitation as a Society to send delegates. Mr. Holmes and Professor Green could attend, and would probably go, and he (the President) thought it would be a compliment to the Congress, and gratifying to two of their officers, if they were delegated to attend the Congress. A resolution to that effect was put and carried.

REPORTS OF EXAMINATIONS.

Board of Examiners for England and Wales:—

	Candidates Examined	Passed	Failed
<i>Major.</i>			
	48	19	
<i>Minor.</i>			
	191	67	124

In the Modified examination one candidate passed.

Board of Examiners for Scotland:—

	Candidates Examined	Passed	Failed
<i>Major.</i>			
	3		1
<i>Minor.</i>			
	88		37

For the First examination 412 candidates presented themselves, and of these 205 passed and 207 failed; 23 certificates were received in lieu of the Society's examination.

SCHOOL OF PHARMACY PRIZES.

The reports of the examinations showed the following results:—

Practical Chemistry—Silver medal, G. A. Shaw; certificates of honour, R. H. Jones, G. Hill, and H. A. D. Jowett.

Chemistry—Silver medal, H. A. D. Jowett; certificates of honour, Messrs. Gane, Boucher, and Staw.

Botany—Silver medal, H. A. D. Jowett; certificates of honour, Messrs. Gane, R. H. Jones, and G. A. Shaw.

Materia Medica—Silver medal, Mr. Gane; certificates of honour, H. A. D. Jowett, G. A. Staw, and R. H. Jones.

Pharmacy and Practical Pharmacy—Silver medal, Mr. Gane.

HERBARIUM PRIZE.

This is the first year in which the new conditions of competition come into force, and it was reported that there was a great improvement in the collections of plants sent in. The awards are:—Silver medal, W. J. Brown, Dover; Bronze medal, G. T. Branch, Cambridge; Certificate of honour, Sidney Davis.

PEREIRA MEDAL.

The examiners reported the result of the examination as follows:—Pereira medal, H. A. D. Jowett; Council's silver medal, E. H. Gane; Bronze medal, Geo. Saxendale.

The PRESIDENT, referring to the new conditions of the Herbarium competition, said it had been suggested by Prof. Green that it was desirable that the number of plants to be sent in should be reduced for the purpose of encouraging more perfect home-work on the part of the individual on the plants that he had collected. This was the first time it had been done. Prof. Green had spoken frankly in his report of the merits of the candidates; and what he said was that they had all collected well, the differences in the competition being particularly in points which displayed skill and knowledge. Their motto in regard to this prize was that they did not want quantity but quality. A man might get the silver medal with a comparatively small number of specimens if the work was of good quality.

Mr. MARTIN said he was glad to note that the herbaria came from different parts of the country. Referring to the examination at the School of Pharmacy, he would like to make it compulsory that every man who attended a course of instruction should sit for examination before he received a certificate of attendance, for the purpose of satisfying his teacher that he had done personal work as well as put in attendance.

Mr. SCHACHT also said he felt great encouragement by the report of the herbarium competition which Professor Green had submitted.

Mr. ATKINS followed with a few remarks of the same nature, and votes of thanks were then passed to the examiners for the Council prizes, Messrs. Shenston and Druce, and to Professor Green for his report.

THE SALE OF PROPRIETARY MEDICINES.

The PRESIDENT said, with reference to the remaining business of the Council, which would be taken in Committee of General Purposes, that a portion of it might be referred to in public without any breach of privilege. A short time back certain proceedings had been initiated as to the sale of a proprietary medicine containing poison—namely, the well-known chlorodyne—and penalties had been paid and promises made not to offend again in the cases that had been dealt with. The persons proceeded against were large dealers who, not being registered chemists and druggists, had sold those preparations, and in view of that fact the Council intended to issue shortly a circular to every registered chemist and druggist, and to other persons, calling attention to the circumstances of the case, and, as far as possible, warning them against the possibility of incurring penalties.

This concluded the public business of the Council, which went into Committee of General Purposes.

JULY EXAMINATIONS.

IN the Preliminary examination, held on July 12, 412 candidates were examined, and the College of Preceptors report that the following 205 have passed:—

Aird, George Henry, Houghton-le-Spring	Aitken, Francis, Dundee
	Alexander, Ernest Glover, Sheffield

Allan, R. Birrell Carruthers, Dumfries	Gwinn, Frederick Walter, Stratford	Pettinger, William Elmer, Hampstead	Smith, William Davidson, Rhyne
Andrews, Ralph Cecil, Winchester	Hair, George, Dumfries	Pickard, Wil iam, Dawlish	Sutherland, John G., Leith
Arkle, Oscar Blount, Lancaster	Hardcastle, Edward, Stockport	Pickup, Ralph, Blackburn	Taylor, James, Peterhead
Ault, William, Chesterfield	Hardwick, Albert Charles, London	Plumb, Alfred, Cambridge	Thomas, Jacob Beynon, Carmarthen
Backhouse, Richard Stubbs, Silloth	Harris Charles Frederick, Norwich	Pratt, Charles Andrews, Chichester	Thorpe, Charles Arthur, Thetford
Baird, Thomas, Moffatt	Harrison, George Henry, Barrow-in-Furness	Prentice, John Hamilton, Leicester	Todd, George, Hollinwood
Barnett, Henry, Folkestone	Hemming, Walter Ash, Chipping Camden	Pritchard, David, Ru bon	Todd, Robert Alexander McLaren, Leicester
Barton, Frederick Cooke, St. Ives (Hunts)	Henderson, Henry John, Lowestoft	Proctor, Ernest Anthony, Downham Market	Traill, Alexander Melville, Perth
Battle, Ernest W. Chatterton, Manchester	Hill, Harry Ernest, London	Pyman, Harold, Stow-up-Land	Tulloch, James J. B., Aberdeen
Beeny, Wallace Frederick, London	Hillman, Edward Stowers, Bristol	Richardson, Edwin, Nottingham	Tumber, Henry Shemeld, Leicester
Birss, George Duncan, Whitby	Homer, Ernest, Birmingham	Ricks, Walter Francis, London	Uttley, Luke, Sutton
Blair, Alexander, Greenock	Hosken, William Henry Martin, Norwich	Roberts, Hugh, Bangor	Wager, Andrew, Sheffield
Blyth, Isabella, Sunderland	Hosking, Frederic, Falmouth	Robertson, Donald William, Pickering	Walker Ernest, Aberdeen
Boss, Frederick James, London	Howard, Percy, Blackpool	Robinson, Alfred E., Norwich	Walsh, Ernest William, Blackburn
Boul, George Henry, Boston	Hulme, Frederick Hitchin, Middlewich	Robinson Charles, Bradford	Walters, John Clifford, Chesterfield
Bowker, Joseph Hyde	Hunt, Henry Lionel, Bath	Robinson, John Lawrence, Bourne-mouth	Watson, George William, March
Brander, William, Aberdeen	Hutchinson, Reginald Heber, Ipswich	Rogerson, Alfred Arthur, Wainfleet	West, Arthur John, Leominster
Briggs, Harry, Old Basford	James, James Stanley, Narberth	Roper, Oswald Newman, Great Dunmow	White, Herbert, Liverpool
Broadbent, Ernest Edgar, Shipley	Jenkins, Evan Llewellyn, Llandysul	Roy, Louis Leslie, Arbroath	Whittaker, Herbert, Ashton-under-Lyne
Brooksbury, David, Great Grimsby	Johns, David Griffith, Swansea	Rush, Herbert George, Eccles	Wilkinson, C. Edward Ernest, Wakefield
Brown, William Charles, Birmingham	Jones, Ernest William, Manchester	Saithouse, Edward, Blackpool	Wilson, James Bell, Ayr
Brown, William Ritchie, Hexham	Jones, Jestin P., Llwynpia	Shand, Alexander, Old Meldrum	Wilson, Tom, Darlington
Butler, George Edward, Bromley	Jones, Samuel Wilfred Job, Sea-combe	Sharp, Joseph William, Maryport	Witten, John Joseph, Seaham Harbour
Bye, William Luther John, Llandilo	Jordan, Herbert Ealyn, Mumbles	Sharples, Robert, Blackburn	Woolston, Walter George, Wellingborough
Campbell, John, Ayr	Keene, Justin Leonard, Sittingbourne	Shelton, William, Chesterfield	Worth, Arthur James, Taunton
Charteris, David, Kilsyth	Kerr, John Gray, Edinburgh	Silson, Richard Townsend, Bradford	Wrathall, Harry Vincent, Halifax
Chatburn, Edwin Jordan, Ashton-in-Makerfield	Kirkland, Walter Herbert, Somerset	Simpson, Gibbon, Stalybridge	Young, Welcome John, Shanklin
Cheyne, Charles, Aberdeen	Kirton, George Thomas, Boston	Smart, William, Leslie	
Clark, Albert Mitchell, Penistone	Lacey, William James, Norwich		
Collin, John Francis, Diss	Laws, John Joseph, London		
Collinson, Arnold, Liverpool	Laws, Maria, Souths. a		
Colson, Thomas William, London	Lawson, John, Musselburgh		
Cooke, Charles Alfred, Portsmouth	Legg, Harold Beaumont, South Norwood		
Coombe, Frank Ernest, Sutton-in-Ashfield	Leggott, Harry, Hull		
Crackshaw, John Robert, Green Haworth	Levin, Joseph Edwin, Manchester		
Crispin, Charles Iargdon, South Molton	Lewis, John Butler Day, London		
Davidson, George Graham, Dundee	Love, John Campbell Martin, Paisley		
Davies William Oswal, Pontypridd	McEwen, William, Perth		
Dax, Henry Richard, Liverpool	McIntyre, Archibald Chalmers, Greenock		
Dean, Charley, Bury	McVitie, Joseph Elliot, Maryport		
Delaney, Edwin Louis, London	Manson, James, Edinburgh		
Dewhurst, Fred, Bradford	Marshall, Alfred George, Morpeth		
Dick, David McIntosh, Aberdeen	Marshall, John William, Leicester		
Douglas, James Malcolm, Arbroath	Marsland, Alfred, Ashton-under-Lyne		
Dring, Charles Albert, Weymouth	Mason, Hugh, Dextley Heath		
Duncan, Alexander Thomson, Peterhead	Melville, Oliver, Kyrkeady		
Dunn, Tom Henry, Bedlington	Miller John Edward, Saltcoats		
Earlam, Robert Henry, Chester	Miligan, William, Portsmouth		
Edgar, George Black, Thornhill	Milroy, Andrew, Glasgow		
Elgar, John Butler, Fakenham	Mitchell, Donald, Inverness		
Ellis, Gerald Edwin, Loddon	Monson, George Alfred, Hayle		
Elwood, William, Grimsby	Montague, James, Stockton-on-Tees		
England Alfred, Leamington Spa	Morgan, Arthur Ewart, Hawkhill		
Evans, Thomas Henry, Llandysul	Morris, Evelyn Harry, Peterborough		
Eyres, Fred, Wainfleet	Moss, James Ernest, Ashton-under-Lyne		
Field, Ernest Peter, Hall	Mote, Charles Frederick, Crewkerne		
Field, William J., Cambridge	Moxon, Gerald Robert, Hampton		
Findlay, Alexander Wilson, Bailiff Bridge	Muir, John, Edinburgh		
Flood, William Hall, Lee	Mundy, Alfred James, Honiton		
Fox, George Alexander, Falmouth	Murray, Edwin, Leeds		
France, Hugh Archibald, Penicuik	Murray, William Low Burgess, Liverpool		
Francis, Charles Joseph, Burnley	Neale, Cecil, Leicester		
Gale, George Thomas, Barnstaple	Nelson, William Brown, Harrogate		
Gardner, Thomas James Elijah, Hythe	Nicholson, George, Tynemouth		
Garnett, John Benbow, Manchester	Nicolson, Albert, Edinburgh		
Giles, Frederick, Sheffield	Norris, George, Long Sutton		
Gill, Frank, Keighley	Osmond, Charles Holdway, Liverpool		
Glass, James G., Grantown	Parry, Idwal, Llanrwst		
Golden, Ernest, March	Parry, Thomas Jones, Rhuddlan		
Gosling, Ernest Scrase, Brighton	Patterson, John, Kelso		
Graham, Edwin, Wigton	Peace, William Henry, Huddersfield		
Graham John Moffat, Workington	Peddie, Alfred Bayne, Dundee		
Green, Charles Orton, Brackley	Petrie, David Laurence, Carnoustie		
Gurnell, William, Ryde			

THE Board for Scotland met in Edinburgh, and concluded their work on Saturday, July 30. The following passed:—

MAJOR EXAMINATION.

Marie, Louis Xavier, Port Louis, Mauritius | Stewart, Alexander Stephensons, Edinburgh

MINOR EXAMINATION.

Adam, Alexander Anderson, Glasgow
Anderson, John, Edinburgh
Angus, Robert Smith, Dunbar
Austen, John, Manchester
Belbin, Harry Ashley, Sheffield
Brice, Frederick Gratton, Leicester
Broadbent William Henry, Manchester
Brown, John, Glasgow
Cameron, James Ellison, Inverness
Carmichael, John, Edinburgh
Christie, George, Edinburgh
Conley, Thomas, Edinburgh
Cruikshank, William, Edinburgh
Cunliffe, John, Accrington
Currie, James Charles, Edinburgh
Douglas, Robert Donald, Edinburgh
Draper, Arthur Longfellow, Edinburgh
Gibson, James Arthur, Glasgow
Hanson, Joseph, Huddersfield
Harrison, Alfred William, Pendleton
Hewitt, Charles Herbert, Sheffield
Hick, Alfred William, Manchester
Hickin, William Edward, Liverpool
Howling, Abram Edward, Leith
Innes, George, Edinburgh
Jones, Charles William, Merthyr Tydvil
Lee, James Arthur Richard, Merthyr Tydvil
Mackie, John Scott, Fyvie
McPherson, Frederick Charles, Edinburgh
Messenger, Arthur Herbert, Southport
Mitchell, David, Bridge of Weir
Moorhouse, Joseph William, Manchester
Nicholson, John H., Birmingham
Pickup, John, Manchester
Plant, Walter Edward, Doncaster
Rennie, Alexander, Edinburgh
Rennie, John Chalmers, Edinburgh
Reech, Alexander Thomas, Edinburgh
Rigby, Walter, Edinburgh
Scanlon, Frederick William, Macclesfield
Scott, Henry Fife, Edinburgh
Scott, Joseph, Barrow-in-Furness
Sewell, Edward Augustus, Bradford
Smith, Henry Edmund Lee, Manchester
Spencer, Frederick, Dewsbury
Thomas, Thomas, Manchester
Thompson, John Meikle, Dumbarton
Thorp, Walter Thomas, Glossop
Watson, James Rutherford, Glasgow
White, Alexander Arthur, Bathgate
Wilson, John Jorden, Manchester

THE Board of Examiners for England and Wales examined forty-eight candidates for the

MAJOR EXAMINATION

last month, and the following nineteen passed:—

Atkinson, Alfred, Bishopton Mills
Baxendale, George, Congleton
Blakeley, Leonard, Otley
Boucher, John Mycroft, Bristol
Chaston, George Hunt, Alresford
Dean, John Thomas, Haslingden

Gane, Eustace Harold, London
Hall, Samuel William, Lichfield
Heanley, Alfred Vergette, Peterborough
Hill, Ernest William, Wisbech
Jones, Robert Haselwood, Bury St. Edmunds
Jowett, Hooper Albert D., Lancaster

Lawson, Frederick, Workington
Nash, Albert Hardstaff, Sleaford
Overend, George William, Leeds
Sansom, Maurice, Barrow-in-Furness
Shaw, George Arthur, Stockport
Tayler, Ernest Walker, Tewkesbury
Turney, Frederick Edmund, Plymouth

MINOR EXAMINATION.

One hundred and ninety-one candidates were examined, and the following sixty-seven passed:—

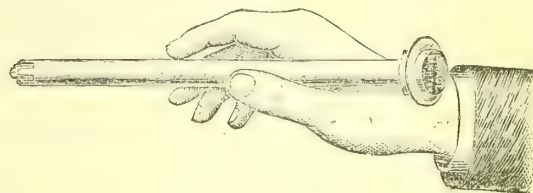
Allison, J.
Andrews, T. N.
Barnett, C.
Barritt, W.
Baynard, E. J.
Birt, O.
Borrow, R. H.
Bowlas, D.
Brittan, T. B.
Casson, R. A. (Miss)
Chadwick, G. W.
Clark, G. R. H.
Clement, H. E.
Colley, H. W.
Cooper, A. J. B.
Crawshaw, G.
Croft, D.
Crouch, W. S.
Davies, R. L.
Dent, J. W.
Dickenson, E. E.
Downward, J. J.
Drayton, E.
Durant, H. T.
Eynon, C. F. J.
Fielding, W. R.
Flint, W.
Garner, J. N.
Gillett, F. J.
Goatcher, W. G.
Gorton, A. G.
Grayson, W. H.
Hartley, J. H.
Hope, T.

Inge, E. G.
Jackson, H. R.
Jary, T. P.
Jenkin, A. H.
Jones, D.
Joseph, L.
Owen, J. G.
Palmer, A. H.
Pugh, W. H. W.
Reas, T.
Richards, R. H.
Richmond, S.
Roe, A.
Rose, T.
Rugman, A. T.
Sanders, E. C.
Selby, J.
Shacklock, J. H.
Sharp, W. A.
Sidebottom, J.
Simmonds, F. L.
Stelfox, J. A.
Suttle, J. H.
Tilson, A. E. (Miss)
Tootill, R. H.
Tweedy, J. H.
Type, H. G.
Waddington, I. (Miss)
Whitelock, H. W.
Whitwell, F. W.
Willis, W. A.
Withers, J. T.
Wood, A. H.

United Kingdom of certain preparations made by Messrs. Reed & Carnrick, of New York. These we have now had the opportunity of examining. One of the most interesting of the preparations is "Kumysgen," which is a white substance in short compressed sticks, each of which makes with an ounce of water as much kumys. The value of this milk preparation has not had, we have always thought, the attention paid to it that it deserves, for in many gastric troubles it can be assimilated when nothing else will stay on the stomach. But the lack of attention is probably due to the difficulty of getting the kumys of the right standard, and this objection is in a large measure met by the "Kumysgen." With it there is no trouble in making the beverage and of ensuring its uniformity. "Lacto-cereal Food" and "Lacto-preparata" are two foods for invalids and infants of a special character, the former being composed of powdered milk (sterilised and partly digested), dextrinated wheat, malted barley, desiccated bananas, cocoa-butter, and manna. "Lacto-preparata" is a humanised milk in powder form. The series of preparations also includes "Pancrobilin" compounds in liquid and solid form, which are elegant in appearance, and are claimed to possess properties not hitherto presented in hepatic remedies. Bile and pancreatic extract are the chief elements in these.

A COUNTER ADJUNCT.

MESSRS. SAVAGE & Co., pharmaceutical chemists, Brighton, have introduced a very useful shop-requisite in their "sealing-wax holder," which is represented in the accompanying illustration. It is a tube with a screw-top



(upon which a seal may be engraved), from which a spring presses down the stick or piece of wax which is inserted. The holder is not only useful in itself, and an elegant and handy thing to work with, but it enables wax to be used to the last grain.

Notes of Nobelies.

A NEW GUM-BOTTLE.

MESSRS. S. MAW, SON & THOMPSON have lately introduced a gum-bottle, which we figure. As will be seen from our illustration, it consists of four parts—viz., a wide-mouth bottle (4-oz.), with a perforated porcelain-topped cork stopper, into which is fitted a piece of glass tubing $2\frac{1}{4}$ inches long and $\frac{5}{8}$ inch wide, and upon this rests a porcelain top, fitted internally with a perforated india-rubber disc, through which the brush passes. The effect of the combination is that the brush never becomes fixed in the top-stopper, and can at all times be raised or lowered to any level. The brush and the top-stopper are practically one, so that on lifting it the superfluous gum is wiped off in the tube, down which it flows quickly, leaving no objectionable incrustation on the top. The bottle is as simple and clean as any we have seen, and just such a one as chemists can use and sell.



NEW DIETETIC PREPARATIONS.

REFERENCE was made last week to the fact that Messrs F. Newbery & Sons have undertaken the agency for the

At Burnley Borough Police Court, on July 28, Darius Bradshaw, aged 19, was committed for trial on a charge of breaking and entering nine shops, including that of Mr. Hitchon, chemist, St. James' Street, Burnley, and stealing in all about 6*l*. In his evidence Mr. Hitchon said that he found his safe had been interfered with, the handle had been wrenched off, and the lock had been so tampered with that the key would not fit it.

UNITED STATES TRADE-MARKS—Registered July 19:—"Be Sure and Work the Horse," for a salve, by Bickmore Gall-cure Company, Old Town, Me.; "Consumption Conquered" and portrait, for a medicine, by Mrs. S. D. Chapman, Ovilla, Tex.; "Fruitanza," for a compound of fruit and cascara-bark, by Emory T. Booth, Brooklyn, N.Y.; "Our Pet," for perfumery, by Bean & Vail Brothers, Philadelphia, Pa.; "Operle Cream," for a dentifrice, by Florence Manufacturing Company, Northampton, Mass.; "Alcomania" and a portrait, for a cure for drunkenness, by Alonzo Noteman, Toledo, Ohio; "Scott's Singing Balm," for a remedy for sore throat, by Maria Scott, San Diego, Cal.; "Absorbine," for liniments, by W. F. Young, Meriden, Conn.; "Black Beauty," for veterinary remedies, by E. A. Craighill & Co, Lynchburg, Va.

AMERICAN PHARMACEUTICAL ASSOCIATION.

THIS Association held its fortieth annual meeting at Profile House, White Mountains, N.H., last month (sessions beginning on Thursday, July 14, at 10 A.M.), under the presidency of Mr. A. K. Finlay, of New Orleans. About three hundred and fifty were present, and, after the formality of welcome, Mr. Finlay delivered an address in which he mentioned the coincidence that that day was the centennial of the birth of the first President of the Association, Daniel B. Smith.

He then summarised the principal events of the year in connection with pharmacy, and dwelt at some length on the



Mr. Alexander K. Finlay, President of the American Pharmaceutical Association, is a native of Ireland, and went to the States in 1858. He served his apprenticeship to the drug trade at New Orleans with his brother, Mr. Thomas K. Finlay, and was admitted into partnership in 1867. Mr. Finlay is now sole proprietor. He is a graduate of the University of Louisiana, obtaining his degree for pharmaceutical studies in 1873. He is prominent in pharmaceutical affairs in the State, and is well known to the members of the A. P. A., having served as local secretary at New Orleans last year. Mr. Finlay is in his 49th year.

evils of price cutting on proprietary medicines, relating some instances in which the trouble had been met and overcome. Another evil, from the pharmacist's point of view, was the increased use of ready-made prescriptions by physicians, and the President urged that an effort be made to check this practice.

THE STRENGTH OF THE ASSOCIATION.

The reports submitted showed that the total receipts during the year had been \$12,962.75; total disbursements, \$9,128.42; amount in treasury, \$3,834.33. One hundred and seventy-six persons were invited to become members at the last meeting, and 139 had accepted. There are now 1,396 active and 21 honorary members. The International Pharmacists' Congress at Chicago in 1892 was referred to. The committee on the national Formulary recommended a number of simple but effective formulae through its chairman, Mr. Louis Diehl. The treasurer's salary was raised from \$300 to \$750.

CUTTING.

The whole of the day on July 15 was devoted to a discussion of the means to stop cutting. This occurred in the Commercial Interests section, and was opened by Mr. W. H. Torbert, of Iowa, the Chairman, who, in his address, after a reference to certain burdensome laws relating to the sale of drugs and liquors, declared that the eyes of all pharmacists were on the section in the expectation that it would deal with the cut-rate problem. The opinion held by some

lawyers that the arrangement made for the suppression of price-cutting on patent medicines was an infraction of the anti-trust law was what had blocked its way and prevented success.

He advised that, in view of the agreement of proprietors, wholesalers, and retailers, and the doubt as to the legality of the American Pharmaceutical Association's plan, the Association insist upon the trial of the plan. This meant much work for wholesalers and retailers, but it was better than having one-third of the sales of the retail druggists without profit. The only alternative was to abandon the field to the cutter.

Mr. Alexander submitted the following resolution:—

That the plan of the A. P. A., as ratified by the joint committee of the National Wholesale Druggists' Association, the proprietors, and retail druggists, be reaffirmed, and that this section be directed to request the Manufacturers and Proprietors' Association to execute the plan, and put it into operation at the earliest possible date.

The discussion on this matter was opened by Mr. Alpers, of Bayonne, N.J., and if the section had purposely chosen this gentleman to speak, they could not have selected a better for exciting a debate, as he at once took up a strong position that the Association should let cutting alone and stick to scientific work. He said, in the first place, that selling proprietary medicines is not professional work—any girl or boy could sell them. Secondly, cutting cannot be stopped; for it is impossible to keep cutters from getting the goods, and the retailers themselves do not want the business stopped. Thirdly, prices cannot be restored; for the public will not have it, and druggists are finding a remedy for cutting in the preparation of remedies themselves to take the place of proprietary medicines which are cut in price.

Messrs. Ebert (Chicago), George J. Seabury (New York), W. H. Rogers, Bartlett, and others spoke in favour of the resolution. Mr. Canning and Dr. Eccles spoke against it, and the discussion was warm, and so long that Mr. Seabury's proposal to limit speeches to five minutes was heartily welcomed. Still, the matter extended over the second session, during which Mr. Finlay, the President, made a strong plea for local organisations as the greatest powers for the control of rate-cutting, at which Mr. S. A. D. Sheppard exclaimed that he would give Mr. Finlay \$10,000 and all his expenses if he would put Boston on its feet in regard to price-cutting. Excitement rose high as the vote was reached, and points of order flew thick and fast. After an amendment offered by Mr. Canning was lost the original resolution was carried by an overwhelming majority, and the announcement of the vote was received with prolonged cheers.

A motion was made by Mr. H. C. W. Martin to the effect that all manufacturers of proprietary medicines be requested to mark all bottles and packages so that the source of supply may be easily traced. It was carried almost unanimously, as was also one by Mr. Seabury to the effect that the State Associations be informed of the action of the A. P. A. in reaffirming the "plan" and be requested to pass similar resolutions, and another, by Mr. Ebert, requesting the wholesalers and manufacturers to unite in concerted action against cut rates. Further, Mr. Hallberg moved that steps be taken to secure local organisation, and this was agreed to.

The Scientific section had the whole of the Saturday to discuss twenty-nine papers. Mr. C. S. Hallberg presided over this section, and delivered an address. In the course of this he made a practical suggestion regarding

NEW REMEDIES,

namely, that a committee of three be appointed by the section, including a medical man, who may be a member of the Association, to undertake the compilation of an ephemeral publication containing brief descriptions of the properties, uses, and doses of such new remedies as appear from time to time, together with such pharmaceutical preparations as may have become sufficiently known to warrant it, such compilation to be published in convenient pamphlet form at such intervals as may be deemed expedient—say, quarterly—and to be distributed among medical men by pharmacists in their respective localities. The publication of such a work to be undertaken by the committee without expense to the Association. This suggestion was adopted. The report will be published quarterly at 10 cents. The first paper read was on

CHEMICAL SYMBOLS IN PHARMACY.

This was by Mr. W. W. Kerr, of Batesville, Ark., and his note was a reply to the query: Would not chemical symbols, in addition to the official titles, be advantageous on the labels of shelf-bottles? He thought they would—(1) to beginners as an educational force; (2) to keep older druggists in mind of the composition, &c., of the articles; for, if a knowledge of chemistry be an essential qualification of the competent pharmacist, then whatever tends to keep that knowledge prominently present with him in all his work should be encouraged, and chemical formulæ on shelf-bottles do that.

Dr. C. O. Curtman then read a paper on the

AMYL NITRITE OF PHARMACY,

which he illustrated with experiments. The author has recently been working on spirit of nitrous ether, traversing in this connection with the nitrometer the ground which so many English workers have already explored, and he now applied the nitrometer to amyl nitrite in the same manner that Mr. A. H. Allen did seven years ago, but Dr. Curtman's nitrometer has two bulbs at the bottom of the tubes (see fig. 1)—a combination of Lunge's and Allen's. Several points in his paper may be noted. First, German and American fusel oils differ in composition. Fusel oil from potato spirit (German) contains principally iso-amyl alcohol and ethyl alcohol, and therefore furnishes a pure product. Fusel oil from maize whisky (American) contains beside the iso-amyl alcohol small amounts of its several isomeric varieties (normal amyl alcohol, *lavo*-rotary methyl-ethyl-carbin-carbinol, &c.), also iso-butyl and propyl alcohols. We find a corresponding difference in the nitrites prepared from the oils, and among unsuspected products occasionally found are amyl valerianate, nitropentane, ethyl nitrite, and butyl nitrite. This part of the subject was more fully discussed by Dunstan, Williams, and Woolley four years ago, but Dr. Curtman did not refer to their papers. Next he proceeded to discuss pharmacopoeial characters and tests of the nitrite, explained how it can be assayed by the nitrometer, and what takes place then, and gave results of the examination of samples of the nitrite obtained in the States. These show great variation in the nitrite value; the poorest sample yielded 27.14 per cent. of amyl nitrite, and the best 93.71 per cent., but most of the samples gave figures between 40 and 80 per cent. The results had all a temperature correction, 0°C being taken as the normal. Dr. Curtman, in concluding, drew attention to the means of preserving this medicament; and among the methods to accomplish this there stands foremost, he said, protection from light. Bottles of the darkest brown glass should be chosen, aided by wrappers of opaque paper, and by position in the darkest part of the store-room or prescription-desk. Besides these, well-fitting stoppers and the coolest possible storage are necessary aids in delaying decomposition. Enclosure in hermetically-sealed pearls is certainly a very eligible mode of preservation, if aided by protection against the influence of light and by accurate dosing.

For this paper Dr. Curtman was specially thanked by the Association.

"ECONOMIC PERCOLATION"

was the title of the next paper, by Mr. Harry V. Arny, of New Orleans. He found, on making a number of spirituous percolates, that the loss of spirit by evaporation varied from 2 to 76 per cent., the average being 16.2 per cent. Thereupon he devised the apparatus shown in fig. 2, which consists of a glass percolator with a brass cover containing two orifices—one for the ingress of menstruum, the other for air. The former hole was tightly closed by means of a screw-cap fitted with a rubber washer, while from the latter proceeded a U-shaped brass tube, to which was attached a rubber tube of sufficient length to reach down to the receiver. The cover was tightly fitted to the percolator by means of iron clamps, a rubber washer completing the fitting, while the projecting glass rim of the percolator was fortified by a wooden ring placed beneath. As a receiver, a tall museum-jar was utilised. Two holes were made in its cover and were fitted with corks, through each of which passed a piece of glass tubing. Over one of these tubes was slipped the rubber tube from the brass cover mentioned before, while to

the other was attached a short rubber tube, the upper end of which was fitted by means of a glass tube and cork to the neck of the percolator. Percolation in this apparatus resulted in the reduction of the average loss of spirit to 5.7 per cent., the highest being 11 per cent., and in the case of cinchona the reduction was from 76 to 3 per cent. Still another apparatus was devised,

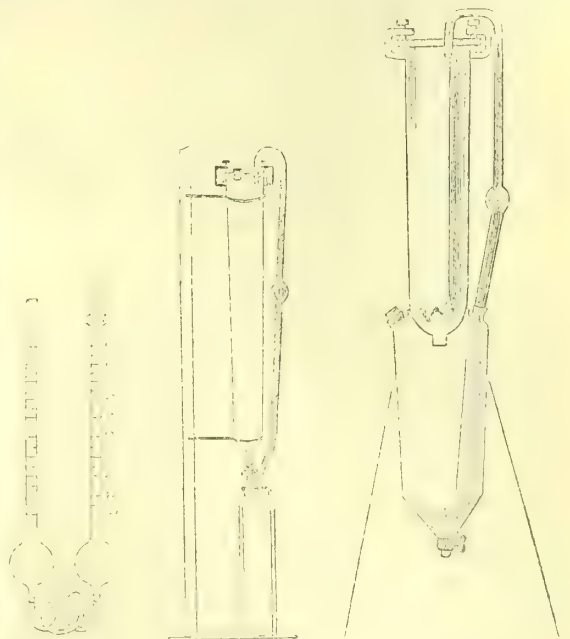


FIG. 1.

FIG. 2.

FIG. 3.

as shown in fig. 3—viz., a narrow percolate which is screwed into the wide receiver at A, the screw not being shown in the figure. One portion of the screw is soldered to the base of the percolator, the other to the top of the receiver, the joint being tightened by means of a tow. From the upper portion of the receiver emerges a tube, which is connected to the percolator cover by means of a syringe bulb and tubing; an additional orifice in the same place, with screw-cap, would be useful in permitting access of air when the percolate is drawn off. The arrangement for drawing off the percolate at the lowest point in the receiver will be found most convenient in fractional percolation, as the percolate arranges itself in layers according to specific gravity, and need not be separated into fractions until the process is concluded. The percolator and receiver now in use are constructed of tinned iron, the chief objection to which is its opacity. The effects of this, so far as the receiver is concerned, may be overcome by the employment of a glass gauge; but, if practicable, the use of a glass apparatus would be far preferable.

SEPARATION OF STRYCHNINE AND BRUCINE.

Mr. H. W. Snow, in a note on this matter, reported that he had failed to get good results with Dunstan and Short's, Schweissenger's, Dragendorff's, Lyon's, and Prescott's methods. Other methods which suggested themselves were tried. First, known weights of the alkaloids were taken, and combined with chloroformic hydrochloric acid. The hydrochloride which separated was then titrated with $\frac{30}{38}$ soda, phenolphthalein being the indicator, as the freed alkaloid has no effect upon phenolphthalein. The results were close to what theory required, but when the method was tried on mixtures of brucine and strychnine it was found to be useless. Next, Prescott's method of separation by weak alcohol was tried. Brucine is soluble in 20-per-cent. alcohol, strychnine very sparingly soluble; but on trying the plan with mixtures of the alkaloids it was found that brucine influenced the solubility of strychnine. Finally, the action of 1.056 nitric acid as suggested by Gerock was

tried, on the supposition that on heating the brucine would be decomposed and the strychnine not. The result was the discovery that in the case of brucine a body is formed that precipitates Mayer's reagent, whereas with strychnine the coloured product formed by the action of the acid causes no precipitate with Mayer's reagent or other general alkaloidal tests. These experiments indicated that while there is considerable difference between the alkaloids in their resistance to 1.056 acid, it is very doubtful whether this can be applied for their estimation when in mixture.

Mr. Adam Conrath next contributed a paper on

AROMATIC SPIRIT OF AMMONIA,

showing that, in the cold process of the U.S.P., it seems preferable to allow the aqueous solution to stand some time before adding the alcohol, the conversion of the carbonate into monocarbonate thus proceeding more rapidly than when the alcohol is added as the U.S.P. directs.

Following this, Mr. J. U. Lloyd read a paper on

AMERICAN POTASH.

This was formerly an article of much importance, and was exported from the country in large amounts. The New England States were at first the principal producers of potash, Boston, where it is now of no consequence, once being the great export market. With the destruction of the forests the source of supply receded from the East, progressing into the West, where until a comparatively recent period more or less was manufactured, but at present only a few stray casks drift into the hands of wholesale druggists or commission merchants. However, contrary to general opinion, the manufacture of potash is still carried on in some parts of the North-west on a considerable scale. In the neighbourhood of the forest of northern Michigan, and in portions of the provinces of Canada, this substance is still systematically manufactured the year through. By "potash" is meant a substance containing 80 to 95 per cent. of carbonate and hydrate of potash, the balance being made up of sulphate of potash, chlorides of sodium and potassium, and insoluble matter. About 70 per cent. KOH is the standard which it is possible to obtain, but Mr. Lloyd found the average of many casks of first sorts came out at 58.4 per cent., and dealers would not guarantee more than 60 per cent., as they had not control of the "salting" which is practised by makers. However, a strong protest improved matters during the last twelve months. A total of 504,138 lbs. averaged 73.5 per cent. KOH, three car-loads averaging over 75 per cent. KOH, while one car-load averaged over 80 per cent. This is evidence that a standard of 70 per cent. KOH is attainable. For generations it has been customary to add more or less salt to the contents of the potash-kettle just before it is "melted down," and sometimes lime is also added. This not only increases the yield and helps to make it cake, but it improves its appearance. Good potash is generally opaque, of a dull grey, slate, or bluish colour, often streaked with red or greenish stains. It deliquesces on exposure to the air, and becomes slowly pasty. It is mostly (unless much lime is present) soluble in water. Sometimes it presents a whitish appearance in the centre of the cake, and occasionally is honeycombed. This description will generally average 70 per cent. and upwards KOH. That which is largely mixed with salt is usually crystalline, often nearly white, pearly and translucent, or of a beautiful delicate pink, and seems to be the most highly valued by those who judge only from appearances.

TARAXACUM JUICE.

Mr. L. E. Sayre, of Lawrence, Kansas, in a note on this subject, contented himself with a single analysis. A sample of root collected in May yielded 57 per cent. of juice (having 22.42 per cent. of moisture in the root). The juice was sp gr. 1.007, and contained 1.472 per cent. solids, of which 0.036 was sugar and 0.0045 ash.

ESTIMATION OF OIL OF WINTERGREEN.

Mr. B. J. Ewing, of Ewingville, Ohio, suggested that this oil can be estimated by saponification with soda, and determining the excess of soda after saponification. The process is as follows:—

Weigh 5 grammes of the oil in a tared flask of 100 c.c.

capacity, and pour upon it 40 c.c. volumetric solution of soda. Cork the flask securely, and heat the contents at 60° C. until the precipitate formed at first has totally disappeared. Cool, remove the cork, and again apply, and maintain heat at the boiling-point for five minutes; again cool, add enough solution of phenolphthalein to impart a red colour, and then enough normal hydrochloric acid to render the liquid neutral. Subtract the volume of acid required from 40, and multiply the remainder by .138 (one-thousandth of the molecular weight of salicylic acid), and the resulting product by 20, to get the percentage of salicylic acid; or multiply the remainder by .152 (one-thousandth of the molecular weight of methyl salicylate), and the resulting product by 20, to get the percentage of methyl salicylate. This method has proved effectual in detecting an oil offered for sale by a travelling broker, which contained but 68 per cent. of methyl salicylate.

SOLUTION OF BIMECONATE OF MORPHINE.

Miss Alice L. Braunwarth, Ph.G., Muscatine, Iowa, said that although this preparation of opium has been in great favour for many years, no positive formula for its preparation nor standard for strength exists in any authoritative work. Accordingly, she did a great deal of work in regard to the morphia yield of morphine sulphate, the saturating-power of meconic acid, and the strength of commercial solution of morphine bimeconate. It is a 1-per-cent. solution with 24 per cent. of alcohol. Upon the basis of her experiments Miss Braunwarth said the following formula will produce a preparation such as is desired:—

	Parts
Morphine crystals	16.0
Meconic acid crystals.. .. .	7.0
Alcohol, 91 per cent.	265.0
Distilled water	715.5

Dissolve the morphine and meconic acid in 100 parts of water by heat, cool, add alcohol and sufficient distilled water to make 1,000 parts.

"THE BOTANICAL NAMES OF THE U.S. PHARMACOPOEIA."

Dr. H. N. Rusby, in a paper with this title, made an interesting review of the principles which should be followed in the revision of the Pharmacopoeia, to which he added a record of all the places and dates of publication of U.S.P. botanical names. The appendix of the paper thus became the more valuable part of it. The nature of the suggestions made may be judged from the following examples. It is proposed to give *Asafetida*, as derived from *Ferula fetida*, Bunge. The synonyms are: *Scorodosma fetida*, Bunge; *Ferula Asafetida*, L.; *Narthex Asafetida*, Falconer; *Ferula Scorodosma*, B. & T.; and *Ferula Narthex*, Boiss. The synonymy of this plant is one of the most difficult to unravel of all in the Pharmacopoeia, says Dr. Rusby. According to B. & H., *Narthex* falls into *Ferula*. If there were no doubt as to Linné's plant, we should be compelled to adopt his name. But while Hugh Falconer declares that specimens of the true *asafetida* plant which he studied were identical with the plate of Kämpfer and the specimens on which it was based, the foundation of Linné's name, Boissier is equally certain that that figure and specimen refer to a different plant from that which yields *asafetida*, and that a new name must be made for the latter. Bunge's name "*fetida*" seems sufficiently distinct from "*asafetida*" to stand in the same genus with it, and it is many years older than Boissier's name "*Narthex*." As to *Garcinia Hanburyi*, Hook. f., Dr. Rusby said it seems to be wrong. Hanbury regarded the plant as a mere variety, and called it *var. pedicellata*, and it is not at all improbable that he is correct. But, if raised to specific rank, the name should be *Garcinia pedicellata*, Hanbury—the presence in the genus of the name *pedunculata* apparently not preventing. In regard to *Oleum Myrcia*, Dr. Rusby said it is from a species of *Myrcia* which should be called either *M. caryophyllata*, Jacq., or *M. racemosa*, Miller. Between 1764 and 1771, Jacquin ("Obs.," 2, p. 1) had called it *Myrtus caryophyllatus*; but the author could not say if this name is older than *Caryophyllus racemosus*, Miller; *Myrcia acris*, Swartz., of the present edition, did not appear until 1783, but until we can decide which of the above names is the older, it is not worth while to make a change.

EASTON'S SYRUP.

With a long title and a quotation from Walter Savage Landor, Professor Charles T. P. Fennel, of Cincinnati, commenced a long paper on this subject. The American syrup is from the outset ferric, and the result of that is that a basic ferric phosphate is slowly precipitated in it, the syrup becomes dark, and the author's intention was to show by equations, &c., how these undesirable results cannot be avoided while things remain as they are. The paper was a longer and more erudite one than can be adequately treated in a short abstract.

SYRUP OF CALCIUM LACTOPHOSPHATE.

Mr. H. W. Aufmwasser has found in this syrup, as generally made, deposits of tricalcium phosphate and monohydrogen calcium phosphate. The following formula he found to yield a permanent syrup:—

	Parts
Calcium carbonate	21.3
Phosphoric acid, 50 per cent.	109.4
Lactic acid	33
Orange-flower water	80
Sugar	600
Distilled water, a sufficient quantity to make	1,000

Dissolve the carbonate of calcium in the acids diluted with the orange-flower water and with 150 parts of water, filter the solution, and wash the filter with water to obtain 100 parts. In this dissolve the sugar, if necessary with a little heat.

The same author made some comments on soluble lacto-phosphate of calcium.

GLYCERINE, BORAX, AND BICARBONATE OF SODA.

Mr. J. U. Lloyd confessed that "some months ago" it did not occur to him that anything unusual would result in the following prescription:—"Powdered borax, $\frac{1}{2}$ oz.; bicarbonate of sodium, $\frac{1}{2}$ oz.; carbolic acid, 10 drops; water and glycerine, of each, 2 cz. He experimented, and found that a mixture of bicarbonate of sodium and powdered borax reacted upon each other in the presence of glycerine, producing sodium borate and carbon dioxide, a fact that had previously escaped his observation. Then Professor Norton, President of the Cincinnati Chemical Society, looked up the literature on the subject, and an explanation by a Mr. Ibes, of Hopkins University, given in 1877, was found.

CORROSIVE-SUBLIMATE LOTION.

For keeping this lotion clear, Mr. Adolph Levy revived the old suggestion of adding 5 parts of tartaric acid to each part of the sublimate. Compressed tablets containing the ingredients in these preparations may be coloured with a harmless pigment to guard against their careless use. They are instantly soluble in warm water. Gauze, thoroughly sterilised, after being washed and ironed and immersed in the solution of the strength of 1 to 1,000, retained its activity in moist condition for over one year. The tartaric acid acts as a mordant to fasten the medicinal agents to the fibre.

SYRUPUS FERRI PHOSPHATIS, U.S.P.

Mr. W. H. Wearn stated in a paper that the cause of the darkening of syrups containing phosphate of iron is that "the sunlight destroys the molecule of ferrous oxide, thereby liberating its oxygen and renewing chemical affinity of ferric phosphate, enabling it to appropriate the free atom of air which produces ferrous phosphate and eliminates ferric salts entirely." He recommended that "a concentrated solution of ferri phosphas be prepared, and exposed to sunlight until the green colour is developed and evolution of oxygen gas ceases, after which it may be made into syrup of desired strength."

CALCIUM HYPOPHOSPHITE.

This salt "is largely contaminated with insoluble salts of calcium. Estimations of the amounts present are desired, and a means of avoiding the contamination." So said the query-paper of the association, but on testing five commercial samples Mr. L. E. Sayre found the percentage of true hypophosphite in them to be 97 to 99.7—not a startling revelation of inferior quality. The rest of his paper was concerned

with the tests and way to manufacture the hypophosphite. The following papers were also read:—

The Practical Use of the Microscope in Pharmacy.

By Alfred R. L. Dohme, Ph.D.

Phosphate of Iron (U.S.P. 1880) and Phosphoric Acid.

Efficacy of the Use of Glycerine as a Substitute for Other Menstrua in Syrups.

By L. F. Stevens.

Alkaloids Accompanying Berberine, their Properties and Reactions.

By W. W. Birkmier, of Ann Arbor, Mich.

The Relationship of the White Alkaloids of Berberine-bearing Plants.

By R. D. Young, of Ann Arbor.

The Action of Hot Sulphuric Acid on Beeswax, Paraffin, and Ceresin.

By C. C. Sherrard.

The Cultivation of Coffee in Jamaica.

By C. J. Lloyd, of Cincinnati.

Laboratory Notes.

By F. A. Thompson, of Detroit, Mich.

The last paper was enthusiastically received, on account of the practical information it contained, but Mr. Martin took exception to the name of the laboratory (Parke, Davis & Co.'s) in which the experiments were made being presented. Mr. Thompson said the laboratory of a well-known house was on the same basis as that of a university.

OTHER MATTERS ARRANGED.

The principal office-bearers for next year are:—President, Professor J. P. Remington, Philadelphia, Pa.; Vice-Presidents, A. P. Preston, Portsmouth, N.H.; Sidney P. Watson, Atlanta, Ga.; and William H. Averill, Frankfort, Ky.; and Reporter on Progress of Pharmacy, Henry C. Kreamer, New York. Professor C. T. P. Fennel was appointed Chairman of the Scientific Section.

At a meeting between the secretaries of the State Boards of Pharmacy and those of the State Associations the topics discussed were the interchange of State certificates and uniformity of standards in examinations in different States. No definite action was taken.

The Committee on Prize Essays (1892) awarded the first prize to Professor Fennel for his paper on "The Chemistry of the Elements Entering into Spirits of Phosphates of Iron, Quinine, and Strychnine of the Pharmacopœia." The second was awarded to Mr. H. V. Army for his paper on "Economic Percolation."

Three hundred and fifty new members were proposed and elected.

THE will, with a codicil, of Mr. Frank Clarke Hills, late of Redleaf, Penshurst, Kent, and head of the firm of F. C. Hills & Co., chemical manufacturers, of Deptford, who died on May 3, was proved on July 14 by Frank Ernest Hills, Edward Henry Hills, and Arnold Frank Hills, the sons, the executors, the value of the personal estate amounting to upwards of 1,942,000*l*. The testator bequeaths 1,000*l*. each to the British Home for Incurables and the Infant Orphan Asylum, Wanstead; 500*l*. to the Association for the General Welfare of the Blind; 300*l*. to the National Refuges for Homeless and Destitute Children; 200*l*. to the Metropolitan Convalescent Institution; 10,000*l*. to the widow and children of his late brother Thomas, to be equally divided between them; 10,000*l*. upon trust, for his brother George, for life; 5,000*l*. to his brother Henry; 1,000*l*. to the widow of his late brother Arthur; 65,000*l*. upon trust, for his daughter, Mrs. Ellen Marianne Harvey, for life, and then for her issue as she shall appoint; 65,000*l*. upon similar trusts for his daughter, Mrs. Constance Annie Harvey, and her issue; and legacies to clerks and foreman of yard in employ of firm of F. C. Hills & Co., of Deptford. The Redleaf Estate, with all the furniture, pictures, plate, household effects, wines, consumable stores, horses, carriages, live and dead stock, and arrears of rent, he gives to his son Frank Ernest. All the residue of his real and personal estate he leaves to his three sons, Frank Ernest, Edward Henry, and Arnold Frank, to be divided equally between them.—*Illustrated London News*.

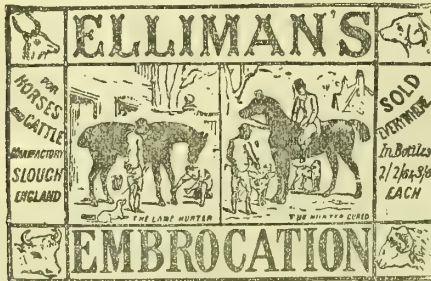
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Prize Competition.

See page 5.

Editorial Comments.

THE AGE OF THE EARTH.

To the chemist accustomed to calculations carried to the fifth place in decimals, the latitude demanded by the geologist is something appalling. How old is the earth? has been the ever-recurring question which the multitude has

been putting to the geologist, and which that man of science, with all his pretence of contempt for the mere vain curiosity of the common herd, has ever been trying recklessly to answer. When the world—that is to say, the penny newspaper world—first began to interest itself in the speculations of the philosophers, it was startled to learn that the traditional six thousand years which we had all been taught to look upon as the age of our worthy planet was an exploded notion altogether. Scientists told us, with a grim pleasure in the torture they were inflicting, that our earth must have existed many thousands of millions of years; and the evidence they adduced was terrific in its weight. We were gradually adapting our historic consciences to this most depressing view of things when, a few years ago, Sir William Thomson came to our rescue with the hopeful news that the earth could not have been in existence for more than 400 millions of years, and that it was scientifically conceivable that its age might not exceed the trifle of 20 millions of years. The margin was wide enough to allow of further investigation before geology could claim to be an exact science, but there seemed to be some satisfaction in getting any authoritative definition of the limits within which speculation might roam, and Sir William Thomson got a peerage—*post hoc*, if not *propter hoc*. The theory he expounded was based on calculations of the heat which the planet could bear when it first came into shape from chaos, and of the possible rate at which the heat had been dissipated. He finally fixed on the convenient figure of 100 millions of years as about the period which might be reckoned to embrace the whole geological history of the globe. Following Lord Kelvin's theories, and improving upon them, Professor Tait has lopped off 90 of these millions, and suggests 10 millions of years as a more reasonable hypothesis of the time within which the processes of earth-cooling could have occurred.

Thus we were galloping back gloriously to our old figure of six thousand years, but now the geological authorities have put their backs against the wall, and claim once more to be heard. Sir Archibald Geikie, LL.D., D.Sc., Foreign Secretary of the Royal Society, F.R.S.E., F.G.S., and Director-General of the Geological Survey of the United Kingdom, has the ear of the world this week, and from the tribune of the British Association, over which he presides this year, he answers back those frivolous physicists. Without claiming, to use his own expressive phrase, "the whole of bygone eternity," for the mutations and developments which the crust of the earth records, he "can hardly doubt that there must be some flaw in the physical argument," though he does not pretend to be able to say where it is to be found. "Some assumption, it seems to me, has been made, or some consideration has been left out of sight, which will eventually be seen to vitiate the conclusions, and which when duly taken into account will allow time enough for any reasonable interpretation of the geological record." In view of the sweeping reductions of time which the physicists demand, the President of the British Association plaintively compares the geologists' position with that of King Lear when his bodyguard of one hundred knights was cut down. "What need you—five-and-twenty, ten, or five?" demands the inexorable physicist, as he remorselessly strikes slice after slice from his allowance of geological time. Sir Archibald Geikie is inclined to admit that the demands of the early geologists for an unlimited series of ages were extravagant, and even for their own purposes unnecessary, and he believes in occasional sudden convulsions and upheavals, and natural catastrophes. But there are processes of denudation and deposition clearly traceable, and capable of actual measurement. The speed varies according to circumstances,

but taking the sediment moved by rivers to the ocean as an example, he says:—

In some cases the lowering of the surface of the land may be as much as $\frac{1}{730}$ of a foot in a year, in others it falls as low as $\frac{1}{6800}$. In other words, the rate of deposition of new sedimentary formations, over an area of sea-floor equivalent to that which has yielded the sediment, may vary from one foot in 730 years to one foot in 6,800 years. If now we take these results and apply them as measures of the length of time required for the deposition of the various sedimentary masses that form the outer part of the earth's crust, we obtain some indication of the duration of geological history. On a reasonable computation these stratified masses, where most fully developed, attain a united thickness of not less than 100,000 feet. If they were all laid down at the most rapid recorded rate of denudation, they would require a period of seventy-three millions of years for their completion. If they were laid down at the slowest rate they would demand a period of not less than 680 millions."

A considerable part of the President's address consisted of what seems to be an almost extravagant eulogy of the Scottish geologists of just a hundred years ago. The genius of the locality, and the happy thought of the centenary, may perhaps excuse a little over-estimate of the scientific greatness of Dr. James Hutton, the author of the "Theory of the Earth," of his apostle Playfair, and of his successor William Smith. Sir Archibald Geikie was not professing to give a history of geology, and of course he was discoursing to men and women who knew something of that history. But the careless reader of the address may pardonably be advised that the science of geology did not date from 1792, as some of our leader-writers in the daily press have too readily assumed, and the notion of the perpetual changes of sea and land which Hutton made so much of was not by any means his discovery. Very clear conceptions of the constant fluctuations occasioned by rivers, rains, and other natural phenomena were expounded by Aristotle, by Strabo, by Herodotus by Pythagoras, and by other ancient scientists. Herodotus calculated, for instance, almost in the style of the President of the British Association to-day, that the sediment carried down to the ocean by the Nile, would be sufficient, if that river could be diverted into the Red Sea, to fill up that long gulf in from ten thousand to twenty thousand years; and Strabo discusses with astonishing acuteness the phenomena of marine shells being found at vast distances from the ocean. The Arab philosophers took but little interest in the "crust of the earth," but from the sixteenth to the eighteenth centuries, Italian, German, French, and British observers were busy thinking about the development of rocks and so forth. Still, Hutton brought more clearly into view than before the processes which were affecting the earth, and the effects of these processes; and no doubt it is since his time that steady persistent investigation has brought to our knowledge the overwhelming evidences of a vast procession of ages, and species, and conditions, the study of which constitutes geology. By many artistic touches in his really brilliant address, Sir Archibald Geikie shows the fascination of the science of which he is so eminent an expositor, and the concluding passage in which he vaguely, but graphically, sketched the panorama from the Castle Rock down the ages from the dense jungles of strange vegetation, the steaming swamps and broad lagoons and volcanic cones of Silurian times to the busy streets of to-day, is likely to fix itself in the memory of all who heard it, and of many who read it.

MEDICAL PROGRESS.

MR. JOSEPH WHITE, this year's President of the British Medical Association, had the good fortune to be its loca

secretary when the Association visited Nottingham in 1857, and to this fact is due no doubt the exceptional interest of the retrospective address which he delivered last week. It is well that we should look back now and then upon the years of our lifetime, or upon any special era in a science, for it is then only that we can justly estimate advances made or ground lost. Mr. Smith had a safe subject in the Association itself, which mustered only eighty or ninety members in 1857, but now is so strong as to embrace the whole of the United Kingdom and its dependencies, with active working branches which can be numbered in scores. The force and utility of the Association are amongst the living factors in present day medical science, and as most of the famous English medical men of the past and present generations have been or are connected with it, it may fairly claim to have performed a large share of the work constituting the medical progress of that period.

In nothing so much as in sanitation has medical science kept pace with the times, and it was fitting that Mr. White should have referred to the work of Chadwick, Simon, and many other medical officers whose influence upon the doctrines of public health entitle them to the highest rank as social reformers. In its essence sanitary reform is not strictly a part of medical science, but a part of sociology. Its inception is due to those men who were the first to recognise the fact that the poor cannot be elevated until their environment is purified from physical as well as moral uncleanness, and under the nursing of such reformers and enlightened medical men public views on drainage, water supply, house accommodation, and air pollution have grown and ripened until it is universally recognised in this country that the man who violates the common laws of sanitation is as big a nuisance as a pig-stye. And, happily, sanitary reform in common life has developed into as vital reforms in the smaller sphere dominated by the surgeon, with whom now the success of an operation literally depends upon perfect drainage, pure water, and pure air. Antiseptic surgery is the microcosm of hygiene. "Simple cleanliness we may call it," said Mr. White, "not that cleanliness which is the antithesis to ordinary dirt, but that special form of rigorous and refined cleanliness which the pathologist and the chemist alone can appreciate—the attainment of that purely aseptic condition which can only be accomplished by the most scrupulous and watchful care that neither by the condition or surroundings of the patient, nor by the condition of the instruments, nor by the hands of the operator, or his assistants, can those micro-organisms on which we have reason to believe that septicity depends come in contact with a wounded surface, or if in contact shall be destroyed." That is what Listerism has developed into, and on a large scale the nation will yet see similar development from the ideas of the Kingsleys and Chadwicks of sanitation.

Surgery owes much indeed to anæsthetics and antiseptics, or, in other words, to the chemist; but Mr. White gave much larger credit to physiology. He asserted that the horrifying experiments on monkeys, which have secured so much sympathy with the anti-vivisectionists, have established that certain areas of the brain surface are intimately connected with certain bodily functions, and the result of this study, he claims, has been a development of brain surgery which has been the means of eradicating certain paralytic and epileptic diseases hitherto incurable.

It is remarkable, when we turn to medical progress, that we find so much of improved diagnostic skill depending upon physical instruments. The microscope, the laryngoscope, the ophthalmoscope, the sphygmograph, the spectroscopic, and various electrical instruments are all of recent

application in diagnosis, and their uses have a specialised function. "But," said Mr. White, "if there is one instrument of precision which has done more than any other to aid us in our efforts of diagnosis and prognosis, it is the modern use of the clinical thermometer, an instrument which was practically unknown at the time of the last meeting in Nottingham."

From this point the President took up the doctrines of preventive medicine, in which we have the latest outcomes of improved knowledge in sanitation. In all these advances nothing is more apparent than the fact that medicine owes much to biology, chemistry, and physics. Biologists have discovered and described the functions of micro-organisms, chemists have provided the means of combating disease, and the study of physics has resulted in the invention and improvement of those instruments which are so helpful in diagnosis. In spite of that, Professor James Cuming, of Belfast, in his address to the section of medicine, seriously discussed the desirability of reducing to a minimum the study of chemistry, botany and physics during the medical curriculum. He says that—

"When the practitioner of medicine has tested for albumen and sugar, and is familiar with the composition and reaction of a few urinary deposits, and knows that a condition of acidity may be temporarily relieved by an alkali, he has pretty completely gained all the information of practical value which chemistry is likely to give him for the needs of his daily work. We may, perhaps, add the tests for the principal poisons and alkaloids."

This is an exceedingly narrow view of the application of chemistry to medicine, and in the light of the progress sketched in the presidential address it seems a generation or two behind the times. What is greatly needed is not minimising, but complete reform of the medical curriculum so far as the pure sciences are concerned. Students require a larger grasp of principles than they at present obtain, and keener appreciation of what biology, chemistry, and physics have done, and may yet do, for the nobler science they are to practise. Without these things medicine is degraded into pure empiricism—the very thing it has been for two generations struggling to free itself from.

COMMENTARY.

CONFERENCE PAPERS.—We are indebted to Mr. W. A. H. Naylor, one of the hon. secretaries of the British Pharmaceutical Conference, for the following preliminary list of papers promised for the meeting to be held in Edinburgh this month:—(1) "Podophyllum Emodi," by J. C. Umney; (2) "Potassium Bromide," by D. B. Dott, F.R.S.E.; (3) "Strychnine Salts," by D. B. Dott, F.R.S.E.; (4) "Notes on Starch Digestion," by G. A. Grierson, F.L.S.; (5) "Note on Ung. Hyd. Nit. Oxyd., B.P.," by Frederick Davis; (6) "*Eugenia Jambolana*: Its Influence on the Action of Diastatic Ferments," by T. Stephenson, F.C.S.; (7) "A New Antidote for Strychnine-poisoning," by James McKenzie; (8) "Proximate Analysis of a Sample of Myrabolanen," by A. Campbell Stark; (9) "Microscopic Examination of some Recent Arrivals of Spurious *Ipecacuanha*," by T. H. Wardleworth; (10) "Valerianate of Zinc," by W. A. H. Naylor.

PATENT MEDICINES IN ROUMANIA.—We are indebted to Messrs. Hodgkinsons, Treacher & Clarke for the following information:—"A recent enactment with regard to the importation of patent medicines and compound drugs into Roumania provides that no such goods shall be allowed entry unless the manufacturer deposits a sum of 100*l.* (47)

with the Roumanian Customs for every article he desires to import. For instance, a patent-medicine maker who is in the habit of shipping a pill, an ointment, and an emulsion, to Roumania must deposit for each article 100f., the payment of which secures for him the permanent right of importation of any quantity of the same class of goods, subject, of course, to the usual duties and charges. Most of the French patent-medicine people who trade with Roumania have paid the tax, and, unless their British competitors do the same, the sale of such goods as Holloway's pills and ointment, Easton's syrup, Cockle's pills, Clarke's blood-mixture, and others, which are much used in the kingdom, may suffer."

THE SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION.—The eighth annual general meeting of the South African Pharmaceutical Association was held at Cook's Commercial Hotel, King William's Town, Cape Colony, on June 8. There were present: Messrs. W. K. Mager (president), G. E. Cook (vice-president), J. McJannet (hon. secretary and treasurer), P. Gray, R. Lumsden, A. E. Austen, and Serrurier. The balance-sheet showed the receipts for the year 1891 to have been 116*l.* 5*s.* 10*d.*, the expenditure 98*l.* 9*s.* 7*d.*, leaving a balance of 19*l.* 16*s.* 3*d.* Mr. Austen proposed that Mr. G. E. Cook, of King William's Town, be elected president for the ensuing year. In making this nomination, the speaker directed the attention of the members to the very great interest Mr. Cook had taken in this Institution, and said had it not been for Mr. Cook's zealous and untiring efforts it was probable the Association would never have come into existence. The nomination was seconded by Mr. McJannet, and carried unanimously. Mr. McJannet was elected vice-president, Mr. P. Gray hon. secretary and treasurer, and the following gentlemen were chosen to serve upon the executive:—Messrs. Mager, Walsh, McJannet, Austen, Lumsden, Wells, Tebb, and Thomas. Upon the motion of Mr. McJannet it was agreed that the Pharmacy Board be asked to allow certified copies of diplomas to be submitted instead of originals, owing to the danger of the latter being lost in transit. Mr. Mager said he would like to see some means whereby the South African Pharmaceutical Association could be made more popular with both Eastern and Western Province chemists, and hoped that before the next meeting some solution of the difficulty would be found. The discussion which arose upon this point, however, showed a general feeling that the apathy and the pronounced jealousy of the Association alleged to exist in the Western Province would operate against any large extension of the Association's membership in those parts. Mr. Gray pointed out that the Western Association had originally been asked to join the South Association, but no arrangement had been come to, and it was believed that, even if the Societies amalgamated, very little good would result, as it was almost impossible for members to travel such long distances from East to West, consequently only Eastern members would be present at Eastern meetings, and *vice versa*. In connection with this Mr. Mager also stated that a suggestion had been made to the effect that alternate meetings might possibly be arranged for between East and West. His reply had been that if a sufficient number of Western Province chemists joined the Association, probably no difficulty would be found in making an arrangement on the lines suggested.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

COLWELL—JAVENS.—On July 28, at St. James's, Clerkenwell, Mr. J. Kear Colwell, public analyst, to Miss Javens, of Clerkenwell.

EGGLESTON—O'REILLY.—On July 30, at the church of St. Peter and Paul, Cork, by the Rev. B. Scanlon, assisted by the Rev. D. O'Mahony, John J. Eggleston, M.P.S.I., youngest son of the late Edmund Eggleston, Listowel, to Jennie, only daughter of Denis O'Reilly, Kanturk.

THOMAS—THOMAS.—On July 26, at the Congregational Church, Talgarth, Mr. T. Thomas to Miss Thomas, sister of Mr. David Thomas, chemist and druggist, Talgarth.

WILKINSON—HELYAR.—On July 7, at Christ Church, Woburn Square, London, by the Rev. J. Glendinning Nash, Robert Wilkinson, chemist and druggist, Dunedin, New Zealand, to Clara Esther, youngest daughter of the late Henry Helyar, of Upper Norwood, London.

DEATHS.

BEDFORD.—Referring to the sudden death of the late Professor P. W. Bedford (regarding which we published a cabled message on July 23), the *Pharmaceutical Record*, which he edited, says:—"Mr. Bedford left New York in his usual good health on the afternoon of Monday, July 11, with a large contingent of pharmacists from New York and neighbouring States to attend the fortieth annual convention of the American Pharmaceutical Association, at Profile House, White Mountains, N.H., where his death occurred. He was indisposed on Wednesday, but was somewhat better on Thursday, and his illness was not at that time considered alarming. On Monday [July 18] he was affected with what appears to have been an apoplectic seizure, and notwithstanding the fact that he received every attention which the best skill and care could bestow, he gradually failed, and



passed away at 10.50 A.M. on Wednesday [July 20]." The funeral took place at New York on Friday, July 22. The portrait which we give is from a photograph which we received from Professor Bedford about three years ago. Professor Bedford was born at Johnsville, Dutchess Co., New York, August 1, 1836, and after his apprenticeship to the drug business was an assistant to Mr. Ewen McIntyre, of New York. He left there in 1858 to enter business on his own account in 6th Avenue, and later became connected with the wholesale houses of Tarrant & Co. and Lazell, Marsh & Gardiner. He was a graduate of the New York College of Pharmacy, which he afterwards served as secretary and professor. He also held several secretarial positions in the American Pharmaceutical Association, of which he was President in 1881.

THOMAS.—On July 27, David Thomas, chemist and druggist, Ferndale. Aged 28.

Legal Reports.

A 20*l*. FINE FOR KEEPING A STILL.

AT Marlborough Street Police Court, on July 27, Thomas Titley, chemist, of Charlotte Street, Tottenham Court Road, was summoned by the Excise authorities for having in his possession a still for the manufacture of exciseable liquors. Mr. Alpe, barrister, prosecuted, and Mr. Freke Palmer, solicitor, defended. Arthur Llewellyn, a detective supervisor of Inland Revenue, said that he obtained a warrant to search the defendant's premises on June 29, and carrying it into effect the same day, he found a spirit-still in the shop. It was of French make and had never been used. Mr. Titley told him that he bought it of a Frenchman named Sauris, who had it brought from Paris in February, and that he had advertised it for sale in a trade paper. Licences were issued to persons wishing to distil water and essences, but no licence would be granted for such a still as the one in question. He had traced the fortunes of the still since its arrival in England, and found that after being shifted from one part of London to another, it was disposed of to Mr. Titley. Its value was about 25*l*. Mr. Hannay said that the defendant would have to forfeit the still and pay a fine of 20*l*.

THE INDECENT ADVERTISEMENTS ACT.

THOMAS KING, herbalist, of 9 Market Street Lane, Blackburn, was summoned at the police court there on Saturday, under the Indecent Advertisements Act of 1889, for exposing to public view in his window printed matter of an indecent nature. Detective-Inspector Dobson said he saw some small coloured handbills in defendant's window, which contained the following notice:—"Nervous debility, under my mode of treatment, is as surely cured as water quenches thirst. Thousands of young men of rare intellectual promise are annually sacrificed through early indiscretion, and delays are dangerous." Defendant said he had been a herbalist for twelve years, and in the provincial papers advertisements relating to nervous debility were inserted. He did not see how any sensible man could construe the words into an offence. The magistrate's clerk (Mr. Brother) said the words were offensive when read in conjunction with the previous sentences, and a fine of 20*s*. and costs was imposed.

CHARGES FOR EMPTIES.

IN the Westminster County Court, on Tuesday, before His Honour Judge Bayley, in which the plaintiffs, Messrs. Cantrell & Cochrane, manufacturers of mineral waters, Woodstock Street, Oxford Street, sought to recover 12*9s*. 6*d*., alleged to be due to them from Mr. Henry James Peacock, a chemist and druggist carrying on business at Beckenham. The plaintiffs' solicitor said the present claim was in respect of bottles and cases which had not been returned. Three months was the outside limit allowed to customers in which to return empties, but in this case the defendant had retained them for nearly eighteen months, and, as he declined to pay for them, the present action was brought.

The defendant said he had dealt with the plaintiffs for some few years, and he thought they were scarcely acting fairly in this matter, because when they first applied for the bottles and cases they had not all been emptied, and therefore it was impossible to return them. Subsequently the plaintiffs made a demand for payment, and he (defendant) was perfectly willing to pay if they would give him an undertaking to return his money when he returned the empties, but they refused to make any such promise. The Judge said it appeared that three months was the time allowed, and the defendant had kept the goods over a year, therefore he thought he was liable to pay for them. The defendant said he thought it was hardly fair that he should have to pay, and, moreover, he disputed the amount of the claim, as he had received several invoices, and each one differed from the other. It was an impossibility that they could all be accurate.

His Honour gave judgment for the plaintiffs, and referred the account to the Registrar to go through the figures.

A VITRIOL-BURN.

AN action was recently raised in the Roxburghshire Sheriff Court by Robt. Jamieson, jun., warehouseman, Hawick, against David Kennedy, chemist and druggist there, for 250*l*., as damages for injuries sustained by the plaintiff through having been burned with vitriol while employed in the defendant's service. The Sheriff has now decided in plaintiff's favour, awarding him 40*l*., with expenses.

COVENANTS NOT TO CARRY ON BUSINESS.

AN important judgment was given by Mr. Justice Chitty in the Chancery Division of the High Court on July 29. The Badische Anilin und Soda Fabrik brought an action against Messrs. Schott and Segner, who had been their agents for the North of England for fourteen years. The plaintiffs have a very extensive business. Their principal works are at Ludwigshafen, on the Rhine, and they have branches or agencies all over Europe, and at New York, Mexico, Rio de Janeiro, Aleppo, Beyrout, Bombay, Calcutta, Damascus, Hongkong, Hiogo, Rangoon, Saigon, Shanghai, Smyrna, Yokohama, Alexandria, Cairo, Casablanca, Mogador, Tripolis, Tunis, &c. Their agreement with the defendants provided that the latter should have the exclusive agency for articles of the plaintiffs' production in a defined part of England; the plaintiffs bound themselves not to effect direct sales and not to carry on direct correspondence with customers in the same; the defendants were to be paid 1,200*l*. per annum during the continuance of the agreement and also to receive a commission and share of profits; and the defendants covenanted to devote their time and energy exclusively to the plaintiffs' business. The defendants bound themselves, for three consecutive years after the determination of the agreement, not to enter into or start any like or similar business to that carried on by the plaintiffs, nor to give any information of any kind about the business. The agreement came to an end on June 30, 1892, and the defendants then commenced business on their own account in Manchester, as dealers in chemical colours. They admitted the breach of the agreement, but submitted that the restriction was void as being against public policy, as, although limited in point of time, it was unlimited in respect of area, and therefore altogether precluded them from carrying on their business; and they also submitted that the restriction was, under the circumstances, unreasonable.

The Judge, after quoting cases, said the law as it had been interpreted appeared to be that where the restraint is general—that is, without qualification, it is bad as being unreasonable and contrary to public policy. Where it is partial—that is, subject to some qualification either as to time or space, then the question is whether it is reasonable, and if reasonable, it is good in law. He held that in view of the world-wide nature of the trade carried on by the plaintiffs, the unlimited area of the restriction was reasonable, and he thought that to decide otherwise would tend to discourage advantageous contracts of this kind. The plaintiffs had only asked for an injunction limited to the district in which the defendants had acted as their agents, and this interim injunction his Lordship granted.

METHYLATED LINIMENT OF IODINE. THE BOARD OF INLAND REVENUE CAUGHT NAPPING.

AT the Stockport Police Court on Wednesday afternoon, before the Mayor (Colonel Turner) and a full bench of magistrates, Mr. John Cash Arnfield, chemist and druggist, Lower Hillgate, Stockport, was summoned by the Excise authorities for that he used methylated spirits in the preparation of an article capable of being used wholly or partially internally as a medicine. Mr. William Saunders, acting supervisor of Inland Revenue, prosecuted, and Mr. Jesse Herbert, barrister, Birmingham, instructed by Messrs. Glasier and Porter, solicitors, Birmingham, defended. There were a number of chemists and druggists from the district present in Court, which was crowded.

Mr. Wm. Saunders, who appeared to prosecute, said: This is a case instituted by the Commissioners of Inland Revenue. I will not detain your worships any longer than I can help, but it is necessary that you should clearly understand upon what grounds we are proceeding. Until a few years ago all spirits that were used in manufacture had a duty on them, but there was such a great demand for some class of spirits that the trade was crippled and the Excise authorities allowed, on certain conditions laid down, that spirits could be used in certain manufactures free of duty; but in allowing this privilege of course, as you understand, it was necessary also to lay down certain restrictions, and those restrictions were these: any person who wishes to use methylated spirits in any art or manufacture first of all has to obtain the consent of the Commissioners of Inland Revenue.

Mr. Herbert: Where do you find that?

Mr. Saunders here handed to the magistrates a copy of the Spirits Act of 1880, and suggested the Bench should follow him in his quotations from that Act. Proceeding, he said: Having obtained such consent—and here comes an important point—he has to enter into a bond that he will use those spirits according to the regulations laid down by the Commissioners of Inland Revenue.

At this point, Mr. Herbert asked if Mr. Saunders was a solicitor.

Mr. Saunders: I appear here just the same as the Attorney-General.

The Magistrates' Clerk: Not quite.

Mr. Saunders: Well, then, the same as the Solicitor-General.

The Magistrates' Clerk: He has the rights of a solicitor in this case.

Proceeding, Mr. Saunders said: Your worships will see 43 & 44 Vict., c. 24, s. 130, ss. c. & d., reads as follows:—"If any person, authorised user of methylated spirits, uses any methylated spirits, or any derivative thereof, in the preparation of any article capable of being used wholly or partially as a beverage, or internally as a medicine, or sells or has in his possession any such article, in the preparation of which methylated spirits or any derivative thereof, has been used, he shall for each offence incur a fine of 100%, and the spirits with respect to which the offence is committed shall be forfeited."

It will probably be contended, continued Mr. Saunders, that there is no harm in using these things, but our contention is that if we were to allow a preparation of these spirits to be made—of spirits on which other traders had to pay duties—the honest trader would be handicapped. And it is as much in the interest of the honest trader as in the interest of the Excise authorities that this prosecution has been ordered. We contend that, in applying for permission to use the methylated spirits, Mr. Arnfield bound himself to use the spirits in accordance with the regulations laid down by the Spirits Act of 1880. The evidence I shall produce will be to this effect. Two analysts attended on April 29 at Mr. Arnfield's shop, and visited the premises. They found on a shelf in the rear of the premises a bottle labelled "liniment of iodine methylated." Mr. Arnfield was present, and said he did not sell it in the shop, but supplied it to medical men, and did not know but what he could do that legally. He volunteered to destroy the preparation, which, after taking samples, the analysts allowed to be done. The samples were sealed, and sent the same day by post to Somerset House laboratory, where they were found to be as labelled on the bottle. Liniment of iodine, although intended for external use, can also be used internally, and I may say that in the British Pharmacopoeia the liniments shown there are shown as being manufactured from duty-paid spirits. Our commissioners, studying the convenience of trade, allowed exception in the case of four liniments—soap, compound-camphor, aconite, and belladonna liniments. Your Worships will see that the chemist is restricted from using duty-free spirits in the manufacture of any other liniment but those mentioned. We charge Mr. Arnfield with using methylated spirits in another liniment. Mr. Arnfield is supplied with a notice containing all the regulations to be observed in regard to the use of methylated spirits. Mr. Arnfield is bound to observe those regulations. The spirit revenue reaches nearly thirty millions, and you can understand the concession I have spoken of was made directly in the interests of the trade, and any contravention of the Act

only tends to limit its usefulness, and would to a certain extent lessen the Revenue.

The Magistrate's Clerk: Are the regulations you speak of made in pursuance of the statute?

Mr. Saunders: Yes.

Dr. Edwin Rayner (a magistrate and medical officer of health of the borough): What law is there that says you shall not use methylated spirits in liniments?

Mr. Saunders: I can answer that better by reading the 120th section, which says, "The Commissioners may, if they think fit, authorise any person to receive methylated spirits from an authorised methylator for use in any art or manufacture carried on by him. The authority shall not be granted until the applicant has given the prescribed security that he will use the methylated spirit in the art or manufacture, and for no other purpose, and that he will observe the provisions of this Act and the prescribed regulations."

Dr. Rayner: There is nothing there about it at all. Where does it say that a liniment shall not be made with methylated spirits?

Mr. Saunders: Subsection C of the 130th section, which I have read, says that if the liniment is capable of being used as a medicine Mr. Arnfield is liable to a penalty of 100%.

Evidence was then called.

Mr. Henry James Helm, F.I.C., and one of the analysts of the Board of Inland Revenue, said: On April 29, in company with another analyst, Mr. Davies, I visited the premises of Mr. Arnfield, chemist. I found a bottle containing about 2 quarts of liniment of iodine. It was labelled as methylated. I told Mr. Arnfield that liniment of iodine was not allowed to be made with methylated spirits. He appeared to know that so far as his shop was concerned, because he said he never sold it in his shop. There he always sold the liniment of iodine made with pure spirit, duty paid. This liniment he supplied to doctors when ordered by them. I told him that even under those circumstances he was not allowed to supply liniment of iodine made with methylated spirit. He then volunteered to destroy it, which we allowed after taking samples, and without prejudice to any further proceedings which the Board might think fit to take. I sealed the sample and sent it off by the same day's post to the Inland Revenue Laboratory, Somerset House, to be analysed.

Mr. Saunders (to Mr. Herbert): Is it disputed that this liniment was made as the witness has described?

Mr. Herbert: No.

Mr. Saunders (to witness): In your opinion, Mr. Helm, is liniment of iodine, although intended for external use, capable of being used internally?

Witness: Yes; there is nothing in it to prevent its use internally. It has the same ingredients as tincture of iodine, only that the iodine is in stronger proportions—about five times stronger—and there is a little glycerine in it.

Mr. Saunders: All you would have to do would be to slightly dilute the one preparation to make it a substitute for the other?

Witness: Practically so.

Cross-examined by Mr. Herbert: What is the actual difference in strength of the tincture and the liniment?

Witness: Liniment is about five times stronger than tincture.

Mr. Herbert: Tincture is 1 in 40, and liniment 1 in 8?

Witness: Something like that.

Mr. Herbert: I observed, when it was put to you that liniment is capable of being used internally as medicine, it was suggested that it could be diluted. Do you mean by that that it only then becomes capable of being used as a medicine?

Witness: No; taken in proportionately smaller doses.

Mr. Herbert: That is, that iodine liniment may be used simply by prescribing smaller doses than you would with tincture?

Witness: Precisely so.

Have you had any experience at all of prescribing?—No, I am not a medical man.

Can you tell me whether liniment of iodine has ever been prescribed for internal use?—No.

You have never heard of such a case?—No.

What dose of the liniment do you say would be too much to be taken internally as a medicine?—Judging by the dose recommended of the tincture, about 4 or 5 drops would be a dose of the liniment.

And you say that 4 or 5 drops of the liniment can be taken neat—if I may use that phrase—as a medicine?—Quite so.

Why did you call upon Mr. Arnfield?—We knew him as an authorised user of methylated spirits, and we were visiting all such persons.

He knew what you came for, and he took you round?—Yes.

There was no concealment?—No.

And the Winchester, in which this liniment was, was labelled?—Yes.

From first to last Mr. Arnfield has not concealed his idea that he was right in using it?—No.

Mr. Saunders: We don't impute any such thing.

The Magistrates' Clerk: It is right that that should come out in the interest of the public.

Mr. Herbert: And in the interest of my client. Mr. Saunders admits that Mr. Arnfield has acted openly and frankly, and in good faith, and that the only question before the Magistrates is whether Mr. Arnfield was legally right in doing what he did.

Mr. Saunders: Yes.

Mr. Herbert (to witness): Mr. Arnfield said he never sold the liniment in his shop, but supplied it when prescribed by the doctors?

Witness: Yes.

The Mayor: How long has Mr. Arnfield been in the possession of the notice containing the regulations?

Witness: Since August 5, 1891.

The Mayor: Are not the soap, camphor, aconite, and belladonna liniments capable of being used internally?

Witness: They are not absolutely.

Mr. Saunders: The Board of Inland Revenue have relaxed the regulations in so far as regards those four liniments.

The Mayor: How do they arrive at these being the proper liniments to be exempted?

Mr. Saunders: Because there was such a demand for them. I daresay it is a common thing for brewers and distilleries to be allowed indulgence from the Board.

The Mayor: Can you give us any reason why iodine should not be added to that list?

Mr. Saunders: I cannot say. It is very difficult to explain everything that emanates from the higher powers.

Dr. Rayner: You say liniment of iodine can be taken in a dose of four or five drops. How do you make that out?

Witness: I judge that by the dose of tincture of iodine.

Dr. Rayner: From your experience do you know that liniment of iodine can be taken in such a dose?—I should not mind taking it myself.

Dr. Rayner: Would you take a second dose?—Yes.

Mr. Saunders: You mean diluted with water?—Yes.

Mr. Herbert: Before you said you could take it neat?

Witness: I beg your pardon; I must have misunderstood the question. I meant diluted with water.

Mr. Herbert: But I put the suggestion "neat" before you, and you said yes.

Witness: I should have no objection to take it in the same way that tincture of camphor is taken—that is, on sugar.

Mr. Herbert: Then your courage equals your skill. (Laughter.)

Another witness was then called—George Lewin, F.I.C., one of the analysts of the Board of Inland Revenue—who said he had examined the sample sent from Mr. Arnfield's shop, and found it to be liniment of iodine prepared with methylated spirits. Such a preparation was also capable of being used internally as a medicine.

Mr. Herbert: Are you a medical man, and have you ever prescribed?

Witness: No.

Upon what do you base your statement that liniment of iodine is capable of being used internally as a medicine?—The relation of its position to tincture of iodine.

In the same way as the last witness?—Yes.

Mr. Herbert: Rather a mathematical problem than a medical statement.

This concluded the case for the prosecution.

Mr. Herbert, addressing the Bench for the defence, said: May I clear the way, first, by referring to the fine which is said to be applicable to a case of this sort. The statute

provides for a fine of 100 $\frac{1}{2}$., but if the magistrates find the case proved, they have power, under the Summary Jurisdiction Act of 1879, to reduce that fine as much as they like, according to the gravity of the offence. Now we come to what is said to be the offence. I think I may say, without any injury to my friend, that he has confused restrictions with enabling powers. The section upon which these proceedings are brought is a very simple section, and refers as much to me, or to your Worships, or any other person, as to a medical man or a chemist who has been made the authorised methylator. My client is charged with "using" methylated spirits in the preparation of a liniment of iodine. The offence is using, and not with having in his possession. You have no evidence that Mr. Arnfield used this. That he was in possession of it you have evidence. The case for the prosecution is closed, and there is not a scintilla of evidence that my client used this preparation, and certainly not on April 29. I ask my friend what he proposes to do? Is he going to ask your Worships to alter the summons, and make it "that he had the article in his possession"; or does he still say that he charges him with having used it?

The Magistrates' Clerk: I drew your attention to that, Mr. Saunders. I have been waiting for the evidence as to using, but there is none.

The Mayor: There is no evidence that he used that liniment.

The Magistrates' Clerk: You will have to take out a fresh summons, Mr. Saunders.

Mr. Saunders: It will all have to be heard over again.

The Magistrates' Clerk: Perhaps the learned counsel might consent to an amendment of the summons.

Mr. Saunders: If he does not it will mean the expense of having the case tried over again. My friend has a very slight technical point on this.

The Magistrates' Clerk (smiling): It is a very strong one.

Mr. Herbert: My client is charged with using the preparation. I expected to hear evidence as to the using, but I find that this preparation is stored up, and there is no evidence of it being used. This is a criminal offence subject to a heavy fine, and the authorities of this country, with the assistance of my friend, are sufficiently learned to know the difference between using and having possession of. This is an offence which was said to be committed on April 29. We are now in August. They cannot have been taken by surprise. If they have been napping, it must have been a very long nap indeed. I really cannot consent to an amendment of a summons in such a radical manner as this. It is an amendment of offence.

Mr. Saunders: I will leave it entirely with your Worships. I don't know whether they have the power to amend the summons.

The Magistrates' Clerk: The learned counsel has a right to object.

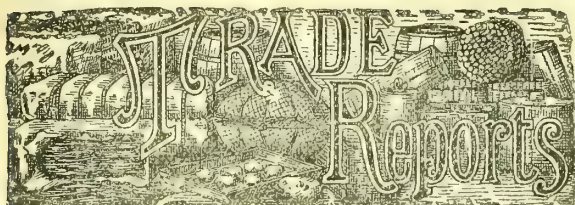
Mr. Saunders: The case will have to be heard again.

The Mayor: It evidently fails now. The case will be dismissed.

Mr. Herbert applied for costs for the defendant, and the Magistrates granted them, subject to taxing by the Clerk of the Court.

FOR SLEEPLESSNESS, that world-famed writer, "G. A. S.," advocates the use of *eau sucrée* flavoured with a few drops of orange flower water. The effect, he says, has always been inexpressibly soothing and reposeful.

CHEWING-GUM is not popular in England, and we question if it will ever be; but an American india-rubber paper is of a different opinion. "It is a curious fact," says our contemporary, "that in England they do not chew gum, but rather look down upon the habit as being vulgar, and of the small quantities that have been shipped abroad but little has been sold. The time, doubtless, will come, however, when this democratic habit will overcome the prejudices of our cousins across the water, and when the Prince of Wales will be seen with a quid of American gum in his mouth, chewing it with as much gusto as a Bowery boy." English druggists would have a new line of business then, but some insular prejudices and common decency in the matter of chewing and expectorating in public places have to be overcome first.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 4.

The London Markets.

ACID (CARBOLIC).—Two tin-lined casks of $3\frac{1}{2}$ cwt. each, white crystals, were offered without reserve, but could not even find a buyer at $1\frac{1}{2}$ d. per lb., and were, therefore, bought in. The position of the article has further improved, and for 95° liquid acid 1s. 9d. per gallon must now be paid, a large volume of business having taken place up to that figure. Crystals, 34–35°, are quoted at 5d. to $5\frac{1}{2}$ d.; 39–40°, at 6d. per lb.

ACID (CITRIC).—The exports of citric acid from London have been:—

	1889	1890	1891	1892
	Cwts.	Cwts.	Cwts.	Cwts.
In July	614	440	190	430
Jan. 1 to July 30	3,507	3,659	2,787	4,500

ACONITE.—For fair small Japanese root, 22s. is now asked.

ALCOHOL.—Prices are just a shade higher this week; 9d. per proof gallon, c.i.f. terms, would probably have to be paid for best German potato spirit, in bond, in quantities of 2,000 gallons.

ALOE.—The only aloes offered at to-day's sales (with the exception of six bags described as Cape aloes, from Bombay, which was too common to elicit a bid, even at 5s. per cwt.) was *Curacao*, of which 161 packages were shown; most of this sold at from 10s. to 11s. 6d. for ordinary dull to medium Capey. There has just been an arrival of 40 cases of aloes from Cape Colony. It was much wanted.

ANISE.—*Russian* seed of last year's crop has been selling here privately at 19s. per cwt. At auction 25 bags of East Indian were shown and bought in—they are held for 17s. 6d.; ten cases mouldy and spurious *Japanese* star-anise are limited at 40s. The crop in Russia is reported to have suffered much from unfavourable weather and insects, besides which the acreage planted has been very small this year. Hence the quantity available for export will be exceptionally small.

ANNATTO-SEED.—For medium reddish *West Indian* seed 2d. would be accepted; and dark and dull-coloured sold at $\frac{1}{2}$ d. to-day, which is rather lower.

ANTIMONY.—Crude Japanese is quiet at 26l. to 27l. per cwt. on the spot.

BALSAM (CANADA).—Two barrels good quality, rather dull, sold at 1s. 2d. per lb., which is about the fair market value.

BALSAM (PERU).—The price for good-quality balsam, direct import, *via* Liverpool, is 4s. 9d. per lb.; 9 cases were bought in at that figure.

BUCHU.—In small supply, only two bales being offered to-day, for which there was a very good competition; they were rather yellowish round leaves, and sold at 4d. to $4\frac{1}{2}$ d., which is an advance of $\frac{1}{2}$ d. per lb. Eleven bales have just arrived from the Cape.

CALUMBA.—There is an excellent demand for this root, and of the 160 bags offered at to-day's sale the unusually large proportion of 129 sold, with competition, at very firm prices. Medium to bold fair yellow mixed, 40s. 6d. to 43s. 6d.; rather dark mixed and partly wormy, from 37s. down to 32s.; ordinary grey sorts, 29s. down to 27s. The finest lots were comparatively the cheapest.

CAMPHOR (CRUDE).—A report was received here a few days ago, and has since been confirmed, to the effect that a ship, having 2,000 piculs on board, and bound from Japan to the United States, has been entirely lost. This circumstance has contributed to render the market firmer than it was. *China* camphor has sold at 127s. 6d. per cwt. on the spot, and *Japan* at 125s. c.i.f. terms. On the spot the latter kind is held for 135s. per cwt.

CAMPHOR (REFINED).—The recent imports of Japanese refined camphor have all been sold, and this article is reported to be moving off well. Five cases (of new import) of good squares were bought in to-day, an offer of 1s. 5d. being refused for them; the owner wants 1s. $5\frac{1}{2}$ d. *German* is held at 1s. $5\frac{1}{2}$ d. per lb. net, and is firm at that figure. The *English* makers have made no alteration—they still quote 1s. $6\frac{1}{2}$ d. to 1s. 7d. per lb., usual discount, according to quality.

CANARY-SEED.—Our Liverpool correspondent writes on Wednesday night:—"The market for Turkish is excited to-day. Fine bright has sold freely at 60s., and now 65s. is asked."

CANNABIS INDICA.—In demand, but at a slight sacrifice in price. Of 63 robbins, about half was sold to-day at $3\frac{1}{2}$ d. for good green tops, and from 3d. down to 2d. for good to common siftings. In Liverpool, $3\frac{1}{2}$ d. per lb. has been paid for a small lot.

CANTHARIDES.—For 7 boxes *Chinese*, fairly bold to somewhat wormy flies, a bid of $11\frac{1}{2}$ d. was refused, 1s. being the price. New *Russian* flies are being offered at lower prices—2s. 9d. per lb., c.i.f. terms, being mentioned; but there is no demand, even at this low figure.

CARAWAY-SEED.—The first batches of the new Dutch crop are of good colour, but small grain; but it is expected that the seed harvested later on will be much darker, as the weather during the harvesting period has been unfavourable.

CARDAMOMS.—In very small supply, the lots offered to-day being not sufficiently important to form a guide as to the position of the article. *Mangalore*, medium and somewhat yellow pods, are held for 2s. 3d. to 2s. 4d.; fair medium brown *Aleppy* were bought in at 1s. 11d.; a parcel of medium to bold slightly brownish long and round mixed *Mysore* sold at 1s. 6d.; and for pale *Malabar* seed from 1s. $4\frac{1}{2}$ d. to 1s. 5d. was accepted, which shows a slightly lower price.

CASCARILLA.—In rather large supply; 57 bags were partly disposed of at prices ranging from 30s. for fair bold round and grey mixed, partly damaged, to from 21s. 6d. down to 19s. 6d. for thin small brown and dusty mixed; good bright quill is held for 36s. per cwt., but was not sold to-day.

CASSIA FISTULA.—Two bags somewhat lean but nice and fresh pods from *Dominica* sold cheaply at 16s. per cwt.

CHAMOMILES.—For 30 bales old but good pale Belgian flowers an offer of 56s. was refused, the price being 60s. per cwt. The prices of the new Belgian chamomiles are gradually sinking. Good pale flowers have been sold this week at 99s. to 92s. 6d., but the general quotation is 100s. Last week the closing price was 107s. 6d. per cwt., and a further fall is anticipated.

CINCHONA.—The exports from Java for the month of July have been very small, being returned at 285,000 Amsterdam lbs., against 1,164,000 in July, 1891. For the first time the exports from the island show a decline, reckoning by the season closing on July 31.

COCA-LEAVES.—The only lots offered were four 28-lb. bags of good green leaves, of fair flavour, from Ceylon. The price for these is 1s. 5d. per lb.

COLOCYNTH.—Dull of sale; pale, slightly seedy mixed *Turkey* apple is held at 1s.; pulp at 8d. per lb.

CUBEBS.—There is a very steady demand privately for this drug, and most parcels are being sold as they are landed on the basis of about 7*l.* for good bright berries. At to-day's auctions 6*l.* was accepted for two bags small mixed and very stalky. The *Agamemnon* brought us 54 bags from Shanghai last week.

CUMIN-SEED.—New *Malta* is not yet offering; for old crop 40*s.* per cwt. is now asked, and the last sales have been at the rate of 38*s.* per cwt. At auction an offer of 15*s.* was refused for a parcel of 38 bags fair *East Indian*.

ERGOT OF RYE.—The first parcel of new crop ergot was sold to-day at a price which marks some decline in value; it consisted of 5 bags very fine bold new *Spanish*, which realised from 2*s.* 1*d.* to 2*s.* 2*d.* per lb. Old crop sold as follows: wormy and dusty *Spanish*, 1*s.* 9*d.* to 1*s.* 11*d.*; ditto *German*, 1*s.* 6*d.* per lb. The demand is good, and part of the new arrivals of this year's crop has been sold privately.

FENNEL SEED.—Sixty-five bags good bright seed from Bombay are held for 14*s.*, an offer of 13*s.* being declined.

GAMBIER.—Sales of fair block are reported on the spot at 17*s.* 10½*d.* per cwt.

GAMBOGE.—Part of the new arrival, consisting of 27 cases nice small to bold run pipe, slightly damp, but mostly of good orange fracture, sold to-day with good competition (which shows that the article is wanted), at a decline in value of 10*s.* to 20*s.*, namely 12*l.* 10*s.* per cwt. Six cases of Saigon pipe, rather ricey and dull mixed, were bought in at from 13*l.* 10*s.* to 16*l.* per cwt. Advices from Saigon, dated July 3, state that on that date the stock of gamboge was limited to a small quantity of first-class gum.

GINGER.—Washed rough *Cochin* ginger has advanced to 46*s.* per cwt., at which price 400 bags have been sold this week.

GLYCERINE.—Exceedingly dull of sale, best double distilled *German* s.g. 1260 is offering now at 42*s.* 6*d.* to 43*s.* per cwt.

GUARANA.—For 1 package of very broken and dull sausage 4*s.* per lb. is asked.

GUM AMMONIACUM is neglected, and holders are anxious to sell. Of 30 packages shown to-day only one, fair partly almondy block, rather drossy, mixed, sold cheaply at 28*s.*; fair drop, partly blocky, was bought in at 50*s.* per cwt.

GUM ARABIC.—At auction to-day a new consignment of 61 bags of Cape gum sold with good competition at almost steady prices—namely, 5*l.* 5*s.* to 6*l.* 2*s.* 6*d.* for fair, rather drossy, to good pale soft sorts, and from 38*s.* to 45*s.* for ordinary brown glassy.

GUM BENZOIN.—*Siam* gum was in rather large supply to-day, and sold at a decline in price, fine bright small to bold almonds in block at 13*l.*, small ditto at 10*l.*, bright siftings in block at 88*s.* to 100*s.*, brown ditto at 60*s.* to 62*s.* 6*d.*; this is a decline of about 20*s.* all round. *Palembang* gum realised 45*s.* for good bright almondy block, and 10 cases fair *Sumatra* seconds, almondy centres, but false-packed corners sold at 5*l.* 15*s.* The supply of *Sumatra* gum is small, and it is said that the stock of this variety has been much reduced.

GUM ELEMI.—A portion of the recent arrival, consisting of 48 cases, was shown to-day. The quality was fair, but somewhat dirty mixed, and of weak flavour. It appears that somewhat lower prices than those recently ruling would be accepted, but to-day an owner refused 37*s.* 6*d.*, as being several shillings below his ideas.

GUM GUAIAIACUM.—Fine qualities bring high prices—witness a case of good bright almonds in block which sold at 2*s.* 6*d.* per lb. Ordinary drossy and woody gum sold at from 3*d.* to 7*d.* per lb. The sales of guaiacum in Liverpool during the month of July were 114 boxes.

GUM MYRRH remains exceedingly scarce, and high prices must be paid for anything of good quality. Fair but rather dusty sorts shown at auction were held at 85*s.*, while fine picked *East Indian* was bought in at the high price of 9*l.*

GUMS (VARNISH).—At last Thursday's auctions most varieties of gums were in small supply. Scraped *Manila*

Copal was somewhat cheaper in price. *Batavia Damar* kept its value very well, good pale, partly small mixed realising 55*s.* to 58*s.* per cwt.; but *Singapore* gum was utterly neglected. *Gum Kowrie* was slow of sale, at barely steady rates for fine scraped, while most other kinds sold at a more or less marked decline. The following prices were realised:—Scraped, fair to fine pale "*Deal*," 7*l.* 15*s.* to 12*l.* 12*s.* 6*d.*; amber and brown to good pale, 90*s.* to 7*l.* 5*s.*; half to three-quarter scraped, 53*s.* 6*d.* to 96*s.* per cwt.; ordinary dark to good pale bold chips, 16*s.* to 71*s.* per cwt.; ordinary to fine pale *Bush* gum, 50*s.* to 6*l.* 7*s.* 6*d.* per cwt.

HONEY.—The tendency is decidedly towards lower prices. Of 67 barrels *Jamaica*, only 16 sold to-day, at from 24*s.* to 29*s.* for rather dirty to good bright brown liquid. *Australian* honeys are in good supply, and also selling at somewhat lower rates—half candied, fairly clean brown to amber 23*s.* 6*d.* to 27*s.*; rather dirty brown liquid, from *Brisbane*, at 27*s.* per cwt. *Chilian* honey is in poor demand in *Liverpool*, while small lots of *Californian* have sold at 40*s.* to 42*s.* 6*d.* per cwt.

IPECACUANHA.—Of 88 packages *Rio*, 50 sold to-day at a decline of about 2*d.* to 3*d.* per lb. for ordinary to medium grades; good root, which would probably be well bid for, was not offering; ordinary thin woody to fair bright annulated sound realised from 5*s.* 5*d.* to 6*s.* 1*d.*; first-class damaged, also, 5*s.* 5*d.* to 6*s.* 1*d.*; and second-class from 5*s.* 4*d.* to 5*s.* 8*d.* per lb. *Carthagena* root, which is in good supply, is also slightly cheaper, good brown stout a little damaged selling at 4*s.* to 4*s.* 1*d.* per lb.

JALAP.—Only 5 bales were offered to-day; the quality was good heavy *Vera Cruz*, and they were bought in at 1*s.* 7*d.* per lb.

KOLA.—Fourteen bags very common wormy African seed sold at ¾*d.* per lb. to-day. In *Liverpool* the market is very much neglected, and no sales are reported.

LIME-JUICE is falling in value somewhat rapidly; the highest price paid has been 1*s.* 11*d.* for a single puncheon of of West Indian, but at the auction to-day several packages were bought in at 1*s.* 8*d.* per gallon, and less would be accepted. New arrivals are now coming in, and there is no prospect that prices can be kept up.

LIQUORICE.—About 200 bales of *Turkish* liquorice were shown to-day; they were all bought in. Prices are as follows: Decorticated, good stout, 35*s.*; thin and ordinary, 16*s.* to 18*s.*; good stout natural, 27*s.*; common to fair ditto, 11*s.* to 16*s.* per cwt.

MAGNESIA SALTS.—*Sulphate* of magnesia is quiet and slow of sale, at 60*s.* per ton; *Carbonate* may be had at 32*s.* 6*d.* per cwt.; and for *Calcined*, in 1-cwt. cases, 10*d.* per lb. is wanted.

MUSK.—In very small supply. *Tonguin* remains steady for thin blue skin, first-pile pods, of which two caddies small to bold, slightly damp, well-trimmed, sold at 73*s.*; old-fashioned first-pile pods are also steady in price, 47*s.* to 47*s.* 6*d.* being paid for small to bold well trimmed, rather damp and of pure flavour.

NAPHTHA.—*Wood naphtha* is "very depressed, and may be had at low prices—miscible 60 o.p. at 4*s.*, and solvent at 4*s.* 3*d.* per gallon.

NUX VOMICA.—Nearly 700 bags were offered for sale to-day, but the demand was slack, and only 23 packages sold, at 9*s.* to 9*s.* 6*d.* per cwt. for rather dark seed from *Colombo*.

OIL (CASTOR).—Sales took place at to-day's drug auctions of 70 cases good pale *Calcutta* oil, which brought 3*d.* per lb., without reserve. For 50 cases fair *Coconada* seconds 2½*d.* per lb. is wanted. Advices from *Calcutta*, dated July 5, state that the stock and the output of oil remain small, because the rainy season continues to impede pressing-operations, and seed, especially from the *Madras* coast, is in small supply. The market is firm.

OILS (ESSENTIAL).—*Star-anise* oil is again a little cheaper. Five cases "unworked" sold at 6*s.* per lb. to-day. A parcel of West Indian essential oils, from *Dominica*, was withdrawn. It consisted of 14 bottles *Lemon-grass*, 4 bottles *Patchouly*, and 1 bottle *Vetiver* oil, all of fine quality. For 7 cases

Japanese *Peppermint* oil (each containing two 42-lb. coppers) the holder declined a bid of 5s. 8d. per lb., 5s. 9d. being his figure. Oil of *Lemon* has advanced in Sicily, and the prices now run from 9s. 6d. to 10s. 6d. per lb., London terms, for fine qualities. Oil of *Bergamot* is also dearer. For Japanese *Peppermint* oil (Cocking's) 6s. 9d. per lb. is asked by the importers, and the same brand of *Menthol* is held by them at 10s. 6d. per lb.

PARAIRA BRAVA.—A small parcel of long thin brown root sold "without reserve" to-day at the very low price of 20s. 6d. per cwt.

PATCHOULL.—A parcel of 35 bales African leaves has been sold at 2½d. per lb. in Liverpool.

PERMANGANATE OF POTASH.—The cholera scare has not been without effect upon this article, of which the price has twice been raised 5s. per cwt. by the combination of makers. The last rise was announced on Tuesday, and prices now are 82s. 6d. per cwt. for large, and 77s. 6d. per cwt. for small crystals.

QUASSIA.—The market is very quiet, Jamaica wood being worth from 80s. per ton for fresh to 100s. for old selected. At to-day's auctions 6 tons of the former kind sold at 80s. per cwt. Other parcels were bought in.

QUICKSILVER.—Market dull. Importers hold at 7l. 2s. 6d., second-hand holders offer at 6l. 17s. 6d. per bottle.

QUININE.—The market closes with a somewhat firmer feeling; there are no sellers to-day at 8½d. per oz. in the open market. At auction, however, 2,000 oz. *Brunswick* quinine in bulk (supposed to be very old stock) sold "without reserve" at 8½d. per oz. Some few small sales, aggregating about 10,000 oz. of German bulk from second-hands, on the spot, are announced this week at 8½d. per oz., which shows a slight recovery, the lowest point touched before having been 8½d. per oz.

QUININE-SEED.—Of 16 bags Cape seed, 6 sold to-day at 7d. per lb.

RHUBARB.—A very good assortment was offered to-day, consisting of 121 cases, 49 of which sold at irregular prices, Shensi being mostly cheaper. Arrivals continue to come in from China. The following were to-day's prices:—*Shensi*, medium to bold, good coat, even pinky fracture, round, 2s. 6d.; bold root, good coat, partly grey and loose, three-fourths pinky, one-fourth dark fracture, flat, 2s. 2d.; small ditto, 1s. 9d.; medium to bold, round ditto, 1s. 10d.; slightly smaller, 1s. 9d.; medium, fair coat, partly rough, three-fourths pinky, one-fourth dark flat, 1s. 6d.; small ditto, and loose fracture, 1s. 2d.; bold, rough-coated, round and flat, mixed, three-fourths pinky, one-fourth dark, 1s. 2d.; druggists' root, fair small to dark, 1s. 3d. to 1s. 7d.; fair pickings, 1s. 2d. *Canton*:—medium to bold, even pinky-grey fracture, round, 1s. 4½d. *High dried*:—small to medium, fair coat, pinky fracture, flat, 1s. 5d.; smaller size, 1s. 4d. per lb. There have been rather large arrivals (some 76 cases) from China this week.

SAFFRON is quite 1s. dearer since last week. To-day's quotation for best Valencia is 23s. per lb. f.o.b., which is equal to about 24s. 3d. per lb. London terms.

SARSAPARILLA.—*Honduras* root was rather cheaper at to-day's sales, though not lower in comparison to the prices privately paid. Of 24 serons 10 damaged ones sold at 1s. 3d. to 1s. 3½d. for Crown Brand. Of red Jamaica root fine bright quality realised 1s. 4d. to 1s. 5d., ordinary to fair from 9d. to 1s. 1d. per lb. Eight bales chumpy Mexican root, mostly damaged, were bought in at 1s., a bid of 7½d. not being obtainable. 19 bales genuine bright *Guayaquil* root, a variety which has not been seen here for a considerable time, sold at 13½d. for fair sound, and 9½d. to 10d. for damaged root.

SCAMMONY.—"I hear scammony is likely to be very scarce this season," said a broker to-day upon offering some; but the statement evidently received but little credence. We reproduce it, however, for what it is worth. None was sold to-day, although several lots were offered. For fair roots 35s. per cwt. is wanted.

SHELLAC.—The speculative market has been much firmer, and the sales include August TN at 83s. 6d. and October ditto at 84s. per cwt. Garnet lac has been sold on the spot

at 72s. to 73s. per cwt. short prompt. At the close, however, the feeling is easier, 82s. 6d. having been accepted for October delivery of TN orange.

SQUILLS.—A parcel of 17 bags of fair pale quality sold at 3d. per lb. to-day.

TEA.—The first cargo of new season's Kaisows arriving last Saturday brought buyers back punctually on Tuesday morning after the holidays, and a fair trade has been done, the crop apparently promising to be a good one. Panyongs and Chingwoos have sold from 8½d. to 1s. 2d., while the crack chops of Soomoo fetched up to 1s. 1½d., and met a ready demand. Common New Season Kaisow has sold in sale as low as 5½d. per lb. and 5½d. per lb., and on the whole, as with Monings, prices have opened at a reasonable level, and one which should help the consumption. A considerable sale of Indians and Ceylons (mainly Indians) went off steadily for all good liquoring sorts on Thursday, this being the only Assam or Ceylon sale for the week. Poor liquoring kinds are very cheap, though terminals are a suspicion firmer for later months.

TONQUIN BEANS.—*Angostura* beans of the new crop are being offered at 6s. 9d. per lb. c.i.f. terms. A fair quantity of Pará were shown at auction to-day, and some found buyers at 1s. 4d. for very foxey, and from 10d. to 1s. for very common mouldy. An offer of 1s. 11d. was refused for fair black, and one of 2s. 6d. for frosted, the prices wanted being respectively 2s. 6d. and 3s. per lb. A Liverpool correspondent writes us, under date of August 3:—"During the early months of the year several arrivals came to hand, which owners at first held off the market for previous high prices. In May and June some orders for cheap beans were received, and at first firmly refused; gradually, however, importers gave way, and accepted bids of 10d. and 11d. per lb. for about 40 cases low foxy Pará quality, selling a few single cases of good frosted at the same time at 1s. 10d. to 2s. During July further inquiries were experienced, which resulted in the sale of 44 cases, including common to fair, at 1s. 3d. to 1s. 4d., and good to fine frosted at 1s. 8d. to 1s. 11d. per lb., clearing the market of all available at these figures. There is still some stock here of common, held for 2s., and fine, held for 3s., but the total quantity will not exceed 30 cases; the recent purchases are all being shipped. The present is about the usual time for collecting the beans in Brazil, and we therefore expect to receive further arrivals in the course of the next six weeks or two months, but have no definite advices up to the present upon this point."

TURMERIC.—The market is very firm, and arrivals as they come to hand are being rapidly taken up. *Madras* root is particularly scarce, and held at from 30s. to 32s. 6d. per cwt. *Bengal* is also firm at 20s., while for good bright finger *China* 20s. is wanted, and for ditto mixed with bulbs 18s. per cwt. At auction to-day 12 cases of two cwt. each, bright genuine powder from Bombay, were partly sold at 25s. per cwt.

WAX (BEES').—Of Jamaica wax 48 packages sold readily at an advance of fully 5s. per cwt., namely, 7l. to 7l. 10s. for good red to fine orange, and 6l. 15s. to 6l. 17s. 6d. for rather mixed red. *Madagascar* wax, which is in large supply, declined about 5s. in value, 80 packages being sold at 5l. 5s. for fair bright mixed; 7 bags of *South American* wax from Rio Janeiro, yellow and grey mixed colours, sold at 5l. 10s. to 5l. 15s. per cwt.

THE LIVERPOOL MARKET.

CANARY-SEED.—This continues to advance, and sales of bright *Turkish* have been made at 57s. 6d. There are many interested parties who think prices will be much higher still, and who are holding off.

HONEY.—*Californian* is firmly held. Fine yellow is offered at 42s. 6d. per cwt.; 40s. was bid for a big parcel, but the price was refused.

IPECACUANHA.—A further parcel of the *Carthagenae* description has arrived, and will be offered at auction next week.

OIL (CASTOR).—Good seconds *Calcutta* are held at $2\frac{1}{2}d.$, first-pressure *French* at $2\frac{1}{16}d.$, and second-pressure at $2\frac{3}{16}d.$ per lb.

SPERMACETI.—The only parcel here—American blocks—is held firmly now at $1s. 5d.$ per lb.

WAX (BEES').—There are further large arrivals of *Chilian*, but prices are firm— $7l.$ to $7l. 10s.$ for finest.

THE SMYRNA OPIUM MARKET.

SMYRNA, August 3.

THE American manufacturers have entered our market as purchasers this week, and bought 45 cases manufacturing opium of the new crop at the parity of $6s. 1d.$ to $6s. 5d.$ per lb., f.o.b. here, according to quality. Our market closes very firm.

BRITISH AND FOREIGN CONSULS' REPORTS.

CHINA.

Camphor-trading under difficulties.

The exports of camphor from the island of Formosa (China camphor) were larger in 1891 than in any previous year. The export jumped from 7,717 cwt. in 1890 to 19,953 cwt. in 1891. At one time the Hong-Kong market fell so low as to show a slight loss on every shipment, but the local firms continued buying, and were eventually rewarded for their perseverance by a rise in the market. The camphor business experienced a serious check, however, in the autumn, when an outbreak took place among the aborigines of the island, who, unable to distinguish between the Chinese caretakers of the camphor stills and furnaces built with foreign capital and their usual foes, attacked the Chinese generally and destroyed numbers of stills. Nothing could be done, the Chinese being quite unable to protect the stills or punish the savages; so one resident, who had considerable capital invested in the business, boldly penetrated into the interior—at a time when the Government troops and savages were at daggers drawn—and managed to make satisfactory arrangements about the balance of his money and stills. Those destroyed will doubtless be a dead loss, but it is interesting—though not, perhaps, consoling to the losers—to see that a solitary foreigner can safely venture with a Chinese interpreter into territory which the Government troops do not dare to approach.

The adventurous foreigner mentioned above was not an Englishman, no British firm having as yet taken up the camphor-trade. Practically the whole of the camphor was carried under transit pass, 134 passes having been issued in the course of the year.

PERSIA.

Business Bad.

In Persia (at least, in that portion of it which falls under the supervisant eye of our consul in Bushire, on the Persian Gulf) trade is very bad. Failures among native merchants have been plentiful, the markets are glutted with unsaleable goods, crops looked poor in the beginning of the year, and the silver decline did the rest. Hence several steamers have been discontinued, and poverty and dissatisfaction alone are flourishing.

Opium.

The opium-crop of 1891 was unusually large, but, owing to the fall of prices in China, speculators were heavy losers. Shipments, however, varied very little, being slightly larger to London, where it is usually sent by European firms for use in the preparation of morphia, and smaller to China. The fall in prices has been as marked as it has been rapid. Only two or three years ago shippers could obtain $14s.$ per lb. in London. Now they can get no more than $7s. 6d.$, and as this article has been often exported to the extent of 7,000 chests, it is obvious how many interests are affected by these fluctuations in value.

Almond-kernels and Gum.

A considerable trade in almond kernels (for oil-pressing) was done during the early part of the year, but large crops in Europe sent prices down, and the export from Persia has ceased to be profitable.

Gum arabic is exported in fair quantities, chiefly by Persians, and fetches good prices. In 1890, 8,065 cwt. were shipped; in 1891, 17,016 cwt.

PERU.

The Opium Monopoly.

Opium is imported into Peru in large quantities. By an Act of the Peruvian Congress, dated October 31, 1887, the handling of the drug has been constituted a monopoly, giving its lessees the sole right to import and sell opium. All those committing infractions of the regulation given by Government will suffer the following penalties:—Confiscation of the opium; loss of the vessels, vehicles, or animals used in its transportation; and a fine of not less than 20% per lb.; and the smugglers, concealers, and their accomplices will be prosecuted criminally. All informers are entitled to the value of the opium at its cost price in bond, and the monopoly cedes to them its right to half the fine. Owners and masters of vessels are specially warned to take all necessary precautions to avoid receiving opium concealed or under the name of other merchandise, for Peruvian ports

Personalities.

MR. ARTHUR ANGELL has been appointed county analyst to the Hampshire County Council.

MR. H. M. STANLEY, the African explorer, visited the Dartford works of Messrs. Burroughs, Wellcome & Co. on Friday, July 29.

MR. JOSEPH HENRY TEBBUTT, wholesale chemist and druggist, Coventry, has been elected a freeman for Gosford Street Ward, and was admitted by the Mayor, Mr. G. Singer, last week.

MR. SAMUEL LAWRENCE, of Oban, has purchased the chemist and druggist business at 23 Cromwell Street, Stornoway, lately carried on by Mr. T. C. Henderson. The business will be under the management of Mr. A. E. Watson.

DR. HORACE DOBELL, who formerly practised in London as a specialist in chest diseases, and latterly has practised at Bournemouth, has finally retired from practice. In future he will reside at his new seat at Parkstone Heights, Dorset.

MR. JOHN MILNE, of Ladywell, S.E., asks us to correct the statement made in our report of the British Medical Museum, that the manufacture of his antiseptic dressings has changed hands. The statement is without his authority. Mr. Milne claims to have made these dressings for Sir Joseph Lister since the great surgeon came to London.

MR. F. H. GLEW, chemist, of 156 Clapham Road, has sent us a photograph of a flash of lightning taken by himself on June 28 last at 9.50 P.M. A reproduction of this photograph is published in the August number of *Knowledge*, which contains also a letter from Mr. Glew, explaining that the flash was taken in a camera, the lens of which was secured to the hammer of an electric bell, giving nine vibrations per second. Mr. Glew gives his reasons for calculating that the flash lasted about one-twentieth part of a second.

A PATRIOTIC citizen of Hereford has written an historical account of the city, which has just been published, with many excellent illustrations. Most of the book is devoted to descriptions of prominent local business people and their establishments. On the cover is a portrait of Mr. W. F. Chave, of the firm of Chave & Jackson, and Mayor of the city. Mr. Chave, it appears, has no longer a pecuniary interest in the chemist's business. He is now the proprietor of Wm. Evans & Co.'s cider and perry manufactory, where they can crush 20 tons of apples a day; and he is also, along with Mr. J. J. Jackson (who now owns the firm of Chave & Jackson), interested in Wilk's Plant-food Company, of which a glowing account is likewise furnished.

BANKRUPTCY REPORTS.

Re JONATHAN STEPHENS, Devonport, Chemist and Druggist.

THE adjourned public examination of this debtor was to have taken place at the Stonehouse Bankruptcy Court last week, but on the application of the debtor's solicitor (Mr. J. G. Jackson) a further adjournment until September 6 was granted. Debtor had, it was said, compiled a goods and cash account for four years, in compliance with the order of the Court, but the accounts were so voluminous, consisting of 195 sheets of foolscap, with ten columns of figures on each, that they had not time to make a second copy of them. They had found that during the four years the debtor had paid away over 20,000l.

Re JOSIAH EDWARD ANDERTON, Crown Street, Halifax, Chemist.

A MEETING of the creditors in this case was held at Halifax. No statement of accounts had been filed; but the Official Receiver said that, so far as he could ascertain, the liabilities would amount to 300l., and the assets to 180l. The estate was left with the Official Receiver to wind up.

Re ALFRED EGBERT WORFOLK, 15 Beauchamp Road, late 28 Galveston Road, Wandsworth, Surrey, Chemist and Druggist. The following are scheduled as creditors:—

	£	s.	d.
Arrocks, R., Hackney Wick	10	3	6
Buckingham, J., Wandsworth	10	8	6
Davis & Co., London	10	0	0
Evans, Lescher & Webb, London	10	0	0
Ford, Cardiff	30	0	0
Ford, Shapland & Co., London	10	7	0
Hodgkinsons, Treacher & Clarke, London	10	7	4
Horsnell Bros., Wandsworth	13	13	2
Jones & Co., London	33	0	0
London & Southern Counties Advance Bank, London	14	10	0
Mercantile Bank, London	33	0	0
Molynaux, J., London	13	2	6
Parritt, W. C., Bradford	15	0	0
Pohl, G., Dantzlg	33	15	6
Sanger & Sons, London	26	3	11
Smith & Co., London	10	4	0
Spencer, O., London	12	10	0
Sutherland, M. A., London	331	6	6
Tye & Sons, London	74	11	6
Verdon, London	23	5	0
Worfolk, B. S., Barnsley	28	0	0
Whitaker & Grossmith, London	10	3	11

Preference.

Martin, H., London	10	6	8
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The accounts filed show liabilities to unsecured creditors 849l., and net assets estimated at 18l.

Re CHARLES BENJAMIN SPRAGGE NORTON (late trading in co-partnership with others as the Castle Pharmacy and the Castle Tea Company), late Castle Street, Bristol, Chemist.

AN application was made at the Bristol Bankruptcy Court on Friday last week, before his Honour Judge Metcalfe, for the discharge of the above bankrupt. It appeared that the bankruptcy took place some years ago, and in 1890 the debtor applied for his discharge, which was refused.

From the report of the Official Receiver it appeared that the debtor had not kept proper books of accounts, and he had contracted further liabilities after becoming aware of his insolvent position. The debtor alleged his failure to have been caused through the failure of others.

In reply to questions the debtor said [the chemist and druggist's business was purchased by his wife, but now she was dead, and he had carried on the business for the benefit of his children.

The Official Receiver said he had not heard of the death of debtor's wife, and he thought, no doubt, that was the reason of the present application.

Finally, his Honour adjourned the case until October, in order that the Official Receiver might be enabled to investigate the matter.

DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Pentney, James Chapman, residing at Dereham Road, Higham, Norwich, trading as J. C. Pentney & Co., Northumbrian Printing Works, St. Benedict's Street, Norwich, printers; and as J. C. Pentney, St. Benedict's Street, Norwich, chemist. Trustee, Charles Larking, Norwich, F.S.A. Dated July 15; filed July 22. Unsecured liabilities, 5,138l. 11s. Composition of 8s. 6d. in the pound, payable 4s. within fourteen days from July 23, and 4s. 6d. on September 23; last instalment secured by sureties. The following are scheduled as creditors:—

	£	s.	d.
Aston Paper Mill Co., Birmingham	12	16	3
Bagshaw, G. & R. G., Norwich	30	1	6
Birmingham Paper Mill Co., Birmingham	19	1	9
Brookhurst, H., London	198	5	2
Brooks, T., Norwich	14	6	0
Bryne, E., & Co., London	251	19	1
Coleman & Co., Norwich	52	3	4
Collins, Son, & Co., London	49	12	10
Cookson & Macdonald, London	319	8	0
Davis, J. T., London	17	5	6
Deed, J. S., & Son, London	10	1	9
Dewhurst, S., & Co., Salford	13	6	9
Fenner, Appleton & Co., London	18	19	8
Flowers, H., Norwich	25	0	0
Gray's Paper Works (Limited), West Thurrock	80	12	0
Grosvenor, Chater & Co., London	125	0	3

Openshaw, Thomas Walker, trading as T. W. Openshaw & Co., Heys, Oswaldtwistle, and 3 Hornby Street, Oswaldtwistle, chemical manufacturer. Trustee, John Duckworth, Church Street, Accrington, auctioneer and valuer. Dated July 19; filed July 22. Unsecured liabilities, 936l. 12s. 4d.; estimated net assets, 648l. 1s. 2d.; creditors fully secured, 636l. 1s. The following are scheduled as creditors:—

	£	s.	d.
Adley, Tolkein & Co., Blackburn	93	17	5
Bayley, F. S., & Co., Manchester	51	14	4
Furness, R., & Co., Church	156	2	5
Haworth, John, & Co., Church	14	15	11
Holmes, George, & Co., Hull	12	0	4
Mackay, George J., Liverpool	29	19	9
Manchester & Liverpool District Banking Co. (Lim.)	850	1	1
Metcalfe, William, Church	213	17	9
Reid, J. A., London	77	5	10
Shelton, G. & G. W., Manchester	14	2	11
Ward, A. F., Accrington	21	9	10
Whittaker, Henry, Accrington	16	4	2

Gazette.

PARTNERSHIPS DISSOLVED.

Ainley & Davidson, Halifax, physicians, surgeons, and accoucheurs.

Kuhn, B. W., & Schroeder, C. F. (under the style of B. Kuhn & Schrieder), Manchester, drysalters.

THE BANKRUPTCY ACTS, 1882 AND 1890.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Marshall, Arthur Willis, Chorlton-on-Medlock, Lancashire, chemist—discharge suspended for two months.

Correspondence

Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Cinchona Syndicate.

SIR,—Some weeks ago I read in your columns a notice and prospectus of a proposed cinchona "Association." It was not the first I had heard of it, but the details were interesting—the more so as I was the first, some years ago, to propose a union of planters and merchants, with a view to giving a "fillip" to the bark market.

As to the attitude of the planters towards the scheme, I need only refer you to my former letter. At the present prices these gentlemen cannot live, much less keep up their estates. My figures have been confirmed by those issued by the Java Government. An output of 260 lbs. per acre, with $4\frac{1}{2}$ per cent. average analysis and 1d. unit, means starvation to a proprietor or "no dividends" to a company.

It must be further noted that this item of 260 lbs. per acre includes a considerable vanishing-point in the future, and for this reason: A very considerable portion of the bark exported from Java has been root-bark, and no root-bark can be taken unless trees are uprooted. But in order to emphasise yet further the present untenable position of the cinchona-producer and his ultimate supply of bark, I venture to give you a few figures with regard to our own small district. Out of, say, 1,700 acres planted with cinchona, 373 acres (nearly 20 per cent.) are being, or have during last season been, coppiced; and this in spite of the fact of our average analysis being higher than that of the Java planters, and the mark of our district being the well-known "Elephant" brand.

Then, again, our outturn per acre is above that of our Java confrères, an average of 500 lbs. of shavings per acre being not uncommon, and 800 lbs. per acre having just been realised on this and an adjoining estate.

It will be apparent to you that if, with all these circumstances in our favour, estates here are sold for a song, and a very old one at that, or coppiced, the cinchona-planter is reduced to his last legs. Only the capitalist can hold out, and even he will prefer to put his "eggs into other baskets," if some remedy is not shortly found to give a "quinine" tonic to the market.

And I believe that the planter has at last awakened to the necessity of co-operation with merchants and others, subject to an equitable arrangement with the merchant being arrived at.

And, with regard to this latter question, it will be necessary for the founders and merchants to issue an estimate of the "office and general costs" of working the Association, and they should sign an agreement to keep within these estimated costs, subject to heavy damages, just as the planters sign, agreeing to sell their produce on the stated agreement, with the penalty of being heavily mulcted if they don't adhere to their word.

It will be evident to my brother planters that, with 800 lbs. per acre of well-known "Elephant" bark, I have not advised them selfishly. It would certainly have paid me better to say, "Those who cannot do as I do, let them go to the deuce with a low unit; my time will come the sooner and the stronger." But since I have never said this, I hope and believe that my letters will have the more effect in convincing my brother planters of India and Java of the

value of my advice—"Work together, and co-operate with the merchants and brokers."

Shortly such co-operation must be and will be effected, and I am certain it will not harm either the retail chemist, the wholesale druggist, or the manufacturer. The purchasing public will have to pay more for their ounce of quinine, but, considering the amount of manual and brain work an ounce of quinine represents, and the immense benefit the public derives from a judicious use of the drug, there is no hardship in the consumer having to pay a shilling or two more for the many doses contained in an ounce of quinine.

While upon this latter subject—i.e., the consumers' point of view—I would advise your constituents, if they wish to increase their sale of quinine, to suggest its being taken in ginger wine—say 3 grs. to a wineglassful. Taken in this way it is agreeable, and quite equal to a sherry and bitters.

I am, Sir, yours faithfully,

Manalé, Deirkulam, Madras.

June 30.

J. ROSENBERG.

Essence of Coffee.

SIR,—We observe that in your issue of July 9 you refer to the experience of the Glasgow sanitary inspector in regard to the proportion of caffeine contained in essence of coffee, and you quote the results obtained by a French chemist as corroborative, to some extent at least, of the Glasgow analyses.

Our experience is exactly the reverse of both the authorities referred to. Coffee is easily robbed of the alkaloid in the process of essence-making. It is not, however, so simple a matter to recover the caffeine again from the essence. In our opinion more knowledge is wanting on this point to enable analysts to estimate correctly the percentage of caffeine contained in such essences as come under their notice. At present there is much harm done to the popularity of essence of coffee by analytical reports, framed—necessarily—perhaps, so as to indiscriminately condemn all brands, finding their way into the public prints, where they are usually allowed to pass unchallenged.

Not longer ago than yesterday we made a test of our essence in the ordinary course, and had no difficulty in obtaining a yield of 1.6 per cent. caffeine. This, you will observe, is a favourable result as compared with those you quote.

Yours truly,

21 Duke Street, Edinburgh,

July 27.

T. & H. SMITH & Co.

The Tartaric-acid Case.

SIR,—Referring to the report of the proceedings of the Woolwich Local Board of Health v. Mr. G. M. Smith, in your issue of July 23, will you allow me to state that I did not say the tartaric acid in question had been supplied by my firm? As a matter of fact, it was not. The questions put to me, and my answers, referred to the process of manufacture generally, and not to any particular make or sample.

I am, yours obediently,

29 Mincing Lane, E.C.,

July 28.

THOMAS BENNETT.

Kerr v. Kerr.

SIR,—In your report of divorce proceedings—Kerr v. Kerr—published on July 23, and just brought to my notice, you mention, "The respondent, before marriage, had been in the employ of Messrs. Marshall & Snelgrove." It should have been "the petitioner." If you will kindly correct this error in your next issue you will greatly oblige.

Sir, yours faithfully,

6 Duke Street, Portland Place.

August 1.

PAMELA KERR.
(The Petitioner).

Assistants in Switzerland

SIR,—In my letter to you of last week, re "Assistants in Switzerland," I said: "In conclusion, I may say that the average, &c., is about ninety hours." This should have been "about eighty hours." I must apologise for making the slip, and, as it makes a good deal of difference, I write to correct.

Lausanne, August 2.

GEORGE CAVE.

Bravo, "Chemist and Druggist"!

SIR,—Well may you have pleasure in offering such a splendid number as your last week's; for advertisements and literary matter it is first-class. I have thoroughly enjoyed perusing it, and, being also manager of a good-going country business, I mean to buy some goods from firms whose advertisements I notice. Your article on "Edinburgh and its Pharmacies" is very good; photos, excellent. I am an Edinburgh worthy, and one who knows the pharmacies and faces you have reproduced, and they are perfect in likeness.

I am sure your journal must be welcomed by thousands of chemists and assistants each week; I know I often weary for it.

To any who do not subscribe to it I would mention that I find it a very paying investment—pleasant food for the mind, many useful business hints and recipes, and, in fact, I consider it a *sine qua non* for any chemist who wishes to know what's what.

Aberdeenshire.

Yours truly,

SUBSCRIBER. (86/20.)

A Birmingham correspondent writes:—"I must indeed congratulate you on the present Summer Issue of THE CHEMIST AND DRUGGIST. It is indeed a 'work of art,' and all those gentlemen who have advertised deserve our warmest thanks for presenting us with such beautiful and useful advertisements." [A large number of other congratulatory letters have been received, for which we are grateful.]

Fair Questions to Ask.

SIR,—It sometimes happens to a manufacturer that he is sorely put to it to answer with civility questions which appear to him impertinent, relative to the composition of his specialities (which are not patented), especially as he knows in nine cases out of ten these questions emanate directly or indirectly from would-be imitators. But it seems fair to ask when best camphor is quoted on a list and best tartaric acid, whether the former is best English or foreign refined and the second manufactured in England or not, for usually the foreign refined camphor does not come up to the English standard, and a great deal of foreign tartaric acid contains more moisture than the English article of the leading manufacturers.

Also, now that there is so much cutting of the price of methylated spirit, it seems fair to ask whether the spirit used in its manufacture is from grain or from sugar, as usually the former is much superior; and whether the naphtha used in it is English or foreign, as the English is more uniformly reliable and generally free from what is often termed a "fishy taste."

July 27.

Yours truly,

MANUFACTURER. (83/48.)

What is the False Statement?

SIR,—In your note criticising the conduct of our firm you make the following false statement:—"To assist the sale of the medicines a 'black' in gold-braided-livery perambulates in front of Messrs. Hicks's shop distributing handbills." Before you make such statements and comments you ought to take care that they are true. I am quite prepared to defend the conduct of our firm. We have not entered into any more unholy alliance than the retailers of Sequah, and I would suggest that before you preach on this text you should refuse to assist the sale of similar quack remedies by excluding their advertisements.

Yours obediently,

Paradise Place, Queen Street, Cardiff, W. T. HICKS.

August 2.

P.S.—You do not say how many of the Cardiff chemists are suffering from the soreness.

Syrupus Zingiberis, B.P.

Subscriber (86/5) writes:—"In answer to 'Gingerine' last week, you say, 'The B.P. directs syrup of ginger to be made up to a pint.' Would you inform me, through your paper, when the official alteration to that effect was made, and in what edition of the B.P. it may now be found? I find these little things are not generally known."

[We have other letters to the same effect, and indicating that we are in error. Not so. The alteration occurs in the 1888 reprint, and does not appear to have been referred to in the lists of corrections. Our correspondent may be right in regard to the point not being generally known, for we find that it is overlooked in the 1890 "Squire."—Ed. C. & D.]

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 161-9.

83/39. B. J.—The indentures are not invalid because A is not a registered chemist, unless there is a special provision in them that he should be.

83/66. Bolo.—A chemist need not label a mixture "Poison," though it may contain a scheduled poison, if the label bear his name and address, and if a copy of the prescription be entered in a book kept for the purpose, with the name of the person to whom it is supplied.

83/50. Eagle.—An apothecary may do all that a chemist and druggist may do. If he keep an unqualified assistant, that assistant may not sell poisons except under the direct supervision of the apothecary. Whether the process you describe would be direct supervision is a question for a Court. We should think not. We do not think that a man with the assistants' certificate of the Apothecaries' Society would be legally regarded as qualified to sell poisons, but this is a point which has never come before a Court.

78/50. C. Windridge.—If any prescription containing a poison is copied in the prescription-book, the medicine need not be labelled "Poison." It does not matter who the writer of the prescription may be—bricklayer or medical man.

86/48. Rolyat.—We gave the following answer to a question similar to yours a few weeks since:—"You would be wise to treat sulpho-cyanide of ammonium as a poison within Part I. of the schedule, though it scarcely comes within the definition of 'metallic cyanides and their preparations.' In case of a prosecution, however, a Court might object to subtle chemical distinctions."

86/66. W. M. L. W.—You are liable to a penalty of 10*l*. under the Poisoned Grain Prohibition Act if you sell or expose for sale any grain, seed, or meal which has been rendered poisonous.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4*d*. each.

77/50. Ajax.—The process now generally employed for De-blooming Mineral Oil is a simple one—viz., the addition of a minute trace of oil-soluble orange aniline. Another method is to heat the oil to 90° F., and add to each gallon 1 oz. of mono-nitro-naphthalene in small crystals.

82/7. *Robur*.—(1) Not in our line. (2) See our issue of November 28, 1891, page 798, for a formula for lime juice and glycerine.

77/47. *Scotty*.—The oil which gives the Odour to Russia Leather is oleum rusci (birch tar).

77/42. *J. F. H.*—Directions for making Stone Ginger-beer will be found in our issue of August 8, 1891, page 230; see also page 31 of the current volume. For hints on brewing see Stevenson & Howell's book on aerated waters.

77/31. *Inquirer*.—The composition of the clay used by the potter has much to do with the glaze. Your customer should get the part of Spon's "Encyclopædia" dealing with pottery (see DIARY, page 323).

76/70. *Balloon*.—Use methylated spirit for fire-balloons.

78/45. *Johannes*.—Moustaches are extremely shy of invigorators, but soap and a razor are the elements which are attended with greatest success. Try that plan for a year or two, and let us know how you get along.

78/2. *J. J. M.*—See the selection of formulæ in our last issue. There are plenty of developers there for instantaneous work.

78/12. *A. P. S. (Dingwall)*.—You have not sent your name, but in medical matters please repose your confidence in your doctor, not in us.

77/74. *H. & P.*—Liquid Glue is now generally made from fish-skins by solution in weak acetic acid, and preservation with boric acid. The following formulæ are good:—

Glue	10 oz.
Water	26 oz.
Nitric acid	10 drachms

Soften the glue in the water, then add the nitric acid and boil for several hours.

Gelatine	10 oz.
Glue	10 "
Spirit	3 "
Alum	2 drachms
Acetic acid (20 per cent.)	20 oz.

Mix the whole, and when the glue is soft, transfer to a suitable vessel with a cover, and heat for six hours.

77/37. *F. D. (Budapest)*.—For the Disinfection of Sick-rooms, in which patients suffering from infectious diseases have been lying, it is now recognised that the fumes of burning sulphur are most certain in destroying the microbes. Any method which will give a copious supply of sulphurous-acid gas may be used, such as throwing sulphur on a charcoal fire, in the centre of the room; but in this country, sulphur candles and "thiocamf" are often employed, as being more elegant and less dangerous. It is advisable to clear the room of furniture, especially pictures or other gilt articles, and keep the doors and windows closed while fumigation is proceeding. After a day the room may be opened, aired, and all paint and woodwork washed with carbolic soap. You can with advantage study the advertisements in last issue, so far as they relate to disinfectants.

81/53. *Barometer*.—We have not particulars of the arrangement.

82/37. *F. & H.*—Wood is Ebonized by treating with decoction of galls and then with a solution of an iron salt (copperas). After several days' exposure it is polished in the ordinary way. Bone black and similar pigments are useless.

111/15. *Restorer*.—(1) The Golden Fluid for the hair is solution of hydrogen peroxide. The fact that a bottle of it burst in a customer's cupboard is an indication that the temperature of the cupboard was somewhat high. (2) People who supply labels like this should also give formulæ:—

THE UNIVERSAL HAIR-RESTORER quickly restores grey hair to its original colour. It is quite harmless, easy of application, has a pleasant perfume, assists the growth, and keeps the head perfectly free from all scurf and dandruff.

DIRECTIONS FOR USE.—Shake the bottle, and with a piece of sponge or soft brush apply it every day till the hair is sufficiently dark, and then as frequently as is necessary to keep the colour.

What is meant is, doubtless, Sulphur Hair-restorer, which has no particular efficacy in promoting growth and removing dandruff. The formula is:—

Milk of sulphur	3liij.
Acetate of lead	3iss.
Glycerine	3v.
Essence of white rose	5i.
Water to	3viij.

Mix the sulphur (not B.P. precipitated) and acetate with the glycerine and essence in a mortar, and gradually add the water.

81/59. *Amma*.—To make Coloured Varnishes for windows use a filtered spirit varnish, and colour with a spirituous solution of aniline dye the colour required. The varnish ultimately peels off, and the glass should be thoroughly dry and warm when the varnish is applied.

112/4. *Ferrum*.—We cannot advise you in the matter.

80/40. *H. C. (Lausanne)*.—Listerine is a proprietary compound antiseptic, for which Messrs. S. Maw, Son & Thompson are agents in this country. Its composition is indicated in the formula given in THE CHEMIST AND DRUGGIST, January 30, page 136.

82/25. *Nil Desperandum*.—See the article on "A University Degree for Pharmacists" in our issue of March 19, and get the London University particulars in regard to the matriculation examination. These will guide you as to the books to get. The examination is a very severe one, and if a candidate fail in one subject he is rejected in the whole. No other examination is accepted in lieu of it. Many work for the examination while at business.

83/40. *E. J. F. (Paris)*.—Seller's Mist. Bismuthi Co. is a proprietary preparation which you can obtain through any London house. For a similar preparation, see THE CHEMIST AND DRUGGIST, January 9, page 64.

83/41.—Zeno gives neither name nor address. 83/46.—*Lignum* withholds his name.

83/56. *W. D. (West Indies)*.—Communicate with Barnett & Foster regarding small ice-making machines.

83/5. *Taffy*.—In your attempts at Silver-plating you have omitted the most important thing—the silver salt. See our issue of August 8, 1891, page 230.

82/53. *Wild Cherry*.—See last week's "Correspondence."

83/22. *Raspberry*.—To colour Granular Citrate pink use cochineal-colouring; the flavour is essence of raspberry, and should be added after granulation.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

78/54. "Oleum scinthoria." Where obtainable? How prepared, or what is usually sold for it?



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1896,
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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

BRIEF abstracts of some of the more interesting chemical communications to the British Association are given on page 241.

It will be seen from a Commentary note that Professor Gairdner, of Glasgow, is strongly opposed to "touting" for new remedies.

THE deplorable conditions under which pharmacy is conducted in British Guiana are exposed in an article by a gentleman in the business there.

THERE was a discussion at the Paris Society of Pharmacy last week as to who first proposed that chloroform should be preserved in hermetically-sealed flasks.

THE Chemical Section of the Chamber of Commerce has resolved to advise the drug-trade not to handle for medicinal purposes any tartaric or citric acid which is not quite free from lead.

PROFESSOR W. RAMSAY has reported, to the British Association that in pure chloroform exposed to light for several months carbonyl chloride is formed, and this is probably the cause of deaths during anæsthesia.

THE Board of Inland Revenue have obtained convictions against chemists in Darwen, Manchester, and Blackburn for having in their possession tinctures of camphor, iodine, lavender, and opium made with methylated spirit.

THE addition of certain scents to tobacco is regarded by the Inland Revenue authorities as adulteration; but the Manchester magistrates, while technically agreeing with them, have imposed only nominal fines in two cases.

THREE Nottingham chemists have been prosecuted for selling laudanum not up to Pharmacopœia quality. One got off, but the others were fined 3*l.* and 5*l.* respectively, the amounts being adjusted inversely to the percentage of morphia. The prosecution appeared to be unaware that "laudanum" is an official synonym.

THE report of the Irish Pharmaceutical Society shows that a certain amount of contention is maintained between the pharmacists and the druggists in the Society. The latter have been more successful than their rivals in whipping up new voters for the next election. A new Vice-President and a new examiner in pharmacy have been elected.

THE County Court Judge at Derby has given an important decision under the Apothecaries Act. He rejected the argument for the defence that the defendant did not act or practise as an apothecary because he did not prepare the medicine specially for each patient, but held that it was sufficient if the person sued had selected the medicine for the patient. On the other hand, his Honour refused to allow the Apothecaries' Society to recover three penalties, as he held that the three cases proved only constituted the one offence of acting or practising. On this point the Society's counsel asked for leave to appeal.

Gazette.

PARTNERSHIPS DISSOLVED.

Christmas & Whittaker, Altham, aerated and mineral water manufacturers.

Gill, J. W., and Littlefair, T., under the style of S. Gill & Son, Pendleton. Manchester, chemists and druggists; as far as regards T. Littlefair.

Hill, A. B., and Hill, A. C., under the style of A. S. Hill & Son, Southwark Street, S.E., wholesale druggists and manufacturing chemists.

Russon, S. T., and Russon, H. A., under the style of Russon Brothers, Birmingham, chemists and druggists.

THE BANKRUPTCY ACT, 1883 AND 1890.

RECEIVING ORDERS.

Fry, Samuel Herbert (trading as the Fry Manufacturing Company), Chandos Street, Charing Cross, and Kingston-on-Thames, dry-plate maker.

Martin, George E. (trading as George E. Martin & Co.), Fenchurch Street, City, and Hoe Street, Walthamstow, importer of essential oils.

Parker, Jackson (trading as J. Parker & Co.), Wakefield, soap manufacturer.

ADJUDICATION.

Fry, Samuel Herbert (trading as the Fry Manufacturing Company), Chandos Street, Charing Cross, and Kingston-on-Thames, dry-plate maker.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Bishop, Thomas, Chatham, mineral-water manufacturer—discharge suspended for three years, ending July 12, 1895.

English News.

Carbolic-acid Poisoning.

Charles Francis Gerhardt Berg, aged 42, a jeweller, lately carrying on business in Worship Street, E.C., was found by his wife sitting in an arm-chair dead last week. At the inquest on Saturday, a police-constable deposed that he found a bottle which had contained carbolic acid in the room, and it had been ascertained that the deceased purchased it in the neighbourhood, saying he wanted it for disinfecting drains. Deceased had attempted to commit suicide in March, and the jury now thought that he had succeeded on this occasion, adding that they were of opinion that some restriction should be placed on the sale of carbolic acid.

On July 19, Susannah Tempest, 16, residing in Beamsley Street, Manningham, attempted to commit suicide by taking a quantity of carbolic acid. A neighbour gave her an emetic, and she was conveyed to the infirmary, where she was successfully treated. Last week she was brought before the Bradford magistrates and reprimanded.

Betsy Cottrill, 18, a Liverpool servant-girl, well-behaved, in good health and spirits, took a glass of carbolic acid last Friday night, and died. "Suicide," said the coroner's jury.

The "Old Tom" inquiry, which was last referred to in our issue of July 23, page 101, has now been closed, the coroner's jury returning a verdict of death from misadventure, and adding, "We consider the Limehouse Board of Works are deserving of censure for having sent out the carbolic acid in a bottle without a label, and we recommend that in future all bottles containing carbolic acid should be sent out in a special kind of bottle, with the word 'poison' printed in conspicuous letters on the bottle."

A Dispenser in Trouble

James Narroway, dispenser, of Camberwell Grove, was charged at the North London Police Court, on Saturday, with being drunk at High Street, Stoke Newington, on the previous night. A doctor certified as to his intoxication, and the prisoner, after expressing his regret, was told by the magistrate to pay the doctor's fee, 3s. 6d., and go away.

James's Blister on Fire

At Farringdon, on Thursday last week, while Mr. W. H. James was manipulating about half a ton of the ingredients used in his horse-blister, the man in charge accidentally spilt some upon a hot plate, and the whole lot was instantly in flames. Mr. James endeavoured to check the flames with buckets of water, which only seemed to make things worse, but ultimately a quantity of ashes thrown on to the furnace had the desired effect.

British Dental Association

The annual meeting of this Association was opened at Manchester, on Wednesday night, with a reception in the Town Hall by the Mayor and Mrs. Bosdin L. Leech. The sessions of the meeting commenced on Thursday forenoon at 11, in the Chemical Lecture Theatre of Owens College, and Mr. H. C. Quinby, the new President, delivered an address. The Association had a very full programme of papers and demonstrations, while the microscopical section and museum attracted great attention. The specimens of abnormal teeth in the latter were of the greatest interest, and showed some abnormalities which have not hitherto been described, and also many transitional forms between normal teeth and those of striking abnormality. The models numbered over 1,000, and included a large number of split models showing the result of extracting the sixth-year molars. These formed a valuable section of the museum. The entertainments of the meeting are on a lavish scale, and do not conclude until to-day (Saturday).

Suicide of a Bristol Chemist.

An inquest was held at Bristol last week regarding the death of George Edward Sadler, a chemist [not on the register], who carried on business in Newfoundland Street. From the evidence of Mrs. Sadler it appeared that for the

past eight months he had been drinking, and during the last few days before his death he drank very heavily; he had been in the habit of drinking sweet nitre from the shop. On Tuesday morning at breakfast-time he appeared as if he had had something to drink; but, nevertheless, he went into the shop and mixed a prescription. At about 9.15 witness went into the shop, and he was making up some medicine. He walked out of the shop, but she did not notice if he took anything with him. In about ten minutes she was called to deceased, who was lying on a couch in the parlour. He was gasping and quite insensible, so she sent for a doctor. Dr. Powell, who had been called, said he saw a prussic-acid bottle on the table. The result of a post-mortem examination subsequently showed all the signs of prussic-acid poisoning. The jury returned a verdict accordingly.

Medical Goodwills.

The Royal College of Physicians of London has just passed the following resolution:—"That this College regards the sale and purchase of practices, or the transfer of patients from one physician to another, for a pecuniary consideration, among fellows or members of its body as contrary to the traditions and practice of the College, interfering with the freedom of patients, and derogatory to the position of a physician." This does not apply to licentiates, who constitute the bulk of practitioners associated with the College.

The Lambeth Poisoning Cases.

Dr. Thomas Stevenson gave evidence at Bow Street, on Monday, in the case against Thomas Neill, who is charged with the murder of Matilda Clover by poisoning. Dr. Stevenson stated that he detected strychnine in the stomach, liver, and brain of the deceased woman, and in a careful quantitative analysis of 2 lbs. of the organs he obtained $\frac{1}{16}$ grain of the alkaloid, which he considered represented on the whole that a fatal dose had been taken. From the stomach, part of the liver, and a kidney of Alice Marsh, another victim, he obtained in all $6\frac{1}{2}$ grains of strychnine. The stomach of Emma Shrivell, Marsh's companion, yielded 1.6 grain of strychnine. He had also examined prisoner's sample case of pills. There were fifty-four lots of pills, and seven kinds contained strychnine. Taking bottle No. 2, described on label as containing $\frac{1}{16}$ grain of strychnine, he found on analysis that each pill contained $\frac{1}{22}$ grain. About nine of them would form a minimum fatal dose. He had been shown a 5-grain capsule, into which about twenty of the pills would fit without being mashed together. If they were rubbed up it would hold more. The 5-grain capsule would hold a fatal dose. The bottles were nearly full, and the strychnine-pill bottles quite full. Dr. Stevenson spoke further in regard to the tincture of nux vomica, which Neill had obtained from Mr. Priest, of Westminster, and was of opinion that this had not been used in these poisoning cases, for he had been unable to discover brucine in the remains.

Plymouth, Ho!

The Army and Navy Co-operative Stores, of Westminster, have taken the premises recently occupied by the Western District Co-operative Stores, now in liquidation, in Union Street, Plymouth, which they will shortly open.

Sulphate-of-ammonia Prices.

At the half-yearly meeting of the proprietors of the Gas Light and Coke Co., held on Friday, it was reported that the residual products of the past half-year included ammoniacal liquor and sulphate of ammonia, which had been sold for the sum of 73,188l. 8s. 9d. In the corresponding half of last year the amount realised for this product was 82,667l. On December 31 there were in store 21,504 butts of ammoniacal liquor; there had been made during the half-year 268,308 butts, and used during the same period, 263,871, whilst the quantity sold was 9,143 butts; this left in store on June 30 16,798 butts. The Chairman (Colonel Makins), in moving the adoption of the report said there had been a falling-off in the prices obtained for sulphate of ammonia, and he was unable to hold out any hope of improvement. The prices realised depended very much on the amount of nitrate of soda which was brought into the country, and that had continued to increase from year to year. In 1881 the amount of nitrate of soda imported was 319,000 tons,

and the quantity went on steadily increasing, until last year it amounted to 946,000. The whole production of the company's sulphate in 1882 was 65,000 tons, as against 476,000 tons of nitrate of soda imported. At the present time the whole product was 143,000 tons, as against 946,000 tons of nitrate of soda imported. Adverting to a question put by Sir Frederick Mappin on this subject, at the last meeting, he said he understood Sir Frederick to ask whether the company's sulphate of ammonia was sold through one broker, which broker bought on his own account. His reply was that the company sold through no broker. Since then he had had an interview with Sir F. Mappin, who explained that his question should have been:—"Is it true that the sulphate of ammonia of this company is sold to one broker, and that broker buys elsewhere on his own account?" His reply to that was that Mr. Blagden, their agent, did buy for himself from other people. It turned out afterwards that though his answer was absolutely true, there was one case in which it had come to light that Mr. Blagden's firm had purchased from this company. But that occurred when Mr. Blagden was in Italy. It was done by Mr. Blagden's clerk through inadvertence.

Outing.

The employés of Messrs. Thomas Tyrer & Co.'s works at Stratford spent a very pleasant day at Sevenoaks on July 30 last. The outing was favoured by excellent weather.

A Chemist Charged with Intent to Murder.

At the West Riding Assizes on Friday, before Mr. Justice Grantham, Aquila Waterhouse, chemist and druggist, late of Ramsgate, was indicted on two counts—viz., of shooting at David Henry Hirst, with intent to murder, and with intent to do him grievous bodily harm. Mr. Kershaw and Mr. Scott-Fox prosecuted, and Mr. Mellor defended. The circumstances of the case were reported by us last week. After a lengthy hearing the Judge summed up in prisoner's favour on the first indictment, but against him on the second, and, after a long consultation, the jury acquitted the prisoner on both counts, and he was accordingly discharged.

Stealing Homœopathic Medicines.

At Leicester Police Court, a hawker, named John Kelley aged 41, and residing in Mansfield Street, was charged with stealing six bottles of homœopathic medicine, value 3s., from the shop of Mr. Robert Henson, 12 Duns Lane, Leicester. In defence prisoner pleaded that he had had a lot of trouble and was in drink at the time. The Bench, believing that he had acted under a fit of temporary stupidity, discharged him.

A Ceylon Planter on His Island's Industries.

Last week Mr. Ferguson, of Ceylon, his honours of corresponding member of the Royal Colonial and Imperial Institute thick upon him, unfolded once more the well-worn tale of the Ceylon cinchona and cardamom industries to the members of the London Chamber of Commerce. Cardamoms, or "grains of Paradise" (*sic!*), said the lecturer, were freely cultivated and exported from Ceylon in the time of the Portuguese, between three hundred and four hundred years ago, and also by the Dutch. Afterwards the cultivation fell off to a few hundreds of pounds; indeed, the Cingalese began to import some from India for local consumption. Cardamoms, however, were again among the products which the coffee-planter had begun to cultivate with profit when his coffee-staple failed, and thus the export from Ceylon has risen from 9,000 lbs. in 1873-74 to 400,000 lbs. Altogether there are about 5,000 acres cultivated with this spice in Ceylon plantations apart from small plots in native gardens. India of late years has not exported more than 400,000 lbs. of cardamoms; latterly, indeed, only half that figure has been reached. As regards cinchona, if we may credit Mr. Ferguson, the first private experiment was begun in 1863-64 by a Kandy firm, which still maintained a close connection with Ceylon. By-and-by plants were taken and put out to grow as ornamental trees, or as groves or shelter-belts. After some years it was found, on stripping or coppicing such trees, that the return per tree or per acre was not only handsome but was enormous, and gradually it dawned upon a good many that this was not only a suitable, quick-growing plant, but a commercial product of high value. The steady failure in coffee,

which about that time set in, gave an impetus to the rush after cinchona until there was scarcely a coffee district or plantation that had not cinchona planted right over it. The few early planters, of course, profited heavily, some to the tune of 100% or more per acre cultivated; but there were only a few acres in most cases. One old planter is fond of narrating how his partners threw away 35,000% to 40,000% because they would not allow him to put 150,000 cinchona-plants on the boundaries and among the coffee in opening their plantation in the early sixties—an arrangement which, after striking off half for deaths, would certainly have given 40,000% worth of bark ten years later.

The Late Adulteration Prosecution at Woolwich.

The Woolwich Local Board of Health have decided not to appeal against the decision of Mr. Marsham in dismissing the summons against Mr. George Mence Smith, of Woolwich and elsewhere, for selling tartaric and citric acid containing lead, nor to proceed against the other two chemists for similar offences. The Plumstead District Board of Works have three summonses pending—one of them against Mr. G. M. Smith, the quantity of lead being stated to be 2 grs. per lb. Mr. Whale, the clerk, it is understood, will advise his Board to proceed with them. They are adjourned *sine die*, but will probably be brought on after the Board's vacation.

Cricket.

Teams representing the wholesale drug-houses of Messrs. Evans, Sons & Co. and R. Sumner & Co. contested a cricket-match at Newsham Park, Liverpool, on Saturday last. The Evans side attained a total of 68, towards which Richardson, with 15, was the chief contributor. The Sumnerites had lost 7 wickets, and amassed 116 runs when time was up. A. Parry made 36 for this side, and retired unconquered.

Irish News.

Chief Magistrate.

Councillor James Shanks, aerated-water manufacturer, has been elected Lord Mayor of Dublin for 1893.

W. & H. M. Goulding (Limited).

The directors of the wholesale drug-firm of W. & H. M. Goulding (Limited), Dublin and Cork, have announced a dividend of 8% per cent., free of income-tax, for the past year, after placing to credit 2,265% 4s. 2d. depreciation account, 4,723% 1s. 11d. debt guarantee account, 3,000% to credit of permanent improvements and alterations, and carrying forward to next year's account a balance of 2,491% 16s. 5d.

Tragedies with Poisons.

In Cushendall a female named Sarah M'Allister has been sent for trial on the charge of fatally poisoning children by giving them sugar mixed with an unknown poison, the name of which has yet to be furnished by Professor Hodges, who is preparing an analysis of the intestines of the deceased.—At Cork, on Monday, a child named Forsyth died from eating a biscuit he took from a dog, but which proved to have been given purposely to the animal to destroy it. Several other children to whom the deceased gave a "bite" of the cake were in great danger for some time.—An Armagh family named Warren, consisting of two sons, a daughter, and their parents, have been poisoned by eating a fowl bought in the market. The cause has yet to be made known by the public analyst.—Several other cases of poisoning have also been reported throughout the country within the week, the principal agents being rat-killer, carbolic acid, and in one case, at Belfast, by a mixture of soot and varnish.

Drug Contracts.

At the last weekly meeting of the Guardians of the Fermoy Union, a letter was read from the Local Government Board enclosing one from Messrs. Hunt & Co., wholesale druggists, Dublin, complaining strongly of the acceptance by the Guardians of a tender for medicines twice as high as

others that had been sent in, of which theirs had been the lowest. It appeared from the discussion which ensued that the contract had been given to a local druggist, and that one of the guardians who objected to this appointment had referred to his prices as "nearly double" those of Messrs. Hunt. Several calculations had been made to compare the prices, but that to which the Board seemed to attach the most importance, and which they gave in their reply to the Local Government Board, was that when Messrs. Hunt supplied medicines to the Union, from September, 1884, to September, 1885, inclusive, their bill came to 353*l*. 19*s* 4*d*., whereas Messrs. Forrest's bill for a like period in 1890-91, came only to 34*l*. 3*s*., showing that the latter, although by the tender the dearer, was by comparison in reality the cheaper, notwithstanding that during the time of Mr. Forrests contract influenza was raging in the Union, and the consumption of drugs was very high.

Bankrupt Druggists.

The case of Mr. W. Jackman, druggist, Edenderry, who was a short time ago adjudged a bankrupt, will come before the Court of Bankruptcy in Ireland on August 18.

Notice is issued by the Court of Bankruptcy, Ireland, that a public meeting will be held at the Four Courts, on August 17, to prove the debts of Mr. Charles Johnston, chemist and druggist, Upper Sackville Street, Dublin.

Coming Prosecutions.

Rumour is busy on the subject of impending prosecutions by the Pharmaceutical Society, and it is stated that more than ordinary importance and interest will be attached to the proceedings in the courts, owing to the number and nature of the summonses issued, as well as the position of the parties concerned.

A Handsome Donation.

Sir John Arnott, D.L., one of the principal merchants in Cork, has presented 1,000*l*. for the benefit of the local hospitals. A short time since Lady Arnott collected over 1,600*l*. towards the fund for establishing "The National Hospital for Consumptives."

Scottish News.

Edinburgh.

The Pharmacy Athletic Club are thinking of having an excursion on September 19, probably to Linlithgow.

Lady Students at Edinburgh Royal Infirmary.

The managers of the Infirmary have arranged that two wards shall be set apart for the use of lady students. These wards will be capable of holding twenty patients each. The managers have been somewhat exercised in regard to the legal enactment that eighty beds are necessary before a diploma can be obtained, but it is expected that this difficulty will be easily overcome. In addition to the forty beds, which have been set apart for the lady students, they will have the privilege of attending the ear, eye, and skin wards, so that in this way the requirements of the law can be carried out. At present there is no intention to have mixed classes.

French Pharmaceutical News.

(From our Paris Correspondent.)

TRISULPHIDE OF BORON.—M. Henri Moissan made yet another contribution to the study of boron at the last weekly meeting of the Academy of Sciences. By numerous successive treatments he has obtained a well-crystallised trisulphide of boron. It acts energetically on metals, also on most organic compounds, producing crystalline derivatives; with chloride of lime it gives off a green flame; slightly heated in oxygen it combines therewith with inflammation. It may be distilled in nitrogen without producing a combination.

THE SALE OF MEDICINAL WINES IN FRANCE.—The Syndicate of Pharmacists of the Department of the Somme seized last April samples of the Staoueli Phosphated Quinine Wine, sold by M. Labbé, grocer, at Amiens, and cited the vendor before the local police-court. The magistrate decided that the wine should be analysed by M. Dubois, professor of chemistry, and the case was finally heard last Wednesday. Professor Dubois reported that the wine contained $\frac{1}{2}$ gramme of quinine as against $\frac{1}{2}$ gramme specified in the Codex formula. The Court condemned M. Labbé to 1*l*. damages, and 20*l*. fine; but as he acted in good faith he benefits by the Bérenger law, which postpones the sentence until a second offence is proved.

THE CHOLERA SCARE.—M. Dujardin-Beaumetz, at a meeting of the Hygienic Council of the Department of the Seine, held on Monday last, drew attention to the inadequacy of the available means of disinfection in case of a serious outbreak of cholera. With the existing movable stove and disinfecting squad, he said, only five to seven disinfections could be operated daily, and the twenty-six men employed were altogether insufficient. If the number for Paris could not be increased he thought additional squads should be provided for the suburbs. Baron Larrey said much needless alarm was caused by illnesses and deaths being ascribed to cholera and its milder forms, which were really due to entirely different causes. M. Paul Brousse added that the authorities were often needlessly troubled on account of these false diagnostics.

CANDIDATE FOR THE ACADEMY OF SCIENCES.—M. Adolphe Carnot, brother of the President of the Republic, and a chemist of repute, has come forward as a candidate for the seat in the above Academy, rendered vacant by the death of M. Lelanne. The *Pigro* of Monday last publishes the following amusing description of the aspiring scientist:—"A professor of analytic chemistry and inspector of the School of Mines; aged 53; small, but sufficiently 'ample'; nose a trifle large, a fixed look and a 'mahogany' beard. Nothing of the presidential look. Always irreproachably gloved, booted, and with linen of resplendent whiteness. Has the correct bearing of his brother, with cheerfulness added. Special note: Has married for the second time; his wife's twin sister is the better half of M. Noirof, of the Treasury; sometimes mistakes one for the other in leaving a ball, but his natural good breeding enables him to discover the mistake before entering the carriage."

PARIS SOCIETY OF PHARMACY.

The Society met on Wednesday, August 3, M. Portes, President, in the chair. The first business was in reference to

THE PRESERVATION OF CHLOROPFORM

in hermetically-sealed flasks. M. Dumontier addressed the Society in support of his claim to the priority of the invention of this idea, because M. Boulé, pharmacist at Algiers, had claimed, in a letter addressed to the Society, to be the originator of the idea, having, he said, communicated it to the Society at the end of 1889. But M. Dumontier was understood to say that he could prove that certain notes of his on the matter appeared in the *Journal of Pharmacy and Surgery* in January of the same year. MM. Prunier and Leidié and other members took part in the discussion, but it was generally felt it could only be proved by comparison of the dates of journals; and it was observed that, after all, this mode of preserving medicaments which are apt to spoil by keeping had been used by chemists for the last hundred years.

ASPIRANT ESSAYISTS.

M. Portes announced that the following essays had been received for the annual competition for the Society's medals:—"The Meliola Genus," by M. Gaillard; "Some New Double Chlorides," by M. Chassavant; "Chloral and its Derivatives," by M. Roussel; "Notes on the Development of the Fruit and Pulp of the Tamarind and Cassia Lignea," by M. Tremeau; and "Study of the Bag-net Fishery in the Bay of Biscay," by M. Roche. M. Leidié expressed some

doubts as to the relation of one of the essays to pharmacy, judging by the title; but the Chairman laughingly remarked that the committee would be sure to promptly throw aside any unsuitable contributions. It was agreed that this committee should consist of M. M. Prunier, Patein, Rousseau, Viron, Collin, and Würtz.

CORRESPONDING MEMBERS.

The Chairman announced that letters of thanks had been received from those recently elected corresponding members—viz., M. Louis Planchon, Montpellier; M. Gérard, Toulouse; M. Roeser, Versailles; M. M. David and Domergue, Marseilles; M. Vaudin, Fecamp; M. Girard, Belfort; M. Bruneau, Lille; and M. Rambaud, Poitiers. M. Barillé, having at this moment arrived, announced his approaching departure for Marseilles, and begged the Chairman to transfer him to the list of corresponding members of the Society. M. Portes, in consenting to do so, expressed the regret of the Society at his departure from Paris.

The proceedings, which had only lasted about twenty minutes, then terminated. The members lingered in groups to wish each other a hearty *au revoir* and a pleasant vacation between now and the first Wednesday in October, when the Society reassembles.

Foreign and Colonial News.

GOOD, IF TRUE.—A telegram from Cape Town states that Dr. Alex. Edington, the ex-pharmacist, who is now bacteriologist to the Cape Government, has succeeded in discovering the bacillus of the horse-sickness, the dreaded plague of South Africa.

THE BERLIN INTERNATIONAL EXHIBITION.—The Prussian Minister of Commerce and Industry is engaged in considering the desirability of holding an International Exhibition in Berlin. He has invited the opinion of several representative bodies upon the subject, among others that of the Executive of the German Druggists' Union.

THE APOTHEKER VEREIN.—The German Apotheker Verein will hold its annual gathering from August 23 to 25 in Hamburg. Business sessions, opening at 9 A.M., will be held on August 23 and 24; the remainder of the meeting period will be devoted to pleasure. The finances of the Verein are in a fairly satisfactory condition, although last year's receipts have been 38,361m. (they had been estimated at 39,364m.), while the expenditure ran up to 38,660m.

SQUARING IT.—The Ontario College of Pharmacy have recently prosecuted a storeman in London, Ont., for infringement of the Pharmacy Act by selling "rough on rats." After the case had been before the police magistrate, an arrangement was made between the parties whereby the storeman agreed to abstain from selling patent medicines for the period of one year, and the druggists of the city agreed to take over his stock of patents.

A TASMANIAN INTERNATIONAL EXHIBITION.—It is intended to hold an International Exhibition at Hobart, the capital of Tasmania, in 1894-95, after the closing of the Chicago Exhibition, and an association to realise that scheme, with a capital of 20,000l. in 1l. shares, is now in process of formation. The official support of the Tasmanian Government has been secured, and it is hoped that invitations to foreign countries will be officially issued. A Government subsidy of 6,000l. is also expected.

SUNDAY CLOSING IN ALSACE-LORRAINE.—The German law concerning Sunday rest, the application of which appeared likely to raise resistance on the part of the small shopkeepers in Alsace and Lorraine, has been applied in the most satisfactory manner throughout the "Reichsland." The chemists' and druggists' shops alone are allowed to keep open; but a plan is under consideration among the chemists by means of which it is proposed that a mutual agreement be arrived at for the various chemists to open their establishments by turns, and thus allow of each shop being shut three Sundays out of four.

ALL ON ACCOUNT OF HIS COLOUR.—Lewis Johnston, a negro, is suing Frederick Bagee, a druggist, of 423 Fourth Avenue, New York, in the Supreme Court of the United States, for \$5,000 damages for malicious arrest. Johnston's case is that on January 25 last he went into Bagee's drug-store for some refreshment, and that Bagee refused to serve him on account of his colour. Johnston declared he would stay in the store until he was served, but Bagee called in a policeman, who arrested Johnston straightway and took him to the station, where, however, he was promptly liberated.

A GERMAN SCIENTIST IN AUSTRALIA.—A representative of our Melbourne journal has had a chat with Apotheker Willy Finzelbach, whose departure from Germany we announced at the time, and who arrived at Melbourne by the German steamer *Bremerhaven* early in July, with letters to Baron Von Mueller and others. Mr. Finzelbach has gone on a tour of scientific inquiry and collecting, especially in Queensland, on behalf of the Herbarium Boissier in Geneva, and with the assistance of the Imperial German Foreign Office, to study the useful and medicinal plants of Australia on the spot.

THE APOTHEKER AS WET-NURSE.—According to the *Pharmaceutische Zeitung*, seventeen out of the twenty-six apothekers in business in Leipzig have lately added a sterilised-milk department to their business, and find it a paying accessory. By their united efforts they feed one hundred babies a day, reckoning each infant to consume seven bottles of sterilised milk every twenty-four hours. The size of the bottles is not mentioned, but if we may assume them to be of ordinary capacity, the statement would seem to prove that in the matter of drinking powers, at any rate, the German child is father to the German man.

THE GOVERNMENT OPIUM-MONOPOLY IN JAVA.—It is reported that the Dutch Indian Government propose to make a tentative experiment in Java in selling opium direct, instead of farming out the monopoly as is done now. Mr. Stoeder, the Amsterdam professor of pharmacy, is reported to have prepared opium pastilles, each of which is wrapped in tinfoil, and which it is intended to sell to consumers instead of the small cakes now retailed by the Chinese. Mr. Eekhout, a prominent Dutch Indian official, who is about to return to Java, will carry a supply of these pastilles with him and try their advantages in a limited area to be specially set apart by Government for the experiment.

CONSUMPTION OF HONEY IN AUSTRALIA.—At the Victorian beekeepers' convention, held early in June, in Melbourne, an apiarian stated that from thirty frame-hives he had taken about 70 lbs. of honey per week, for six weeks in succession, while the red gum was in bloom. Another said that to prevent honey candying, he only found it necessary to make the tins perfectly air-tight by waxing the lid while the honey was still hot, but not boiling it. It was stated, also, that at present the merchants had a profit of about 5 per cent. on the kerosene tin of honey, and the grocer very often 25 per cent. At present not more than 200 tons of honey come into Melbourne during the year. The best way to deal with large supplies was to have 2-ton tanks for storage, and put up in smaller tins during the winter. It is calculated that the consumption of honey in Melbourne and suburbs is less than 1 lb. per head of the population yearly.

UNITED STATES TRADE-MARKS.—The following were registered on July 26:—"Dr. Stanley's Aluminium Cure," for liniment, by W. F. Grell, New York, N.Y.; "Witch-Wash," for liniments or lotions, by Powell & Gilbert, Amsterdam, N.J.; "Oxien," for a remedy for nervous diseases, by W. H. Garnet, Augusta, Me.; "Protectio," for medicines, by A. L. Worden, Detroit, Mich.; "Empress Josephine," for perfumery and toilet preparations, by Bippess & Breißenbach, Dayton, Ohio; "Golden Plasters" on a circular label, with picture of a building, for medical plasters, and "Golden Drops," for remedy for diseases of stomach, &c., by Dr. David, Kennedy Corporation, Kingston, N.Y.; "Salitoria," for a dyspepsia-remedy, by Salitoria Pharmaceutical Company, St. Louis, Mo.; "Silver State Gold Cure," for medicinal compounds, by McCrory & Taylor, Pueblo, Colo.; "Albolene," for boxes, bottles, powder distributors, &c., by McKesson & Robbins, New York; "Persian" and "Mary Stuart," for perfumery, by Alfred Wright, Rochester, N.Y.

Pharmaceutical Society of Ireland.

COUNCIL MEETING.

THE Council met at 67 Lower Mount Street, Dublin, on Wednesday, August 3, the President (Mr. Hayes) in the chair. The other members were Mr. E. Hodgson (Treasurer), Professor Tichborne, Mr. W. J. Baxter, Mr. Samuel Gibson, Mr. G. H. Grindley, Mr. W. T. Wells, Mr. P. Mearin, Dr. Burnes, Mr. G. D. Beggs, Mr. H. Conyngham, Mr. Charles Evans, Mr. W. R. Whitla, and Mr. Joseph Stewart.

CLEARING THE WAY.

When the minutes of the previous meeting were read, Mr. WELLS said: Before you sign the minutes, Mr. President, there was a discussion at last meeting with regard to a gentleman's certificate, and it certainly ought to be entered on the minutes.

THE PRESIDENT: Was it not referred to the Certificates Committee?

Mr. WELLS: It was not; the Committee refused the certificate.

THE PRESIDENT directed the Registrar to ascertain what had been done at the last meeting.

Professor TICHBORNE: While we are waiting for the book, Mr. President, might I ask as a favour, that when you come to the election of a Vice-President, in room of Mr. Robinson, resigned, you would proceed to No. 5 on the agenda-paper? There are a great number of the gentlemen present who are very much interested in that. In fact, some of them came on purpose to have a voice in that election, and they are obliged to leave by train. I myself have to leave at a quarter-past 4, and I think there are two besides me who have to go by early trains.

THE PRESIDENT: It would be pleasanter if we all had time to go through the agenda as it is, but if there are any gentlemen who wish to get away we could take these subjects up.

Mr. GRINDLEY: I would like to get away at half-past 4.

Mr. WELLS: There is nothing to prevent us acceding to Professor Tichborne's request.

THE PRESIDENT: With reference to that other matter, Mr. Wells, I find the entry is, "For receipt of further proof."

Mr. WELLS: I think if you look you will see "that the Committee refused his certificate for pharmacy as it did not conform to the Act."

Mr. HODGSON: The thing was settled so far as the meeting was concerned.

THE PRESIDENT: In the case of Robert S. Moore, Belfast, who was requested for further evidence of his having properly fulfilled the requirements of the Council in practical pharmacy, the evidence having been given to the satisfaction of the President, I permitted him to present himself for examination subject to the confirmation of the Council. The votes were seven in favour of his acceptance and four against.

Mr. WELLS: I think it was six to four.

Dr. BURNES: I think it was seven to five.

THE PRESIDENT: It was seven to four.

THE PHARMACEUTICAL CONFERENCE.

THE PRESIDENT: Before we commence the agenda I may mention that we have received a communication from the Secretaries to the Pharmaceutical Conference in England saying that they will be glad to receive the names of the delegates appointed to attend the approaching meeting of the Conference.

Mr. WELLS: Mr. Payne, of Belfast, is going, and Mr. Beggs, of Dalkey, and myself. I do not know whether there are any others going. Of course, the usual way will be to adopt them as delegates.

THE PRESIDENT: Is there any other gentleman would like to go as a delegate?

A NEW COUNCILLOR.

THE PRESIDENT: Professor Tichborne, do you wish us to go through all the letters in No. 1 or only little "A"?

Professor TICHBORNE: Only little "A." There are two

sections in it; and then, if you would kindly take No. 5, which is another election, afterwards.

THE PRESIDENT: The first business, then, is a letter from the Vice-President resigning his seat on the Council. Thereupon (1) to elect a member of Council in room of Mr. Robinson, resigned; and (2) to elect a Vice-President in the room of Mr. Robinson, resigned. The Registrar will read Mr. Robinson's letter.

THE REGISTRAR (Mr. Ferrall): Mr. Robinson's letter is as follows:—

I herewith tender my resignation as Vice President and member of the Council in order to offer myself for the vacant examinership in practical pharmacy. I cannot thus sever my connection with the Council without acknowledging my indebtedness to every member for the kindness and friendship shown me. I shall look back to the past two years with unmixed pleasure and satisfaction; and even if I am not permitted to occupy an official position in the Society, I can never cease to entertain for the Society and its affairs the most sincere interest and regard.

I am, dear Mr. Ferrall, sincerely yours,

THOMAS W. ROBINSON.

THE PRESIDENT: Before accepting Mr. Robinson's resignation, which he has tendered in a double capacity—first, as member of the Council, and, secondly, his position as Vice-President of the Council—I regret exceedingly that we should lose so valuable a member and one who I have found, during the time I have occupied this position, always tried to discharge his duty in the least offensive manner. If he had to oppose anything that he thought was not as it ought to be, he always did it in such a gentlemanly way that his opposition was almost pleasanter than a great many people's assistance in carrying out their wishes. Therefore I regret exceedingly that we should lose Mr. Robinson.

Mr. WELLS: I endorse every word that you have said. I think it is a great pity that Mr. Robinson should resign, for I think he would be far more use to the Society and Council in the position he held. I exceedingly regret that such a man should resign.

THE PRESIDENT: Our next course is to elect a member of Council.

Mr. WELLS: I propose Mr. Robert J. Downes as a member of this Council. I think I need hardly say anything about Mr. Downes. He is known to everyone as a working pharmacist, and as one who has taken a great interest in pharmaceutical subjects generally, and I know he will be a useful working member.

Mr. GRINDLEY: I have great pleasure in seconding that Mr. Downes be elected to a seat on the Council, inasmuch as I have known him from his earliest years, and been associated with him in business. I can say, from personal experience of him, that he will be found to be a thorough worker for the good of the Society.

THE PRESIDENT: Two months ago, when we elected Mr. Conyngham on our Council, it was suggested that we should have elected a druggist as there were only two representatives of the druggists on our Council. But it was thought that that was not desirable—that we should keep in the same condition as we were placed at the election last October—and as that was adopted as a principle, I suppose we should adhere to the same principle in this case.

Mr. GIBSON said he was not present on the last occasion, when that matter was arranged, and he therefore wished to state that he highly disapproved of the arrangement, and for the purpose of showing and endorsing his views, he should propose a gentleman from the chemists and druggists' body.

THE PRESIDENT: I am sorry we cannot be unanimous in this matter. I, too, would wish to see a member of the druggists on, but at the same time we feel that we ought to keep as we were placed at the annual meeting till the next election. It will then be in the power of the druggists, if they wish, together with the members of the Society, to put any number, up to seven, on the Board.

Mr. GIBSON: I think it would come with better grace now.

Mr. WELLS: I would like to point out that Mr. Gibson is proposing to do a thing to-day which, if he carries it, will leave it open to me or any other pharmaceutical chemist hereafter, when a druggist retires, to elect a pharmaceutical chemist in his place. Now, it ought not to be necessary to point out to Mr. Gibson the unfortunate position in which

he places himself. The pharmaceutical chemists must always have a majority of fourteen to seven. If Mr. Gibson wishes to act on the principle he is adopting, it is open to any other member who may be here to propose a pharmaceutical chemist in room of any druggist who may resign. I considered the matter very fully before I put forth the principle, and I think the members of Council here, when we considered it, thought it the fairest principle to follow. We are not electors. We are simply here as elected members. We are here to carry out whatever principles the Society wishes us to do, and I think it is our duty to keep the Council in the balance that the Society put it in. However, Mr. Gibson is, of course, quite at liberty to propose a druggist now, and let him carry him if he can. If he does, he must bear in mind the principle he is setting up.

The PRESIDENT: I think, after what he has heard, he will coincide with what you have said.

Mr. GIBSON: If it is going to be a *bond-fide* arrangement between the parties, I am willing to adhere to it.

The PRESIDENT: I think it is a matter of courtesy. I do not think there was any arrangement.

Mr. WELLS: I will say this much—that if Mr. Gibson resigned and I were here, I would feel bound to place a druggist in his place.

Mr. GIBSON: As regards Mr. Downes personally, I have great pleasure in supporting him, as I believe he will make a very suitable member of Council.

The motion was then agreed to unanimously.

ELECTION OF A VICE-PRESIDENT.

Mr. GRINDLEY: I have great pleasure in proposing a gentleman with whom we have been associated for a great many years, and who, although having strong opinions, is always ready to sink these opinions in the cause of fairness and justice. I allude to my friend Mr. Beggs, of Dalkey, and I am sure, if you elect him to the position of Vice-President, you will not regret the step you have taken.

Mr. WHITLA seconded, cordially endorsing every word Mr. Grindley had used with reference to Mr. Beggs.

The PRESIDENT: When Mr. Grindley stood up I was about to propose another name, and one that I think would have been as acceptable in many ways—one who filled the office of President of this Society with great grace at a very difficult time. The gentleman to whom I refer is one who, I am quite sure, would prefer at the present time to remain a private member, unless duty called him, following his own profession without interfering in these matters at all. But he has stuck to us through evil report and good report, and I think, when I mention the name of Mr. Charles Evans—(hear, hear)—you will all agree with me that in Mr. Charles Evans we would have a gentleman whom we would not only respect, but whom we would all like to see in this position. I accepted the office of President on the resignation of Mr. Evans, and at his very earnest request, and I feel exceedingly grateful to him for having continued to support us and to support me during the time that I have continued, through your grace, in this chair. Mr. Evans is quite near me, and would be of very active assistance to me in consultations. During Mr. Robinson's continuance in office as Vice-President, I often found it a difficulty that I was not able to communicate with him. Mr. Evans is near to me, and I would be able to communicate with him on every difficulty that might arise. He is, too, very approachable, and one need not be afraid to go to him. I am quite sure that Mr. Beggs would in many ways be a very suitable gentleman to occupy the position, but Mr. Beggs is a great distance from us and from me, and I would not have the same comfort in being able to consult him. If any gentleman would second Mr. Charles Evans, I would be glad, and we could then leave the Council to decide.

Mr. BEGGS: Before you get any gentleman to second Mr. Evans I would ask you to allow my name to be withdrawn. This came, rather by surprise on me, and as I am fully aware there are many gentlemen round the table who can fill the office better than I could, I may say that, though I have belonged to the Society for a long time, I would be much obliged if my name would be withdrawn.

Mr. EVANS: I was surprised to hear my name proposed as Vice-President. I am very much obliged to the President for the kind way he has spoken of me, but at present I would not like to undertake the office, and I hope Mr. Beggs

will not withdraw his name. He has been a useful member of Council, and I have had great experience of him as a member of committees, and there is no member of committee who gives more time and attention to the business of the Society than Mr. Beggs. I would be grateful, therefore, Mr. President, if you would withdraw my name.

Mr. WELLS: I would support Mr. Beggs, because I think it a great mistake to confine the working of the Society to two or three. Mr. Evans has already been President of the Society, and I think it would be rather degrading him to put him back to Vice-President. I think we should rather make Vice-Presidents with a view to their becoming Presidents. The work of the Society is very onerous, and I think you ought to train the members of the Society to take every place in turn. Mr. Beggs has been a very active member of Council. He has been a good while a member now, and I feel sure there is no one will fill the office better than he will. I might remind the President of the words of the song, "Thou art so near, and yet so far." Mr. Beggs is within easy reach of him, though he lives some distance away, as they are connected by the telephone, and there need be no difficulty in consulting each other.

Mr. EVANS: I am sure you will not think it is on the grounds mentioned by Mr. Wells that I am withdrawing. Mr. Wells says that I was President, and that it would be a degradation to be elected Vice-President. I would consider it a favour to be elected in any capacity. At the same time I would not like to hinder Mr. Beggs being elected Vice-President.

Mr. WELLS: Of course Mr. Evans will not understand me as objecting to him in any way. I hope he knows me too well to take what I said as an objection to him.

Dr. BURNES: Perhaps it is better to fulfil the formalities, and, therefore, I second the President's motion that Mr. Evans be elected. It is merely to fulfil the formalities, as I have no doubt whatever that Mr. Beggs will make an excellent Vice-President, though Mr. Evans has experience that Mr. Beggs lacks, and I think that the Society would be better served from the fact that Mr. Evans has that experience. He guided the Society through very trying times, and I think the Society ought not to be unmindful of the efforts Mr. Evans made at that time. Under these circumstances I have great pleasure in seconding Mr. Evans. Mr. Evans bows in deference to Mr. Beggs, and Mr. Beggs bows in deference to Mr. Evans, and I think you ought to let them solve the problem between them.

Mr. CONYNGHAM: The election is only for three months.

The PRESIDENT: Yes, only for three months. Perhaps it would be better to leave the matter to the Council.

Professor TICHBORNE: I think, sir, that both Mr. Beggs and Mr. Charles Evans are such popular members of the Council that you place the Council in a difficult position.

The PRESIDENT: I hope, however, they will both allow their names to go forward, and they will be satisfied whoever is elected.

Mr. CONYNGHAM: Wouldn't it be a more pleasant thing not to divide the Council?

Mr. EVANS: If you will allow me, I will withdraw my name.

The PRESIDENT: Very well; I am quite satisfied.

The Council then elected Mr. Beggs unanimously as Vice-President.

Mr. BEGGS said: I thank you for the honour you have done me, which was unexpected when I came into the Council-room. I am more of a worker than a speaker, and I hope that in the work I have to do if there are any deficiencies in it they may be overlooked. My election is only for a short time, but I shall do my best in the interests of pharmacy. I may say it is by pharmacy that I live, and the Pharmaceutical Society will have my best and constant attention.

ELECTION OF AN EXAMINER IN PRACTICAL PHARMACY.

The PRESIDENT: It has been moved by Professor Tichborne that we now pass on to No. 5 on our agenda-paper, to the election of an examiner in practical pharmacy in the room of Surgeon John Evans.

Professor TICHBORNE: I believe it is customary to nominate these gentlemen, but as there are a great number of candidates we shall require to have an election.

Dr. BURNES: Has there been any application received since the agenda-paper was printed?

The PRESIDENT: Yes; I was going to remark that Mr. Edward S. Leyburn, 35 Rathmines Road, had sent in an application after the time advertised, so that his name could not be placed on the agenda-paper. I will ask you to consider his name as if it had been received in time, in order that he may get the same chance as the rest. Of course, it is against himself his name not being on the agenda, as many members did not know he had applied, and would not be prepared to vote for him.

The Council then went into committee for the election, and as the result the PRESIDENT announced that Mr. Thomas W. Robinson, M.P.S.I., Upper George's Street, Kingstown, had been elected.

THE SOCIETY'S CALENDAR.

The Pharmacy Board of Victoria, the Pharmaceutical Society of Australasia, and the editor of the *Pharmaceutical Journal* of New South Wales wrote acknowledging the receipt of copies of the Pharmaceutical Society of Ireland's Calendar for 1892.

THE ROYAL UNIVERSITY AND THE SOCIETY'S SCHOOL.

The Secretary of the Royal University of Ireland wrote stating that the University could not accept the certificates of the school of the Pharmaceutical Society of Ireland in practical chemistry.

APPLICATIONS.

Mr. Jno. Pelin wrote to the Council asking to be registered as a druggist without examination, and stating that his health would not allow him to read for his examination.

The PRESIDENT: We wrote offering to accept him for examination next time, and I also wrote to the district inspector not to look him up too closely; but I think we ought to write to the inspector and tell him that Mr. Pelin is not now going up for examination.

Mr. Campbell W. Gilmer, R.D., wrote asking to be registered as a chemist and druggist.

The REGISTRAR said Mr. Gilmer's letter was practically a refusal to supply the Council with the evidence that they asked for as to whether he was in practice before the Amendment Act.

Mr. BAXTER: I know of my own personal knowledge that he was in partnership with Beatty & Wilson.

Mr. WELLS: That does not agree with the gentleman's own statement.

The PRESIDENT: Is it your will, gentlemen, that we reopen this question?

Mr. GIBSON: I wish to correct what Mr. Wells says. I have Mr. Beatty's direct statement that Mr. Gilmer was owner of the place before the passing of the Act.

Mr. WELLS: Had he paid for it? Did he pay for it since?

Mr. GIBSON: I have seen the legal agreement drawn up between them.

Mr. WELLS: Which legal agreement was never carried out.

Mr. GIBSON: It was.

Mr. GRINDLEY: When?

Mr. GIBSON: Before the passing of the Act.

Mr. WELLS: If Mr. Gibson has any definite written proof to satisfy us that the gentleman was entitled to what he claims, we will grant it; if not, I think we should do no more than refer it to the Law Committee to see if they could get the proofs. We have had hearsay enough about it.

The PRESIDENT: This question has been opened on a claim by Mr. Gilmer to be registered as a chemist and druggist. We have registered him as a druggist. Do you wish to reopen the question whether we ought to admit him to the register of chemists?

Mr. WELLS: If he does not give the proofs we require, we ought to remove him.

Mr. GIBSON: I think you should not make that statement when I have given you the gentleman's own words.

Mr. WELLS: I have it from a gentleman who interviewed Mr. Beatty, and I must take it from him. Let us have positive proofs and documents.

Mr. GIBSON: I have already seen them.

Mr. WELLS: Let him bring them up.

Mr. GIBSON: Do you not think my word that I have seen the documents good enough?

Mr. WELLS: Is there any objection to our seeing them?

Mr. GIBSON: If you go to Belfast you could see them.

Mr. WELLS: We will not go to Belfast.

Mr. GIBSON: Can people send their leases to you?

Mr. WELLS: They have sent them to us before now, and we certainly require to get them laid before us.

Mr. CONYNGHAM: If a man was only in business for two hours, would not that entitle him?

Mr. WELLS: I had better read the information I have and that will explain matters.

The PRESIDENT: Perhaps it will be well to read what you directed me to write on his letter at last meeting—"We require evidence of your having carried on business before the passing of the Amendment Act, and also, if you wish to go into the matter of title, to give proofs of having styled yourself chemist and druggist."

Mr. BEGGS: Has he done so?

The PRESIDENT: He has not, and I think it is necessary for us to get from Mr. Gilmer what you agreed we should ask from him.

Mr. GIBSON: I think he has given proof that he was trading as a chemist and druggist.

The PRESIDENT: He has not given it to us.

Mr. GIBSON: He traded with Alexander Beatty as "Beatty & Co., Chemists."

Mr. WELLS: What about the other partner? That is only two you speak of. You are forgetting there was a third.

Mr. GIBSON: I think there were only two.

Mr. WELLS: Excuse me; there were three, and two were withdrawing from it. Did they do so?

Mr. GIBSON: I understood they did.

Mr. WELLS: You and Mr. Montgomery gave us a statement. I have Mr. Montgomery's grounds for making that statement, and I have it here now.

Mr. GIBSON: Well, read it.

Mr. WELLS then read portion of a letter to the Council:—

I have written to a friend in Ballymena, and the information received agrees exactly with what I had known of the case, and is this—Alexander Beatty and C. W. Gilmer entered into an agreement with James Beatty, in 1889, to take over his (James's) business and carry it on as Beatty & Co., on certain conditions as to price, after the stock was ascertained; but as a price could not be agreed on, the deed was never completed, and Alexander left the business, and Gilmer continued on as the traveller of James Beatty until the year 1891, when Gilmer took over the business on his own account from James Beatty, and is now carrying it on as Gilmer & Co.; and it was with the understanding that the terms of the first agreement would be ratified that we (Mr. [Gibson and myself] recommended Gilmer getting in under Schedule B. It will be necessary to see that dates are right before accepting a verbal statement.

Mr. GIBSON: I understand that Mr. Gilmer was in business and had gone out of it again.

Mr. WELLS: You understood that that agreement was to be ratified.

Mr. GIBSON: I did not understand anything of the kind.

Mr. WELLS: Did you see that the agreement was carried out?

Mr. GIBSON: I did not, but it was carried out for several months, and then Mr. Beatty entered, and took over the place again.

Mr. WELLS: They simply would not agree on the price?

Mr. GIBSON: I would not like to inquire into the details of people's private business.

Mr. WELLS: Unfortunately, it is our duty to inform ourselves of the details of people's business.

Mr. GIBSON: I got information that he was in possession of the business for a certain time.

The PRESIDENT: I think the business belonged to Mr. Gilmer for a time, and he is entitled to get on the Register.

Mr. WELLS: It did not belong to him; he did not carry out the agreement and pay for the business.

Mr. BAXTER: If Mr. Beatty gave over the place to Mr. Gilmer for a certain number of months, and there was no clause in the agreement that they could not possibly carry out, I think during those months Mr. Gilmer was certainly entitled to be considered as the owner of the place *pro tem*.

The PRESIDENT: He was in business, certainly.

Mr. BAXTER: If an account was presented to Beatty & Co., would not Gilmer and Alexander Beatty be responsible for it during those months?

Mr. WELLS: Sure, Mr. Beatty was in the place still.

Mr. BAXTER: Because the money was not paid.

Mr. WELLS: In other words, I agree with my senior assistant that he is to purchase my business. After being in my place two or three months, he says he is not prepared to carry out the agreement, and notwithstanding that, he was the proprietor of my business for the time he was in. That is rather unnatural. In this case Gilmer never took over the actual possession of the business.

Mr. BAXTER: I think if he was there for six months he was in possession of the business.

Mr. GRINDLEY: Was it not on condition that the agreement was carried out?

Mr. GIBSON: The name of the firm was changed.

The PRESIDENT: I think this is a case that we now understand pretty well, and it is not a case that we should go back upon and thrust him out of his place and withdraw from him the licence he holds.

Mr. BAXTER: You could not do it.

The PRESIDENT: He considers that for a time Beatty and he were lawfully in business. A disagreement subsequently occurred between him and Beatty, which caused him to throw up the business which had been given over to him.

Mr. WELLS: Mr. Beatty was still in it.

Mr. BAXTER: He was not. Your information is incorrect.

Dr. BURNES: What is the point at issue? Would it affect Gilmer?

The PRESIDENT: Gilmer would be taken off the register entirely, and would have to come up again for examination.

Mr. HODGSON: He is registered, then, already?

The PRESIDENT: Yes; and how this question stands open at all this: Mr. Gilmer applied to be transferred from the register of druggists to that of chemists and druggists, which he said he was entitled to, as James Beatty & Co. had the title of chemists and druggists before he took up the business, and also during the time he was in the business before he surrendered it again to Mr. Beatty.

Mr. BEGGS: Have we not written to him for proof of that, and has he replied to that?

The PRESIDENT: That is what has opened up the question. Mr. Montgomery said on the last day that it was a question whether we ought not to ask him for proofs of his being in business. But I think we have heard from Mr. Gibson and from other sources that there was a misunderstanding, and that he was really in business, although he surrendered it afterwards.

Mr. BAXTER: I was not approached by Mr. Gilmer. He never mentioned this matter to me, nor did I know it was coming before the Council; but from my intimate knowledge of the premises and of the whole arrangement, I understand perfectly that Mr. Gilmer was in *bona-fide* possession of the business, and that a certain time afterwards, through some misunderstanding regarding the price, Mr. Gilmer and Mr. Beatty mutually agreed that the agreement would be dissolved and another arrangement entered into by which Mr. Gilmer now is in possession of the premises. I do not think we should go back on it.

Mr. WELLS: We are here to do what is right.

The PRESIDENT: I think if Mr. Wells took a wider view of the subject he would see that he was in the wrong.

Mr. WELLS: You asked this gentleman to give proofs; if he has proofs, why not give them?

The PRESIDENT: We understand the whole case as well as if we had the documents here. You are aware he showed Mr. Gibson a memorandum or document which he said would be carried out.

Mr. WELLS: But which was not carried out.

Mr. GIBSON: But at that time he was in possession of the business.

The PRESIDENT: We have discussed this business long enough, and ought to bring it to a conclusion. As many as are of opinion that this matter be now shelved will say *aye*.

Mr. WELLS: I move that it be referred to the Law Committee to see if they can get the proofs they require.

Mr. GRINDLEY: I second that.

The PRESIDENT then put the amendment, and declared it lost by four votes to eight.

Mr. BEGGS: I think it is stultifying ourselves to a great extent. You wrote to a man asking for information and he will not give the information to you.

The PRESIDENT: We have got the information from others. However, we have discussed it, and we have decided it.

Dr. BURNES: We do not recognise him as a chemist and druggist. He is a registered druggist.

Mr. GIBSON: Am I in order in proposing that we register him as a chemist and druggist?

The PRESIDENT: I think, for his sake, you had better give that up.

MISCELLANEA.

Dr. R. J. Montgomery wrote to the Council asking them to sanction the holding of his examination on Thursday instead of Friday. The matter was referred to the examiners.

A reply to the address presented by the Council to Trinity College was received.

The examiners reported that fourteen out of seventeen presented themselves for the Preliminary examination, and of these ten passed. They also reported that twelve students presented themselves for examination for pharmaceutical licences, all of whom passed. The examiners further reported that three students presented themselves in the pharmaceutical assistants' examination, and only one passed.

The PRESIDENT: I think this is the first record of all having passed in the pharmaceutical licence examination that we have had.

The House Committee reported that they had examined the accounts for the month, and recommended that the house be closed from August 5 till August 21.

Mr. Robert Andrew, 209 Shankhill Road, Belfast, asked to have his name placed on the Preliminary Register. He passed his examination in November, 1879. The request was complied with.

A FINANCE COMMITTEE.

The PRESIDENT: The next business is Mr. Wells's motion with regard to a Finance Committee. Mr. Wells brings this forward now formally. I may mention this principle has been acted on, but there is no rule in connection with our meetings to carry it out, and this motion is to make it a rule on our Society.

Mr. WELLS: The motion speaks for itself. The explanation you have given is exactly what I was going to state. I think we should have some system of watching expenditure. Here we have been paying accounts, and sometimes there were some that the Registrar could not arrange, and the result was there was really no check. We propose to make the system we have pursued for some time a law, so that in future it must be complied with. I therefore move—

That the House and General Purposes Committee do act as a Finance Committee. It shall be the duty of this committee, two of whom shall form a quorum, to examine all accounts and to present at the monthly meeting of the Council such as shall have been approved for payment, with the signature of the Chairman attached. No money shall be ordered for payment by the Council unless passed by the committee.

Mr. BEGGS seconded.

Dr. BURNES: It is proposed that no money should be ordered for payment by Council unless passed by the committee. Would it not be possible for the Council to pay money without having it passed by the committee? As it reads now, it would seem as if the Council would be bound by the committee.

The REGISTRAR: The regulation already on the subject is that each account should be checked by the President and initialed by the President and Registrar.

Mr. WELLS: Where is that? It is not one of the published rules, surely?

The REGISTRAR: It is one of the Privy Council rules.

The PRESIDENT: The Council cannot pay money at present unless it is on the agenda-paper, and that, of course, is passed by the committee before.

Mr. WELLS: I am sure, Mr. President, if this rule has been long in existence we have never acted on it, because I have never yet seen an account signed by the President and the Registrar.

The PRESIDENT: Do you think that rule is sufficient?

Mr. WELLS: No; I think it is necessary to have a system of checking.

The motion was then passed unanimously.

PRACTICAL PHARMACY EXAMINATION.

Mr. WELLS: The next motion I have down is that the House and General Purposes Committee do consider and report to the Council at its next stated meeting on the putting-up of proper benches and fittings for the practical pharmacy examinations. After we came into this house the committee intended to have completed the furnishing. Mr. Hodgson, you may recollect you said we would want 100% for examination-benches. The bench we have at present is the bench you had from the start of the Society, and it is not at all large enough for the purpose. You are tied to nothing by this resolution, except that the committee will consider the matter and report to you at a future meeting.

Mr. HODGSON: This is a matter we cannot discuss now, and it might have a bearing on what I was going to say here. We have in bank a sum of 343*l.* 2*s.* 3*d.* The question is, how much do we want to retain in hand for current expenses? The balance I would suggest should be invested. You have some 300*l.* in the Funds, and I think it is bad to have 343*l.* lying in the bank idle.

Mr. BEGGS: I think the benches will be necessary.

Mr. HODGSON: What do you suppose the benches will cost?

Mr. WELLS: I think 50*l.* ought to go a long way.

Dr. BURNES: It will take 100*l.* at the very least, and to what better use could it be put than in putting in benches and in providing the necessary accommodation for maintaining the dignity of your examinations?

Mr. WELLS: There are a lot of bottles and things, and it will probably require 100*l.* before you are done with it.

The PRESIDENT: That will not be expended within the next two or three months.

Mr. WELLS: I think we should go at it and finish it.

The PRESIDENT: Mr. Hodgson has asked me how much we should buy Consols with.

Mr. HODGSON: Put it in the Funds as you did the other. You should invest 250*l.* as you have 343*l.*

The PRESIDENT: I think we should put in 250*l.*, but we have 70*l.* to pay away to-day. However, there are names Mr. Gibson has given who, if elected, will bring in 50*l.* all at once.

Mr. WELLS: I do not like to count on money until you have it. Don't mind any money you haven't got.

The PRESIDENT: I will move that we have on the agenda next month that a sum of 250*l.* be invested in 2½-per-cent. Stock.

Dr. BURNES: That will leave 100*l.*, and 100*l.* will not do all we want.

Mr. WELLS: And we should make the house right while we are at it.

The motion was agreed to.

ELECTIONS.

Mr. William White, L.P.S.I., 24 Twickenham Street, Belfast, and Mr. Kingston Young, L.P.S.I., Charlotte Street, Newbridge, were elected members of the Society.

The following gentlemen were elected as associate druggists:—Mr. William Alexander, chemist and druggist, Great Strand Street, Dublin; Mr. John Cairns, chemist and druggist, Wilton Street, Belfast; Mr. Andrew Kinkead, registered druggist, 4 Yarrow Terrace, Belfast; Mr. John McClement, chemist and druggist, Newtownards; Mr. Thomas McDonnell, chemist and druggist, The White House, Portaferry; Mr. Harold H. Quigley, registered druggist, 121 Capel Street, Dublin.

ANTICIPATING.

Eight pharmaceutical chemists were proposed for membership, and about sixty druggists as "associate druggists." The Council then adjourned.

PACKING SALT IN THE DUTCH INDIES.—The answers received by the Dutch Indian Government to their question how to pack salt for retail sale so as to preserve it from decomposition (for the best solution of which question a prize of 10,000*fl.* is offered) are so numerous that they fill "five large boxes." These have been sent to the Director of the Soerabaya High School for examination.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BARRAT—SALMON.—On August 3, at Sevenoaks Congregational Chapel, Mr. R. Barrat, pharmaceutical chemist, St. John's Hill, Sevenoaks, to Miss Elizabeth M. Salmon, eldest daughter of Mr. Joseph Salmon.

BASSETT—HARDING.—On July 31, at St. Mary's Church, Fulham, by the Rev. Herbert Satchell, John Bassett, A.P.S., to Grace Dowie, widow of the late George Daniel Harding, M.R.C.S.Eng. M.R.C.P.Edin., of Grantham.

MACKEITH—GADD.—On July 28, at St. David's Church, Exeter, by the Rev. W. G. Mallett, uncle of the bride Alexander Arthur MacKeith, M.B. C.M., St. Thomas, Exeter, youngest son of the late Dr. MacKeith, Hurst Green, Sussex, to Alice, eldest daughter of Henry Gadd, J.P., chemist, Exeter.

POLLARD—SHAW.—At the Wakefield Cathedral, on July 27, by the Ven. Archdeacon Donne, M.A., assisted by the Rev. C. D. H. MacMillan and the Rev. P. D. Hornby, Mr. John Pollard, mining engineer, to Maude Mary, youngest daughter of the late Mr. Edward Pearson Shaw, chemist and druggist, of the Market Place, Wakefield.

ROGERS—PARR.—On August 10, at St. James's, Moss Side, Manchester, by the Rev. S. B. Ainley, E. H. Rogers, chemist and druggist, 66 St. Giles Street, Oxford, to Mary, second daughter of the late W. Parr, granddaughter of the late George Parr, Brook House, Burnage.

DEATHS.

CALLAWAY.—At Market Place, Whittlesea, Cambs, Lemuel Callaway, chemist and druggist.

DALGLEISH.—At Dundee, on August 6, Mr. Peter Dalgleish, manager of the Wellgate Laboratory, Dundee.

ISON.—Suddenly, at Melbourne, near Derby, on August 5, Mr. Francis Ison, chemist and druggist. On Thursday night Mr. Ison appeared to be in the enjoyment of his customary health, but during the night he was seized with an attack of paralysis, from which he never recovered.

LAUGHLIN.—At Albion Terrace, Ramsey, I.M., on August 4, Mr. W. Laughlin, chemist and druggist. Aged 55. Mr. Laughlin went to Ramsey about the year 1859, and purchased the chemist's business founded by the late Mr. John Karran. This business is the oldest in the Isle of Man, and was subsequently carried on, after Mr. Karran went to Folieu, by Mr. Llewellyn Summers, father of Mr. Hardy Summers, editor of the *Birmingham Owl*. Mr. Summers was succeeded in the business by Mr. Laughlin. The deceased gentleman was highly respected in Ramsey, where he had taken part in public and educational affairs, and was an ardent Freemason. He leaves a widow and grown-up family.

TEBBUTT.—On August 4, at Bank Buildings, Ponder's End, Mr. Frank Tebbutt, chemist and druggist. Aged 60. Deceased was in business many years ago in Kilburn, and latterly travelled for Messrs. Breffit. He was the inventor of Tebbutt's patent percolator.

WHITTAKER.—On August 7, Sophia, wife of J. W. Whittaker, chemist, Rochdale. Aged 34.

ASTONISHING THE NATIVES.—The Rev. A. N. Wood, a Mamboia missionary, tells a story about a lion which caught a man and partly ate him. The natives were terror-stricken, and sought the missionary's advice through the chief's son. Mr. Wood gave him a little strychnine and directed him how to use it. The result was that the next morning the lion was found dead. It was a very large male lion, and all the people said it was an old man-eater. The natives buried the carcass; but the hyenas came during the night and had a feast, to their sorrow, for ten of them have been found dead. The natives could not understand it all; one lion and ten hyenas, with less than a teaspoonful of white-looking stuff, like salt, was past their comprehension. And Mr. Wood calls a teaspoonful of strychnine "a little."

Legal Reports.

METHYLATED TINCTURES.

At the Darwen Borough Police Court, on Thursday, August 4, Ralph Shorrock, chemist and druggist, of Darwen, was summoned for having used methylated spirit in the preparation of an article—viz., compound tincture of lavender—capable of being used internally as a medicine.

Mr. Mant, supervisor, of Bolton, prosecuted on behalf of the Excise authorities, and explained the conditions under which duty-free spirit, properly methylated, is allowed to be used. By infringing the regulations defendant had incurred a penalty of 100%. On a certain day Mr. Shorrock's shop was visited by analysts, and they found on the premises compound tincture of lavender, in the preparation of which methylated spirit was used. Mr. Mant considered that it was to the interest of the trade, as well as the Excise, that a man should be prevented from selling without duty a preparation upon which others had to pay duty.

Mr. Shorrock admitted having the tincture on his premises, but he was not aware it was there. What little he used was for making up liniments for farmers. From his reading of the regulations he did not think he was liable.

The Clerk: You say it was an oversight?

The Defendant: An oversight entirely.

The Mayor said there was no suggestion of fraud, and he thought a nominal penalty would meet the case.

On the question of expenses, Mr. Mant remarked that two analysts had come down from London as witnesses.

The Clerk: Rather oppressive to bring witnesses from London to a court like this, when a witness on the spot would have been sufficient.

Mr. Mant: They have to travel about the country to discover these things.

The Magistrates ordered defendant to pay 40s., including costs.

A second case, against Mr. J. W. Butterfield, chemist and druggist, of the same town, was then heard.

Mr. Mant said the offence was precisely similar except that the preparation found on Mr. Butterfield's premises was tincture of opium.

Defendant said the tincture was not to be taken internally: it was only used as a lotion for cattle.

Mr. Mant said it could be used internally.

A similar fine, to include costs, was imposed.

On August 5, Councillor Joseph Brooks, chemist, 42 Shudehill, Manchester, was summoned before Mr. R. A. Armitage and Mr. Lowthian, at the City Police Court, Manchester, at the instance of the Commissioners of Inland Revenue, for having in his possession tincture of camphor capable of being used internally as a medicine, in the preparation of which methylated spirit had been used contrary to section 130 (d) of the Spirits Act, 1880, whereby he had incurred a penalty of 100%. Mr. Alpe conducted the prosecution on behalf of the Commissioners. There were two informations, one of which charged the defendant with having the tincture in his possession, and the other with making the article.

Mr. Alpe stated that, in consequence of the failure of a prosecution at Stockport, he was not quite sure whether they would succeed on the second information on the technical ground that they had not proof of the making within six months. It would, therefore, be withdrawn, and he would proceed in support of the first information.

Mr. H. J. Helm, F.I.C., a Somerset House analyst, spoke to a visit he paid to the defendant's premises on April 28, and to finding on an upper floor a jar containing a gallon of tincture of camphor, which was capable of being used as a medicine internally, and in the manufacture of which methylated spirit had been used. The jar was labelled "Methylated tincture of camphor."

Mr. Cobbett (for the defendant): If you were to drink the contents of the bottle you have in your hand, containing the sample you took, would you leave the box alive?

Mr. Helm: If I took it all at once it would probably kill me.

In answer to other questions Mr. Helm said he was told at the shop that it was an intermediate preparation for horse-blister, and that it had been prepared for a firm of Manchester carriers. Taken in doses it could be used internally as a medicine.

Mr. Cobbett said he would not be doing justice to his client were he to contend that no offence had been committed against the section. It must have been intended to give the officials at Somerset House a little airing in the country, or else these prosecutions would never have been instituted. The right course would have been to say to the defendant, "You have made a mistake, and if you do anything of the kind again we shall prosecute you," instead of which the authorities issued this summons right off. Defendant was not aware he was committing an offence.

Mr. Armitage said that a technical offence had been committed, but the fact of the label being on the jar showed that there was no endeavour to do anything underhand, but rather to support the statement of Mr. Cobbett that defendant was not really aware he was committing an offence. The Bench believed that the tincture was not there for sale as a medicine for internal use, and they would impose the smallest penalty in their power, which was a fine of 1s. and costs.

TINCTURE OF OPIUM AND LAUDANUM.

At Nottingham, on Tuesday, three local chemists were summoned under the Sale of Food and Drugs Act for selling laudanum which was not of the nature, substance, and quality demanded by the purchaser. Mr. F. B. Harris (from the office of the Town Clerk) appeared to prosecute.

The first case was that of Frederick Lumby, chemist, of 9 Wilford Road, Nottingham, who was charged with selling 6 oz. of tincture of opium, commonly called laudanum, which was not of the nature demanded. An inspector of nuisances for the borough deposed that he paid 1s. 6d. for the tincture, and after dividing it into three parts submitted a sample to the borough analyst, Mr. E. B. Truman, M.D., whose certificate stated that the drug contained no morphia at all. In answer to defendant, the inspector stated that he did not ask for tincture of opium, but simply for laudanum.

Dr. Boobyer, medical officer of health for Nottingham, stated that the only opium allowed to be used by the British Pharmacopoeia was that obtained from Asia Minor. It was generally known as Smyrna opium, although it did not all come from that country. This opium contained about 10 per cent. of morphia, and the Pharmacopoeia allowed a variation from 9.5 to 10.5. Tincture of opium was obtained by macerating 1½ oz. of opium in a pint of proof spirit, and the strength of this mixture, if the Pharmacopoeia standard was observed, came out at about 754 per cent. His contention was that anything sold as laudanum without specifying any particular laudanum should be made according to the Pharmacopoeia prescription. The importance of this would be realised when they considered that it was to children mainly that this drug was given at the present season of the year, and children under twelve years of age were more sensitive to opium than to any other drug in the Pharmacopoeia. If the quality was allowed to vary children might be poisoned in some cases and in others they might be treated ineffectually. Mr. Harris said that the present case was one of the worst possible cases, and he asked for a heavy penalty.

The defendant said that in the course of an experience extending over twenty-one years he had, in company with others, always regarded tincture of opium and laudanum as two distinct drugs, laudanum only being supplied to the general public. The preparation supplied to the inspector was asked for under the name of laudanum, and it was a preparation made on the premises from crude opium instead of dried opium, and to that extent it might be weaker than the Pharmacopoeia prescription. He did not admit that the drug contained no morphia.

Cross-examined: He had not had his sample analysed, because he thought he was right. If the inspector wanted tincture of opium he should have asked for the Pharmacopoeia preparation.

The Magistrates thought that the case was proved up to the hilt, and the defendant would be fined 5s.

Wm. Widdowson, chemist, of 67 Duke Street, New Basford, Nottingham, was charged with a similar offence, and the analyst's certificate disclosed the fact that there was .206 instead of .754 of morphia in the drug. In answer to a question raised by defendant, Dr. Boobyer said that he did not recognise any legitimate distinction between tincture of opium and laudanum. Laudanum was the popular designation and synonym. His authority was "Owen's Tables." The Pharmacopoeia was a classic work, and did not recognise popular designations.

The defendant said that he had circulars in his hands from some of the largest wholesale chemists in the country in which tincture of opium and laudanum were quoted separately.

The Magistrates said that, in this case, they would give defendant the benefit of the fact that the drug did contain a little morphia, and he would be fined 3s.

Albert E. Beilby, 259 Ilkeston Road, chemist, was charged with selling 5 oz of tincture of opium which only contained .51 instead of .754 of morphia. The inspector, who said that he bought all the tincture of opium the defendant had, further stated that the defendant said, "Do you want the B.P.?" and he said "Yes, certainly."

For the defence, Mr. Linford, F.C.S., chemist to Messrs. Lofthouse & Saltmer, of Hull, and a Pharmaceutical Society examiner in pharmacy for many years, stated that he analysed every chest of opium which came into his laboratory, and the tincture of opium in question was of full strength. The analysis of opium was not a very easy one, and he had doubts about the analysis submitted to the Court. Similar prosecutions with respect to sweet nitre had always failed.

The defendant said that when he ordered the tincture he specially mentioned that he wanted B.P. quality, and he paid the market price, 3s. 2d. per lb., for it. He sold the article in good faith, and he would ask that the third part, in the possession of the inspector, might be analysed by the Government analyst at Somerset House. The Bench said that they were inclined to think that the article was sold in good faith, and they would inflict no penalty.

SCENTED TOBACCO.

THE Inland Revenue authorities had two cases brought before the Manchester magistrates on Saturday, in regard to the possession of adulterated tobacco. Mr. Alpe prosecuted. Leopold King, a tobacco-manufacturer, was fined 20s. and costs for having in his possession a quantity of tobacco which was adulterated with the petals and seeds of flowers. The defendant did not deny the offence, but said there was only 1 lb. of tobacco, which had been sent to him by a customer to be made up into cigarettes. The seeds and petals were for scenting the tobacco, and cost more.

A tobacco-dealer, named Plews, was fined 10s. and 8s. 6d. costs for selling, on April 7 last, a packet of cigarettes which were found upon examination to be adulterated with scent.

Mr. Armitage, the magistrate, said it seemed rather hard that there should be so wide an interval between the time when the offence took place and the hearing of the case. The case was a very trivial one, and seemed to justify the remark that these were "holiday" prosecutions.

Mr. Alpe pointed out the difficulties which lay in the way of an immediate prosecution following the commission of an offence. The principal reason was that the inspectors from Somerset House, who were constantly travelling over England to see that the law was not infringed, were obliged to submit the goods which were supposed to be adulterated to the examination of skilled chemists on their return to London, and to await their decision. He assured the Bench that there was no unnecessary delay.

Mr. Armitage asked Mr. Alpe to tell the authorities at Somerset House that the Bench thought that when prosecutions were to be instituted they should not be instituted four months after the offences had been committed.

ACTIONS UNDER THE APOTHECARIES ACT.

At the Derby County Court on Tuesday, his Honour Judge Kenelm Digby gave judgment in the three actions brought by the Apothecaries' Society against Christopher

Jones, herbalist, of Derby and Ripley. The plaintiff Society sought to recover three separate penalties of 20s. each against the defendant for three alleged offences against the Apothecaries Act. The hearing took place a fortnight since, when his Honour reserved his decision.

In the course of a lengthy judgment, his Honour said the questions discussed at the trial of the action were (1) whether the evidence established that the defendant did, as charged in the particulars, on May 6, 1892, act or practise as an apothecary in Derby within the meaning of section 20 of 55 Geo. III., c. 194; and (2) whether, if so, in more than one of the three actions more than one penalty was recoverable. After detailing the evidence, and observing that, according to the defendant's card, he "removes tumours, cancers, and abscesses without cutting; also removes the germs of consumption, even when they are given up," the Judge said he had reviewed the evidence in detail in order to make it clear that the special occasion relied on was not an isolated instance of advice asked and given as to an appropriate medicine for a particular ailment, but, as he found, in fact, was one of a series of acts. Upon the facts it was contended by Mr. Hextall, on behalf of the defendant, that no case of acting or practising as an apothecary within the meaning of section 20 of the statute had been made out. Mr. Hextall argued that there could be no acting as an apothecary unless the person mixed and compounded the medicine with his own hands, and, further, that the medicine must be compounded and prepared for the case of the particular patient. In the present case there was (the Judge said) certainly no evidence of compounding of medicine or pills at Derby, but the medicine and pills supplied were made up at Ripley and brought to Derby. In justice to the defendant it should be stated that there was no evidence that the medicine or pills were other than harmless. If a compounding or preparing of medicine, whether with reference to the particular case or not, was a necessary ingredient in the offence of acting or practising as an apothecary, he should hold that no offence had been made out, and that judgment must be for the defendant. If, however, all that was necessary was that the practitioner should select and prescribe the medicine which he professed to think was adapted to the particular case, then, in his opinion, the offence was complete. His Honour then proceeded to deal with the meaning of the words in section 20, "act or practise as an apothecary," and the cases in which they had been raised, and remarked that the words of the fifth section, which was relied upon by Mr. Hextall, referred to that part of an apothecary's duty now usually discharged by chemists, and consisted in making up the prescriptions of licensed physicians, and imposed a penalty upon the refusal of an apothecary to make up the prescription, and upon improperly making up the prescriptions of physicians. There was nothing, however, in the words of this section to show that the making-up of medicines was regarded as the whole of an apothecary's duty; indeed, the section itself referred to the sale of medicines as well as to their compounding as within the provision and duty of the apothecary. In referring to the cases which had been cited, the learned Judge said in the case of *Woodward v. Ball*, Judge Williams, in summing up to the jury, was reported to have said:—"The practising as an apothecary is the mixing up and preparing medicines prescribed by a physician or other medical practitioner or by the party himself." There was nothing to show that these words were intended to contain an exhaustive definition of the functions of an apothecary. There was no more fertile source of error than to apply the words used by a judge with the intention only of giving a description of an offence large enough to cover the facts with which he was dealing as if they contained, or were intended to contain, an exhaustive definition covering every possible instance of the offence in question. Even in the case referred to the evidence would be found to be directed to the selling of medicines rather than to the preparing of them. On the other hand, it appeared to him that the cases of the Apothecaries' Company v. Nottingham and another, were decisive that it was not necessary that the medicine prescribed should be compounded by the practitioner; that it was enough if he selected the medicine for the patient instead of the patient selecting it for himself. If he did this he acted or practised as an apothecary. He thought it was proved in the present case that the defendant was in the habit of prescribing medicine

selected by himself; therefore, in this (the first of the three actions) he would give judgment for the plaintiffs for the penalty of 20*l*. With reference to the other two cases his Honour said the question he had to determine was whether, under the words of the statute, "the person offending shall for every such offence forfeit and pay the sum of 20*l*," the advising and prescribing for these three persons consecutively, under the circumstances stated, constituted three offences or one offence. After citing the cases raised, he said no single case had been furnished to him in which more than a single penalty was recovered, and the inference appeared to him to be that in this respect expressions were not wanting of weight—opinions in favour of the view that the offence consisted not in a single isolated act but in a course or habitual action. It was not necessary for him to attempt to define what would constitute a separate offence under the Act of George III. All that it was necessary for him to say in the present case was that he felt bound to follow the ruling of Lord Tenterden in the case of the Apothecaries' Company *v*. Bentley, and to decide that the advising and prescribing to three different patients consecutively on the same day constituted but one offence under the statute, and therefore the judgment which he had already given in the first of these cases was a bar to the recovery of further penalties by the plaintiffs in the second and third cases. In these cases, therefore, there would be judgment for the defendant, and in each case the costs would follow the decision.

On the application of Dr. Rogers, Mr. Potter, who appeared for the plaintiff Society, his Honour gave leave to appeal.

ADULTERATED OLIVE OIL.

At Guildford Borough Bench, William Cole, of the Guildford Co-operative Society, was summoned for selling olive oil not of the nature and substance demanded. The public analyst certified that it was adulterated with more than 50 per cent. of cotton-seed oil. The defendant pleaded that the oil was the same as received from the wholesale firm. If it were pure olive oil the cost would be much greater. A fine of 1*l*., including costs, was imposed.

AN "EMPTY" ACTION.

At the Leicester County Court on Tuesday, before his Honour Judge Hooper, John Sampson Booth, manufacturing chemist, Walton Chemical-works, Chesterfield, sued William Forrester Bramley, of Granby Street, Leicester, to recover the sum of 11*s*., value of bags not returned. It appeared from plaintiff's evidence that in February last he sent defendant certain goods in the bags in question, and since then the defendants had disposed of his business, but had not returned the bags.

The defendant contended that plaintiff sent the bags for his own convenience, and said he might keep them until they were empty. When he sold his business the bags were not included in the valuation, and Mr. Ashwell, the purchaser, said he would return them as soon as they were empty. The bags were not empty yet, but as soon as they were they would be returned to plaintiff if he would wait for them. The plaintiff denied that he had made any such arrangement with defendant. A witness was called by defendant to prove that Mr. Ashwell intended to return the bags when they were empty. Finally his Honour gave judgment for the plaintiff.

PROSECUTION OF CHEMISTS AT BLACKBURN.

On Wednesday at the Blackburn Borough Police Court, Messrs. Clayton, Jowett, & Ward, an old-established firm of chemists, carrying on business in King William Street, Blackburn, with a wholesale business in Exchange Street, were summoned for having in their possession tincture and liniment of iodine, articles capable of being used as internal medicines, in the preparation of which methylated spirit, and derivatives of methylated spirit, had been used. There were two cases.

Mr. Alpe, barrister, prosecuted on behalf of the Inland Revenue authorities, and Mr. Crossley appeared for the defendants.

Mr. Alpe stated that the summonses were taken out under section 30 of the Spirits Act of 1880, and that the defendants had used methylated spirit instead of duty paid spirit. In the course of this year the defendants had made application for permission to use methylated spirit in the preparation of certain articles, which did not include those mentioned in the summons. They were liable to a fine of 100*l*. in each case.

Mr. H. J. Helm, analyst, of Somerset House, spoke to visiting the defendants' wholesale premises in Exchange Street, and finding tincture of iodine mixed with methylated spirit, and a similar bottle containing liniment or tincture, also mixed with methylated spirit. The duty upon spirit was 10*s*. 6*d*. per proof gallon, and the defendants had by their action caused a loss to the Revenue of 15*s*. When questioned about the articles, Mr. Ward, one of the partners, said they only supplied them to medical men, and not for use in the retail shop in King William Street.

Mr. George Lewin, also an analyst at Somerset House, gave similar evidence to Mr. Helm's.

For the defence Mr. Crossley urged that there had been no intention to defraud the Revenue, and that the offence had been committed in ignorance.

The Bench imposed a penalty of 20*s*. and costs in each case, amounting in all to 2*l*. 16*s*. The costs did not include witnesses' expenses.

AN ANALYST'S CERTIFICATE OBJECTED TO.

At Bakewell Petty Sessions on August 5, in the case of a person charged with selling adulterated milk, the inspector under the Sale of Food and Drugs Act produced the analyst's certificate, which stated that the sample contained 92 per cent. of milk and 8 per cent. of added water. Mr. Ainsworth, who defended, took objection to the certificate on the ground of an addition which the analyst had appended to it, saying, "This statement assumes that the original milk was of fair average quality, and if originally of very inferior quality the proportion of added water would be somewhat less than is stated above. The sample was analysed before any change had taken place in its condition that would interfere with the analysis." Mr. Ainsworth contended that that certificate put the inspector out of Court, and not only so but it was a fact that Somerset House officials took a lower standard than that of the Society of Public Analysts. The Chairman of the Bench said they were not satisfied that the water was added water, and dismissed the case.

THE AUTOMATIC SCENT-FOUNTAIN COMPANY (LIMITED).

MR. JUSTICE VAUGHAN WILLIAMS on Thursday made an order winding up this company upon the petition of Mr. P. Everitt, a holder of 3,400 shares and a debenture for 1,000*l*. The company was registered in 1889 with a nominal capital of 20,000*l*. Since then they have carried on business at a loss of 5,071*l*. 19*s*. 1*d*. The 10-per-cent. interest guaranteed on the debentures has not been paid.

BANKRUPTCY REPORT.

Re JOSIAH E. ANDERTON, Crown Street, Halifax, Chemist and Druggist.

THIS bankrupt was publicly examined at the Halifax County Court on Monday last, before Mr. Registrar Alexander. The statement of affairs disclosed liabilities amounting to 310*l*. and assets estimated to produce 112*l*. The debtor said he and his brother took over the business two or three years ago which had previously been carried on by their father. About six months ago his brother retired from the business, drawing 81*l*. therefrom as his share of the capital. At that time the liabilities amounted to about 187*l*., and the assets, including book-debts, amounted to 260*l*. The reason he paid his brother so large a sum was in order that he might obtain possession of the shop and work the business in a more economical manner. The debtor was finally allowed to pass his examination.

TROUBLES OF THE DRUGGISTS IN BRITISH
GUIANA.

BY ONE OF THEM.

FEW druggists in England know anything of the difficulties with which we in the colonies have to struggle. Here in Demerara business is carried on so differently that it is two or three years before a new-comer can grasp the situation. There is no law to protect either the druggist or the public, and, notwithstanding the efforts of the Chemists' and Druggists' Association, the Government have hitherto done nothing. Every shop has to pay a heavy licence: first, that of the store, which varies according to the value of the premises; then that of the druggist; and, finally, those for wine and opium, if these are kept. The licence for drugs varies from \$48 in the best localities down to \$4 in the rural districts, while that of the store may be as high as \$150, and opium \$480.

For years past there has been nominally a licence to practise as a druggist, from which members of pharmaceutical societies and other bodies were exempted, but this remained a dead-letter up to the present year, when some alterations were made in the annual tax ordinance. The item now reads as follows:—"Licence to practise as a druggist to be issued by the direction of the Chief Commissary, on the authority of the Governor, to those persons who are, in the opinion of the Governor, qualified to dispense and compound drugs. \$25."

Early in April this year several druggists were verbally informed that they would have to take out this licence, that it would have to be paid annually, and that the Governor had delegated the Surgeon-General to grant certificates of competency. At once a meeting of the Association was held, which resolved to oppose the licence as an annual impost, and also to refuse subjection to the Surgeon-General. The first condition was so obviously illegal that the Government found it best to drop it, but nothing was done in regard to the Surgeon-General. It follows, therefore, that every druggist in the colony, however long he may have been in business, must now subject himself to the chief medical authority, and, if that gentleman chooses, pass an examination by the Medical Board.

A few persons applied to the Commissary for the licence, and tendered the amount, but this was refused for want of the certificate. They did not object to paying for the licence, but contended that they were not bound by any law to put themselves under the control of the Surgeon-General, notwithstanding that the Governor had chosen to use his arbitrary power to that end.

Following upon these refusals came a notice, headed "Medical Board," and signed by the Secretary and dated June 20:—"All persons in actual practice as druggists who are desirous to obtain the certificate of competency as chemists from the Medical Board, are requested to make application to me on or before the 30th instant. A meeting of the Medical Board to consider the applications will be held at an early date."

Now comes the tug of war. The druggists have taken no notice of this advertisement, and intend to remain passive, leaving the Medical Board to do what they please. They consider it an attempt to interfere with matters beyond the province of the Board, and naturally resent such arbitrary proceedings. Already the colony is crowded with a set of men who, under certificates as dispensers of estates hospitals, open druggists' shops in every direction. They have been trained in the public hospital as sick nurses, rather than anything else, yet the medical men consider them the best and most suitable for the drug-business. They cannot see, however, what is very obvious to an outsider, that these dabblers in physic injure the profession in many ways. On the strength of their little learning they become a danger to the community, and, being left in charge of hospital patients, soon fancy themselves competent physicians and surgeons. As a natural consequence, when out of employ they wander about the country with bags containing a few medicines and undertake to cure everything. Several hundreds of them have at different times been passed by the surgeons, and as there are less than one hundred estates hospitals in the

colony, the majority settle down as druggists or quacks. The Chemists and Druggists' Association formulated a draft ordinance for regulating the sale of poisons last year, and sent it to the Governor, but without result. The Court of Policy—the legislative body of the colony—cannot introduce a Bill; everything must come from the Government, and if it take no action, nothing can be done. Probably the Governor referred the matter to the Surgeon-General, who reported against it, so that it was shelved, and not even an answer returned.

What will be the ultimate result of this affair time will show. No doubt the Government and the doctors wish to bind us hard and foot, and will probably bring in an ordinance to that end. But if the druggists stand firm and with their Association refuse to admit this uncalled-for interference, it may be defeated; otherwise the body of druggists of British Guiana will become only an appendage of the Medical Board.

In England, where everything runs smoothly, people have no experience of the arbitrary government of a Crown colony. We are deluged with officials of all grades—just double the number actually required, to allow a large minority leave of absence as often as possible. The heads of departments are only interested in their next step upwards, and care little or nothing for the colony, as any day may see their removal to another. To pay for this incubus we are taxed enormously, almost everything imported being burdened by a duty, and, as a matter of course, the druggist pays his share. Most of the large firms import direct from England, and have to pass entries and listen to most curious definitions. "Cats is dogs, rabbits is dogs, but a tortoise is a hinsect," said the railway guard, but this is nothing to the definitions of a Demerara Custom-house official. Castor oil is not a medicine, neither is hydrate of chloral, chloroform, sulphuric ether, or any tincture. Calves'-foot jelly is a sweetened preserve, and Japan wax is beeswax. Peppermint lozenges are not medicated; laudanum is opium, and must pay \$4 a pound duty; and chlorodyne is chloroform. Of course every definition is intended to produce a higher rate of duty entirely regardless of fairness. The importer is rarely able to do anything, as it would be too expensive to fight the Government. The sharpest legal officers in the colony are at the command of the official, while the poor importer has to be satisfied with inferior talent at enormous expense. It often happens, therefore, that injustice is borne, however unwillingly. Sometimes it seems as if the officials are trying their best to ruin the colony. They hamper trade in such a manner that sometimes the importation of an article is given up. A year or two ago a paint for ships' bottoms containing methylated spirit was imported in considerable quantities at a low rate of duty, giving employment to a number of men and profit to the importer. But it was discovered that it contained spirit, and at once the Custom-house authorities strained heaven and earth to make it out a varnish, notwithstanding its basis was red oxide of iron. They were defeated, but took care to include the article under the higher designation in next year's tax ordinance, thus crippling the industry. In England things are done to facilitate matters; this particular article could be made from duty-free methylated spirit, but here the authorities were delighted to impose the spirit-duty.

Up to last year most of the drugs paid a duty, varying in different years, of from 5 to 10 per cent. Then someone got hold of the English tariff, and seeing that a duty was charged on imported articles containing spirits, rushed to the conclusion that it would suit British Guiana. He could not see that the cases were quite different—that this arrangement was really equivalent to the Excise-duty. However, the spirit-duty was imposed here with most absurd results. A valuable liquid extract would be charged on its 10 per cent. of spirit, while sometimes the quantity would be less and the impost enormously disproportionate to the former *ad valorem* duty. Nothing was gained by this, although it may be presumed an increase of revenue was expected. The druggists would have preferred the old system, as it gave them no trouble, but this was a continual annoyance from its causing delay and spoiling the portion of liquid taken for analysis. The authorities were not satisfied with the Pharmacopœia but must have the compound distilled by the Government chemist. Probably he abused them right and left, and was glad when in April this year a new tariff was introduced.

This, which was prepared under an agreement with the United States, in consideration of Demerara sugar being admitted into that country free, was expected to be particularly favourable to the druggists. In the schedule of exemptions is the following:—

"Medicinal extracts and preparations of all kinds, including proprietary or patent medicines, but exclusive of quinine or preparations of quinine, opium, gangle, and bhang."

Now, we thought, there will be no more trouble. But when we looked into the other schedules we found that chloral, chloroform, collodion, acetic and sulphuric ether, and castor oil all had their various imposts. Not satisfied with this, the authorities became quite arbitrary in their definitions of medicinal preparations, absolutely refusing to allow tinctures to pass free, and interpreting the sentence to please themselves. They make opium include preparations of opium, and altogether seem to have forgotten the meaning of words. Up to the present we have refused to pay duty on tinctures, and several importations are waiting in bond the result of an appeal to the Governor.

What is most annoying in all these things is the continual delay and trouble, for which there is not the least chance of compensation. Even if after several weeks or months the decision is in favour of the importer, it would be useless to expect even an expression of regret for the delay. Men who consider themselves polite will worry others needlessly, and when obliged to give way look on themselves, instead of their victims, as having suffered injury. As for an apology from the office, such a thing is unknown, however great the injury. Why this should be the case is hard to find out. We in business have to apologise for the faults of our servants, and sometimes pay heavily for their mistakes. How often has the feeling engendered by abuse of power produced opposition to the laws! There have been ordinances in force in British Guiana which were a crying shame on the Government for years, and yet no effort was made to repeal them. The most striking were those relating to the sale of opium and spirits, both of which pressed heavily on the druggists. It may be confidently stated that for something like twenty years not a grain of opium was sold in a legal manner. The Government knew this, and were well aware that the law could not be kept, but still retained it as an instrument to oppress the poor Chinaman. The law was, of course, broken continually, and every now and again some poor fellow was fined or sent to gaol. Tales have been told of the meanness of some of the commissaries that are hardly credible. In the name of duty they have done things which ought to make them ashamed to look honourable men in the face. Fortunately, things have improved lately, and it is not absolutely necessary for a druggist to break two or three laws in carrying on his business.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," July 20, 1892.)

"RUPPERT'S SKIN TONIC," sketch of child's head, signature, and wording; for skin tonics. By Anna Ruppert, 89 Regent Street, London. The essential particulars are the device and signature. 160,130.

"KETURAH"; for plasters, patent medicines, &c. By Keturah Goodman, 130 London Street, Reading. 164,215.

"STIFFNOMORE," and device of tennis player and court, and wording; for an embrocation. By J. H. B. Green, trading as J. H. Green & Co., 19 Wood Street, Swindon. 165,075.

"HERBALINTUS," and device of female figure and shield with word, on round label; for a herbal preparation for outward application. By E. Denton, trading as Herbalintus Company, 109 Wakefield Road, Moldgreen, Huddersfield. 165,124.

Signature written across circular device; for medicines for human use. By T. Henshelwood, 202 Duke Street, Glasgow. 165,374.

Sketch of steam-hammer; for patent medicines. By J. H. Thomson, 34 South John Street, Liverpool. 165,409.

"SEPTOL"; for perfumery and toilet articles. By W. Shepper-son, 22 Albion Road, South Hampstead. 164,465.

(From the "Trade Marks Journal," July 27, 1892.)

"ERIMUS"; for medicinal oils, embrocations, or remedies, for outward or inward application. By J. R. Burrell, 3 Samuelson Street, Newport, Middlesborough. 163,715.

"OLANEDUM"; for a salve for human use. By E. Grimsdick, Western House, Haywards.

"ORUSOSO"; for medicinal preparations for human use. By M. A. Lilley, 35 Colston Street, St. Augustine's, Bristol. 165,260.

"PETAL DUST," and design of coronet and horse's leg, and wording; for a perfume. By A. J. Seward & Co., trading as the Rosmarine Manufacturing Company, 54 Stamford Street, London. The essential particular is the device. 153,928.

Device of steering-wheel; for perfumery and toilet articles. By W. Gossage & Sons, Widnes. 165,671.

(From the "Trade Marks Journal," August 3, 1892.)

"ÆGAP OINTMENT"; for ointment for human use. By R. D. Page, Whitchurch, near Cardiff. 165,027.

Sketch of Rock of Gibraltar, signature, and wording; for perfumery and toilet articles. By Richard Dixon, trading as R. Dixon & Co., Rock Soap Works, Rochdale. The essential particulars are the device and signature. 163,595.

Likeness of proprietor and wording on circular label; for a preparation for the teeth. By Wm. Evans and Thomas Evans, trading as W. & T. Evans, 14 Station Road, Llanelli. 163,621.

"DAIROLLIO"; for hair-dye, hair-wash, and perfumery. By Wm. Revell and F. A. Badman, trading as Revell, Steele & Co., 40 New Street, Birmingham. 165,369.

"SPORTS"; for perfume. By J. S. Collins, the Grand Hotel, Trafalgar Square, London. 165,565.

"FEDORA"; for perfumery and toilet articles. By F. Heilbronn, 109 Priory Park Road, Kilburn, London. 165,693.

(From the "Trade Marks Journal," August 10, 1892.)

"ATB PONSOT," as signature; for sanitary paper for fumigating purposes. By A. Ponsot, 8 Rue d'Enghien, Paris. 165,700.

"ELIXIR GODINEAU," and signature and wording on label; for a patent medicine. By M. Blanchon, 7 Rue St. Lazare, Paris. The essential particular is the device. 156,826.

"SELMO"; for medicated external application for human use. By E. L. Cumberland, 6 Brownhill Road, Catford. 164,161.

"WONDERFUL BALM," and device of lyre and painter's palette and brushes on square block label; for an embrocation. By Sawyers & Curd, High Street, Shoreham. The essential particular is the device. 164,808.

Device of eagle holding inverted parachute containing a man close to last quarter of moon; for mineral and aerated waters. By the Redruth Brewery Company (Limited), Redruth. 165,699.

"ROZENIA," and device of St. Botolph's Priory, and wording on label; for a perfume. By W. E. Everett, 33 and 34 St. Botolph's Street, Colchester. The essential particular is the device of St. Botolph's Priory. 165,253.

"IDALIA BOUQUET"; for perfume and toilet articles. By W. Revell and F. A. Badman, trading as Revell, Steele & Co., 40 New Street, Birmingham. The essential particular is the word "Idalia." 165,367.

"CARNIVAL SOAP"; for a toilet soap. By C. R. Illingworth, Clayton House, near Accrington. The essential particular is the word "Carnival." 165,455.

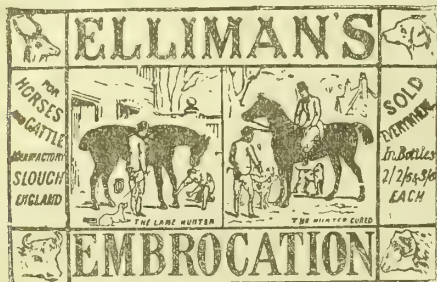
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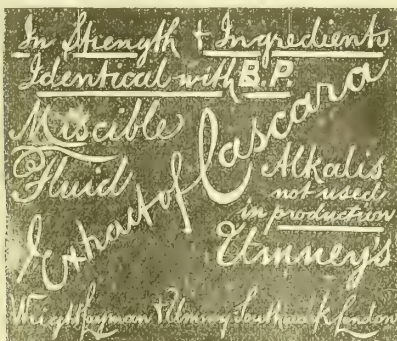


See first page, facing inside of front cover, in this issue, for latest particulars.

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Prize Competition.

See page 5, August 6th.

Editorial Comments.

LEAD-FREE CITRIC AND TARTARIC ACIDS.

THE citric and tartaric acid cases recently tried at Woolwich Police Court have caused a good deal of commotion in wholesale drug-circles. The decisive fight, as fortune would have it, took place upon a summons against a grocer, but it was only the collapse of the prosecution in this crucial instance which prevented several other cases against phar-

macists from being proceeded with. Many representative wholesale druggists were in attendance at court, and an eminent authority, whose testimony was not required, but who, had the evidence for the prosecution been stronger, might have been relied upon to play a leading part in the defendant's behalf, had been specially retained by the combined wholesale druggists. It so happened that the samples of which the prosecution impugned the purity, and which were admittedly types of fair commercial acids, were proved to be contaminated with lead to so infinitesimal a degree that they could not cause injury under any conceivable circumstances, and on this ground the summons was dismissed. A less aggressive body than the wholesale drug-trade, and one less honourably anxious to maintain a high standard of purity in its goods, might have been content to leave the matter there, satisfied with the establishment of the fact that the ordinary acids of commerce if not chemically pure, are positively innocuous. The wholesale grocers and oilmen who had provided the merchandise for the sale of which some of their retail colleagues were arraigned appear to have adopted this view and rested satisfied with the termination of the case; at any rate, we have not heard that their representative bodies propose to stir in the matter. But the druggists, looking upon themselves (as one of their body put it to us) as the custodians of the standard of purity of medicinal substances, could hardly be expected to assent to a course of conduct such as commended itself to grocers and oilmen. We have often urged in this journal (though our efforts have not always been fortunate enough to secure the support of the trade as a whole) that it is of the highest importance that the sale of purposely adulterated or accidentally impure drugs should be discouraged and discountenanced, and we welcome all practical and well-considered steps in that direction, no matter from what quarter they originate. The wholesale druggists, although they are not, perhaps, the most important factor in the sale of citric and tartaric acids, know their own interests best, and they have no doubt sound reasons of policy in making the recent prosecutions before the Woolwich magistrates a lever for disturbing the conditions under which the trade in the two drugs has been carried on thus far. For such, if our information is correct, is the object of certain members of the wholesale drug-trade who are associated with the Chemical Section of the London Chamber of Commerce. Two private committee meetings of that Section have recently been held (the last of these took place on August 9), at which, among questions regarding the correctness of the evidence given in the Woolwich cases, the admitted imperfection of commercial citric and tartaric acid was discussed. We understand that at this week's meeting a resolution was adopted urging citric and tartaric acid makers so to perfect their manufacture that their goods should answer to the B.P. test; and, further, that the wholesale druggists of Great Britain agreed that they should, in future, sell for all medicinal and dietetic purposes only such qualities as were up to the B.P. standard—i.e., practically free from lead. The term "wholesale druggists of Great Britain" should be used, we take it, in a metaphorical sense only, for, of course, the committee had no authority to speak on behalf of the whole of the trade, though we believe that the matter had previously been threshed out at a meeting of the recently-resurrected "Wholesale Druggists' Club," and that the assent of the leading provincial as well as London druggists to the proposition had been secured. Two firms of citric-acid makers, and one tartaric-acid maker, present at the meeting, declared their readiness to supply acid answering the tests of the Pharmacopœia at the same prices which they had hitherto been charging for ordinary commercial acid. There are other citric-acid

makers in this country who were not represented at the Chamber of Commerce, but who will, no doubt, be compelled, in self-defence, to follow the lead of the non-lead men, if the expression may be permitted. In so far as citric acid is concerned, therefore, the druggists' action has been productive of solid benefit to the trade. If we shall henceforth have an article in general use which is warranted to be up to the Pharmacopœia requirements, that will be a distinct gain. It should be stated, however, that there has never been any difficulty in obtaining such a quality in the past, only a higher price has been charged for it, and it appears that the trade generally has not considered it worth having at the increased cost. Nor is the determination of the two makers in question to sell only B.P. acid in future the result of the recent prosecutions, but the merest coincidence. One of the two had commenced to lay down his new plant nearly two years ago, and it was nearly completed when the Woolwich prosecutions imparted an actual interest to the matter. The manufacturers, by thus commencing to alter their plant long before the prosecutions were heard of, and when there was no agitation of any kind to urge them to do so, have shown themselves fully alive to the claims of progress, and can afford to smile at any ignorant sneers that may be levelled at them. As regards tartaric acid, the bulk of that substance used in this country is imported from abroad, and it remains to be seen whether continental manufacturers, whose profits at the present rate of prices for the article must be infinitesimal, will think it worth while to put themselves to any expense for the sake of retaining the English druggists' orders. There appears to be a good deal of misconception concerning the proportion bought by wholesale druggists proper of the citric and tartaric acids consumed in this country. One good authority tells us that at least two-thirds of the citric acid manufactured in England is exported; while of the remainder the wholesale druggists buy probably not more than one half. Tartaric acid is a much more important article (bulk for bulk) than citric. It comes mostly from Germany, and it is doubtful (according to the same informant) whether the share of the imports which passes into the hands of retailers through the medium of wholesale druggists exceeds from 5 to 10 per cent. of the whole. We are inclined to believe, however, that our informant can have had in his mind only the comparatively limited section of wholesale druggists who meet on "Change" in this City. Had he included the whole of the large manufacturing firms who consume immense quantities of the acids in the manufacture of citrates, baking-powders, and so forth, and all of whom are connected pretty intimately with the drug-trade, his estimate would no doubt require multiplication several times. But there is, to our mind, one weak point in the course of action of the wholesale druggists, and that is their intention, expressly stated, to continue to supply anyone who asks them for "ordinary commercial acid," if that should be obtainable at a lower price than the B.P. article, and it must not be forgotten that hitherto the trade, as a whole, has never been willing to pay higher prices for the sake of getting a more than commercially pure article. That fact remains now, as it always has been, the test of the whole question. If the citric-acid makers continue to manufacture B.P. acid at the same price at which they previously supplied the commercial article, the latter will, no doubt, go to the wall. If the tartaric-acid makers continue to offer two or more different qualities with price-graduations, however slight, according to the purity, we may confidently expect, in the light of long experience, that the lower-priced article (so long as it is not positively injurious) will virtually rule the market.

AMERICAN PHARMACY.

THE art of cutting scored more heavily than the science of pharmacy at the recent meeting of the American Pharmaceutical Association. We devoted a considerable portion of our space last week to the proceedings during the three days' work of the Association, and it is noteworthy that an equal portion of the time was given to the consideration of cutting and to pharmacy. In one sense this may not be regrettable, but the trouble is that the Association gets no further in regard to the difficulty before it than passing resolutions. Fifteen months ago a committee report on cutting was adopted. That report predicated that makers and wholesale dealers in proprietary articles should sell these articles to druggists only who do not cut prices, on condition that the latter would not substitute. That is the essence of the eight conditions entitled the "Tripartite plan," and after simmering for a year, and receiving the approval of the wholesale druggists, the members of the Association now ask manufacturers and proprietors to put it into operation forthwith. That over the whole of the United States, too. The 300 at the meeting so decide in the name of the 30,000 druggists in the States, with some dissension amongst the 300. The cold breezes of the Atlantic have left none of the fire of enthusiasm in the plan by the time it reaches us. Of the three parties to the plan, the retailers only are to be benefitted materially. There is not union amongst those of them who appeal to the other two parties, no evidence that the rest of the trade will support a scheme applicable to the whole nation, and no guarantee that the plan once started can be maintained for a day. Moreover, manufacturers appear to be unwilling to enter the compact; substitution is a thing which stares them in the face; competition is always with them and may grow; the immense field and diverse interests therein, the enormous labour and keen oversight to maintain the plan, are all elements to be considered before it can be adopted, and these mean expense to be met thereafter. It is points such as these that the manufacturers will have to consider, and all the assistance that they are offered by retailers is a promise to sell the things that are already sold. If there were a strong bond of respect between manufacturers and retailers, there might be a chance of the plan succeeding, but that there is not. Manufacturers distrust retailers, and retailers have no love for manufacturers.

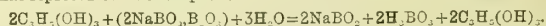
In opening the section on scientific papers, Mr. C. S. Hallberg deplored the dearth of contributions from quarters which would make their papers of such importance as to create enthusiasm; but he considered that the number of papers actually presented was as great as could be expected. Mr. Hallberg expressed himself satisfied with the quality of the papers, although he thought they did not keep pace with the progress of pharmacy. Mr. Hallberg is optimistic. There was scarcely a paper of first-rate importance in the whole twenty-nine read at the meeting; a number were quite unworthy of the association; some showed evidence of rapid manufacture, and a few were venerable chestnuts. Three flagrant instances of the last nature may be mentioned. First, there was Professor Curtman's paper on the examination of amyl nitrite, which traversed practically the same ground covered by a paper communicated to the British Pharmaceutical Conference, by Mr. A. H. Allen, in 1885 (abstracted in the Association's Proceedings, 1886, page 559), and confirmed later by Dr. A. B. Lyons, an American pharmacist. Professor Curtman did not mention these facts in his paper, nor did he refer at all to the important work on amyl nitrite by the Pharmaceutical Research Laboratory. As a means for popularising the

nitrometer in America this paper is not without value; but it is somewhat surprising that English pharmaceutical literature, and even the British Pharmacopœia, should have received such scant courtesy from so eminent an American pharmacist. There was further demonstration of the same neglect from Cincinnati. A lady, working under the supervision of a professor in the Pharmacy College there, presented an elaborate note on the solution of bimeconate of morphine. It did not strike them to look to the British Pharmacopœia for an "authoritative formula." Professor J. U. Lloyd, of the same city, communicated a note on the reaction between powdered borax, glycerine, and sodium bicarbonate, and with the help of the President of the Cincinnati Chemical Society he unearthed a remarkable explanation given in 1877 by Mr. M. W. Ibes, which is as follows:—

Since glycerin is one of the best solvents known, and also since glycerin dissolves more carbonate of soda than of any other salt, therefore when these salts come into solution together there will be a displacement of one molecule of carbonic acid by one molecule of boracic acid, and the resulting product will be two molecules of normal or neutral borate of soda, because when boracic acid is in solution it is a stronger acid than carbonic acid (see Gmelin's "Handbook of Chemistry"). Furthermore, the readiness with which the chemical action takes place is partly due to the fact that boracic acid neutralises the alkalies imperfectly, a fact clearly substantiated by borates having an alkaline reaction.

Since that was published the matter has been investigated pharmaceutically by Professor Dunstan, and the results were published in this country in 1883. These show that:—

Polyhydric alcohols decompose sodium pyroborate with the formation of sodium metaborate and a boric ether, or, if water be present, boric acid. In the case of glycerol there can be little doubt that the substance produced is glycerol in which all the three hydroxyl groups are substituted by the boric radicle ($C_3H_5BO_3$). In aqueous solutions the reactions may be thus represented in one equation:—



If Professor Lloyd were a mere tyro in pharmacy he might be forgiven ignorance of an investigation which has been mentioned again and again since the results were published; but he is a past President of the American Pharmaceutical Association, and this year the Association puts a seal upon his pharmaceutical merit by presenting him with the Ebert prize. The moral which we wish to deduce from this recital is that some writers of papers do an injustice to their predecessors in the field of investigation by neglecting to consult available records. We take it, for example, that all who read papers before the American Association can search the "Proceedings," which contain an excellent epitome of European periodical literature. The contrast between the Association's meeting this year and those held in the Eighties is much in favour of the latter. Then practical pharmacy was exceedingly active in the United States, and most of the papers communicated to the Association were based upon laborious investigations; now a large portion of the work reported on is fragmentary and trumpery, and theorising is abundant. Perhaps the International Pharmaceutical Congress will incite the members to better things.

TONQUIN BEANS.

THERE has been quite an unexpected activity in the market for tonquin beans for some weeks. Whether the movement originated in Liverpool or in New York does not appear to be quite certain, but there is no doubt that almost all available parcels have been bought up or withdrawn from the market in both these places, and that the price of so-called "Pará" beans, the variety most in demand in Europe, has risen by about 50 per cent. in the course of the last fortnight or so. The idea generally

prevails here that the advance originated with the New York speculators, who have for many years pulled the wires of the drug; whereas the latter say that the rise is owing to orders received from England, and that their market is merely following ours.

The key of the position appears to lie in the prospects of the crop of Angostura beans, the more important and dearer variety. That crop is harvested in the Venezuelan forests in April. When the seeds are freed from their heavy shells, they are packed in casks, moistened with native spirit, and set aside in a hot place to assist the process of crystallisation of the coumarin, the odorous product from which the seeds derive their value, and which they contain in common with a vast number of other plants. The central market for the tonquin-bean trade in Venezuela is Ciudad Bolivar, on the Orinoco river, and to that city the beans, or rather seeds, are carried by their collectors from the swampy forest-regions in the southern and western parts of the Republic. About six or seven years ago the monopoly of the collection of the variety known to commerce as Angostura beans was given by the Venezuelan Government to a syndicate (the gathering had previously been free to everybody), and shortly afterwards a considerable export duty—equalling, we believe, about 1s. 6d. per lb.—was placed upon the drug. One of the first acts of the syndicate, which was closely allied to certain firms connected with the produce trade in New York, was to restrict the exportation of Angostura beans, which had formerly, in years of plenty, averaged from 250,000 to 300,000 lbs., and to bring it more into consonance with the requirements of the perfume and tobacco industries, by which by far the greater part of the crop is absorbed. Lately, it would seem, the syndicate has either been abolished or come to grief, and the export is said to be once more comparatively unrestricted. It is not certain whether the monopolist organisation has ceased to operate, but be that the case or no, the general impression prevails that the Angostura crop, which usually regulates the market, has been unusually small, and will not exceed 60,000 lbs. The crop of so-called Pará beans is gathered later in the year. There is as yet no reliable information concerning its probable yield, and at any rate the course of the market will depend, for the present, upon the Angostura variety. It has been reported that a large part of the crop has been either destroyed or placed under embargo by one of the contending parties during the recent disorders in Venezuela, but the impossibility of obtaining free, quick, and trustworthy information from that country should prevent such promiscuous reports from being seriously considered as factors in the situation. For many years tonquin beans have not been a fortunate article from the investor's point of view. In the first place, their perfume has been synthetically prepared. It is true that the artificial coumarin, in spite of its cheapness, and of the fact that it is chemically absolutely identical with the product of crystallisation of the seed, has been unable to supersede the natural product, but its existence places an effectual bar upon the extension of the usage of the tonquin bean, and limits the consumption of the latter to a quantity altogether out of proportion with the possibilities of the supply, which is practically inexhaustible, and has never been tapped to the full extent of its capacity. Then, the liability of the article, the production of which is easily cornered, to be manipulated by a few speculators, renders it an unsafe investment for outsiders; and, lastly, the crops are peculiarly liable to sudden fluctuation. It is thought that as a rule tonquin beans yield good crops two seasons out of every three, but although that may be the case where the seed grows it does not by any means follow that the whole

of the supply can be gathered. In 1888, for instance, excessive heat seriously interfered with the collection, and shortly afterwards certain districts were rendered inaccessible by floods just at the season of the ripening of the seeds. Last autumn a very large quantity (over 30,000 lbs., it is said) of Angostura beans was destroyed or damaged by fire in New York. The salvage has since been sold by public auction there, and consumers have been warned to beware of purchasing any of these beans, which are known to have been acquired by clever manipulators, who have doctored them up, and whose object it is to palm them off upon unsuspecting buyers. It is not impossible that these gentlemen have a hand in the stir that is now agitating the trade, and even if they have not, dealers and consumers generally have not sufficient statistical and other data to enable them to judge with any approach to accuracy the position of the article. Under the circumstances, *caveat emptor* should be the motto of all who are urged to invest in the article at the high prices now prevailing.

COMMENTARY.

THE SALE OF POISONOUS PROPRIETARY MEDICINES.—It appeared, from an announcement made by the President at last week's meeting of the Pharmaceutical Council, that proceedings had been commenced against certain large dealers, who, not being registered chemists and druggists, had (as the Council consider) infringed the Pharmacy Act by selling proprietary medicines containing poison. These gentlemen had paid penalties, and had promised not to offend again. And now the Council are preparing a circular to send to every registered chemist and druggist, and to other persons, calling attention to the circumstances of the case, and suggesting the possibility of penalties. This is a curious method of procedure. There is, no doubt, some sense in sending such a circular to the "other persons," and it may be effective to a little extent. But the purpose of addressing 14,000 registered chemists and druggists on the subject is not at all apparent. We confess we do not like that circular. The Council show a singular indisposition to enter into this contest, though they have been expressly urged to it by the British Medical Association and by the Treasury, and challenged by influential champions of the non-registered vendors. It looks as if they wish to dispose of their responsibility in the matter by means of a cleverly constructed document which shall commit them to nothing definite. Their duty is to fight this question in the public courts, and common sense suggests that this should be done with as little delay as possible. There are defendants ready for them, and we hope the members of the Society will insist on such action being taken.

A PROFESSOR ON THE NEW PHARMACY.—Professor Gairdner, of Glasgow, was last year appointed chairman of the pharmacology therapeutic section of the British Medical Association, but he did not fill the chair this year. A little trouble had arisen. Things were not managed quite as he wanted them; his objections were not printed in the Association's *Journal*, and he resigned. At Nottingham he gave the reasons why. He said he was "perfectly satisfied that without therapeutic organisation in all our great medical centres therapeutics will go to the dogs. We are all getting more and more in therapeutics to be the victims of what in American politics is called the 'machine.' It is either a scientific machine, such as Dr. Sidney Martin or Dr. Lauder Brunton, and all the great authorities in London, who are working away at therapeutics in their libraries and laboratories—a kind of machine that is highly honourable—or it

is a kind of machine that had found its way even into that room. It is the latter he is most afraid of—the 'touting' machine. We see touting right and left, so much so that we are not allowed now to make up our own prescriptions. It is this apothecary in London and that physician in New York who keep urging on us combinations of remedies used by themselves, and there is no ill to which human nature is heir that has not got its sole and universal remedy advertised all over the world. Any medical man requires simply to send his attestation that he has tried this remedy in numerous cases and always found it effective, to secure to himself that his name will get all over the world. It is that 'touting machine' that is perverting all our therapeutics, and lying at the root of biassed judgment." This and much more Professor Gairdner had to say; and that was the direction in which he wished a therapeutic committee to work. He had hoped that the committee might establish "a protection against the constant invasion of bad, useless, and worthless things, and, on the other hand, advance the interests of true therapeutic science." We take it from his resignation, after the matter had been placed before all the branches of the Association, and after it was refused publication in the *Journal*, that the medical profession is not so desirous of reform as the professor.

CONFERENCE PAPERS.—The list of papers to be read at the meeting in Edinburgh on August 23 grows apace. The following eleven have been promised since our last issue:—

Experiments on the Alkaloids of Tea. By A. H. Allen, F.I.C., F.C.S.

Essence of Lemon. By Arthur H. Barret.

Concentrated Essence of Lemon. By Arthur H. Barret.

Barbadoes and Curaçao Aloes. By E. M. Holmes, F.L.S.

Carbo Animalis, P.B. By J. Hodgkin, F.I.C., F.C.S.

The Action of Iodine on Phenol in Alkaline Solution, with special reference to the estimation of Phenol volumetrically by this Method. By T. R. Cardwell.

Note upon *Lycopersicum esculentum*. By Frederick Davis.

Van Moun's Test for Cyanides. By H. Bowden.

Notes on Tincture Menstrua; Tincture of Cinchona. By E. H. Farr and R. Wright.

Laboratory Notes: (a) Quinine Phosphate; (b) Barium Hypophosphite; (c) Phosphoric Acid. By George Coull, B.Sc.

The Purity of Commercial Salts of Lithium. By William Mair.

There is every prospect now of the business of the Conference being very crowded, and, as Mr. Payne's motion in regard to future relations with the British Association will take up some time, authors of papers should be prepared to present the facts of their communications briefly and clearly if they wish them to be discussed.]

DEDUCTIONS FROM WAGES.—A question of great importance to large employers of labour and to their staffs was decided by the Court of Appeal on Wednesday, and a more astonishing judgment has seldom been given in any court. Messrs. F. Allen & Sons, manufacturing confectioners, of Bow, employ a large number of people and make it a condition that a small percentage of their wages should be deducted every week towards a sick and insurance fund. Every person employed has to sign a contract agreeing to this and to other conditions. A girl who had been in Messrs. Allen's service for some years rather intermittently,

at 7s. per week wages, sued them on leaving to recover the amounts (2½d. per week) which they had deducted on the contract. The basis of her claim was that under the Truck Act (so it was argued) any such deduction is illegal, and any contract to allow such deduction is void. The County Court Judge allowed the claim, the Queen's Bench Division reversed that decision, and the case has since been argued before the Court of Appeal—the Master of the Rolls, Lord Justice Bowen, and Lord Justice Kay. Lord Justice Bowen has given the judgment of the Court in terms with which the other judges concur, though Lord Justice Kay prudently puts it on record that he is a little doubtful, as he well may be. The Court rule that the deduction is an infringement of the Truck Act, and as such is illegal; the contract is therefore void, and it is not unlikely that the employers may be liable to penalties. But the Court of Appeal says that the plaintiff acquiesced in the deductions and knew the purpose of them so long that she has precluded herself from now recalling them. This seems to us the most complete stultification of the legal construction of the Truck Act which can be conceived. The girl acquiesced in the deductions simply because she could not help herself. Now it turns out that the contract under which this acquiescence was ensured was an illegal one, and yet the Court of Appeal enforces it.

ANALYSIS OF COAL-TAR PREPARATIONS.—Messrs. Helbing and Passmore's latest investigation is on the valuation of disinfectants prepared from coal-tar. In their report they state that, since the bactericidal properties of these preparations reside in the phenoloid bodies contained therein, the chemical estimation of such bodies is a measure of their activity, so that a bacteriological examination becomes unnecessary. Tar-oils contain certain acids (so-called), bases, and hydrocarbons which are more or less present in preparations made from them. A method of chemical analysis applicable to the one is, therefore, suited to the other within certain limits, which are laid down in the report. For determining the hydrocarbons (benzene, anthracene, naphthalene, and the like) the acids in 50 grammes or more of the oils are fixed and removed with 10-per-cent. caustic-soda solution, the oils having first been diluted with an equal volume or more of ether. The ether dissolves the hydrocarbons and bases, and the small quantity of the latter, washed out by the soda, is also removed with ether from the alkaline liquors. The combined ethereal liquids are next washed with 1-to-4 sulphuric acid to remove bases, after which the ether is treated by washing and evaporation for hydrocarbons. By fractional distillation the character of these may be studied and the bases may be estimated in the acid liquor by neutralising with soda, evaporating to dryness, and extracting with spirit, whereby only the salts of the organic bases are dissolved out. The acid constituents of tar-oils are phenol and its homologues. Strictly they are not acids, but they associate themselves readily with the soda in the preliminary treatment, and are to be sought for in the alkaline liquors. The process which Helbing and Passmore suggest for this is simple—viz., to acidify with sulphuric acid and extract the "acids" with ether, which on evaporation yields a residue of the phenoloid bodies. It is impossible, the authors say, to separate carbolic acid from its homologues by practical distillation, owing to the close proximity of their boiling-points, and the only method which they found practicable was to fractionally precipitate the alkaline solution of tar-acids with small quantities of mineral acid, whereby the carbolic acid is concentrated in the first fraction. So working they were able to satisfy themselves that Jeyes' fluid contains less than 0.25 per cent. of carbolic acid, and 40 per cent. of other phenoloid bodies.

BRITISH ASSOCIATION NOTES.

THOSE who regard the British Association as a serious body, and become members of it for the advancement of science in the literal sense, are beginning to kick against the "tripper" element in the meetings. In the great majority of instances, says Prof. H. E. Armstrong, the reading of papers on technical questions in the Sections has become little less than a solemn and dreary farce played to almost bare benches; and it is only in exceptional cases that a small and devoted body of true believers worship at an inner shrine without regard to the general public, and are thus able among themselves to do work of high value to science. He considers that the Association should exercise an influence in two directions—it should advance scientific knowledge among scientific workers; and it should aid the general public in understanding and appreciating scientific work, its methods and results. He urges that there should be more discussion in the Sections; that the discussions should be reported; that there should be less entertaining, and a greater regard for the interests of science than for private hospitality. Prof. Armstrong's opinions are shared by many others; but whether they will overcome the strong conservative element in the Council, and the ingrained desire for junketing amongst the majority of members, is another matter.

The work of the Sections began in earnest on Thursday last week. The Chemical Section met in the chemistry-class room of the University Medical School under the presidency of Prof. Herbert McLeod, F.R.S., of the Indian Civil Engineering College, Cooper's Hill. For his address Prof. McLeod selected certain considerations in regard to

ATOMICITY, CATALYSIS, AND TEACHING.

Chemical notation was a thing that troubled the Association as far back as 1834, and at that year's meeting in Edinburgh a committee was appointed to inquire into the matter. Dalton, Thomas Thomson, Faraday, Gregory, and Christison were amongst those on the committee which reported in favour of the system then in use on the Continent. It sounds distinctly strange to read now that the committee thought "it would save much confusion if every chemist would always state explicitly the exact quantities which he intends to represent by his symbols." What progress has been made since then! Dalton preferred the symbols which he had himself used from the commencement of the atomic theory in 1803 to the Berzelian system of notation subsequently introduced. In his opinion, regard must be had to the arrangement and equilibrium of the atoms (especially elastic atoms) in every compound atom, as well as to their number and weights. A system either of arrangement without weights, or of weights without arrangements, he considered only half of what should be. That is exactly the view held now, and Prof. McLeod sketched the changes which have occurred meanwhile. Sulphate of lead was to him, first, PbO_2SO_3 ; Hofmann said PbSO_4 ; Gerhardt doubled the atomic weights of sulphur and oxygen, and the formula became Pb_2SO_4 ; Cannizzaro showed that the atomic weight of lead should also be doubled, and the formula went back to PbSO_4 ; then Frankland said it should be SO_2Pbo , which not only states that the compound contains 207 of lead, 32 of sulphur, and 64 of oxygen, but that the sulphur is hexad, and is combined with two atoms of dyad oxygen, and with a dyad compound radical containing one atom of lead and two of oxygen; and of all the formulæ this is the only one which satisfies the requirements which Dalton thought necessary in 1834. What the nature of the attraction that holds the atoms together may be is not known, but it is more probably of a character similar to that of gravity which holds together sun and planets than of the nature of cohesion which would hold the atoms rigidly together; the atoms in each molecule are, therefore, most probably in a state of rotation around, or of vibration to and from, the central atom which holds them together. After discussing the theories (none of them quite satisfactory) advanced to explain the functions of "free bond" in such compounds as NO and ClO_2 , Prof. McLeod considered the condition in which the combination of water of crystal-

lisation exists in compounds. He thought it possible that the water may be in actual combination, and he showed by graphic formulæ that the oxygen of the water molecules may, in these cases, be tetrad, although all the formulæ are to be considered as artificial. Indeed, we are, in this matter, driven to the conclusion that, notwithstanding all the progress that has been made in chemical science during the last fifty-eight years, we have not yet reached a method of notation that would have satisfied Dr. Dalton in 1834.

For the explanation of catalysis, Prof. McLeod used the well-worn examples—the production of ether by the action of sulphuric acid on alcohol, the oxidation of ammonia in the presence of chromic oxide, the evolution of oxygen from mixtures of potassic chlorate and oxide of manganese (due, he said, to the primary formation and subsequent decomposition of potassic permanganate), and the action of cobalt oxide on solutions of hypochlorites—and his conclusion in this matter was that molecular alteration is apparent in all the bodies involved in a catalytic change.

He next discussed the importance of practical illustration in teaching on the lines laid down by the sectional committee on the subject, threw in a word of laudation in regard to the Institute of Chemistry, and concluded with a feeling reference to the late Prof. von Hofmann.

The *Times* made a curious slip in its report, stating that "Prof. A. von Hoffmann" seconded the vote of thanks. As a matter of fact, it was Prof. Crum Brown, and Sir Henry Roscoe put the motion. In doing so he said that nowadays they did not deserve to have the finger of scorn pointed at them by continental scientists in regard to the progress made in chemistry. Over 700,000 had been set aside by the Government for the purpose of scientific education. They had now really got the means of instructing the people in this branch of knowledge.

IMPURITIES OF CHLOROFORM.

Professor W. Ramsay, of London University College, is one of a committee which is investigating the causes of death from chloroform during surgical operations. He has found that the only impurity in a number of samples of chloroform received from hospitals where deaths had occurred was carbonyl chloride. It was impossible to look for an unknown impurity in a number of small samples of chloroform, and therefore he had exposed a large quantity of perfectly pure chloroform to daylight in presence of air. After some months a considerable quantity of carbonyl chloride was formed, no other product (except a trace of hydrochloric acid) having been detected. It was possible to test for carbonyl chloride by pouring baryta on the surface of a suspected sample, when a white filament would appear at the line of division between the chloroform and the watery solution. Most of the samples received by him gave this test, and it was a significant fact that most of the samples were the products of large consignments to the hospitals. He was inclined to believe that the cause of death was the spasmodic contraction of the glottis produced by the carbonyl chloride after the lungs had been thoroughly charged with chloroform. This paper was discussed by Dr. W. W. J. Nicol, Dr. Arthur Richardson, Mr. Vernon Harcourt, and others.

ATOMIC WEIGHT OF BORON.

Professor Ramsay communicated another paper to the Chemical Section under the above title, he and Miss Emily Aston, B.Sc., being the authors. By a dozen determinations of the amount of water of crystallisation in borax, $\text{Na}_2\text{B}_4\text{O}_{10} \cdot 10\text{H}_2\text{O}$, they arrived at a mean of 10.921 for B. Next they distilled known quantities of borax with methyl-alcohol and hydrochloric acid until no more boracic acid was detected in the distillate. The residue in the flask was then heated to dryness, first at $100\text{--}110^\circ\text{C}$., and then at 350° , and the residue of common salt weighed. This gave a mean of 10.952 for B. Another series of experiments with a flask of harder glass was made, and the chlorine of the NaCl was checked with silver nitrate, but as no special precautions were taken to obtain pure silver for the chlorine determinations, but ordinary silver nitrate was employed, it is probable that the distillation results yield the more correct atomic weight of boron—viz, 10.963.

ETHYLENE AND FLAMES.

Messrs. B. Lean, B.A., B.Sc., and W. A. Bone, B.Sc., students at Owens College, communicated a paper on the explosion of ethylene with less than its own volume of oxygen, showing that they invariably found both saturated and unsaturated hydrocarbons present in the products of the explosion, and the percentages of both these increased as the percentage of oxygen in the original mixture decreased. The quantity of marsh-gas present in the products of explosion of 100 volumes of ethylene to 70 volumes of oxygen was 5.53 per cent., but a mixture containing 100 volumes ethylene and 96.5 volumes of oxygen yielded only 1.01 per cent of marsh-gas. With regard to the unsaturated hydrocarbons present in the products, a qualitative examination revealed the presence of acetylene.

These investigations have an important bearing upon the question of the luminosity of hydrocarbon flames. The view that the separated carbon is due to the fact that oxygen combines with hydrogen in preference to carbon is no longer tenable. This work shows that oxygen combines with the carbon in preference to the hydrogen; and the separated carbon is probably due to the decomposition at high temperatures of heavy hydrocarbons into marsh-gas and carbon. The same authors described a new method for measuring the pressure produced in gaseous explosions. Prof. Smithells, of Leeds, also told the Section about his experiments on gas-flames; and Prof. B. Lewes did the same. This same vein of inquiry was tapped by Professor Frank Clowes, of Nottingham, in a paper on the application of a hydrogen flame in an ordinary safety-lamp to the detection and measurement of inflammable gas or vapour. In the course of this he stated that many serious accidents have arisen from bringing a "naked flame" into spaces in which light petroleum oil has been stored. The vapour of this oil, when mingled with the air in proper proportions, is violently explosive; and it becomes important, therefore, to have means of detecting its presence and measuring its amount. He described tests carried out with a hydrogen safety-lamp in his test-chamber, which prove that the hydrogen flame can detect one-twentieth of the amount of petroleum vapour which can be kindled in air, and one thirty-sixth of the amount which explodes when mingled with air.

THE IMPURITIES OF TOWN AIR.

Dr. G. H. Bailey described the investigations by the Air Analysis Committee of Manchester, in conjunction with the Royal Horticultural Society, on the analysis of the air of large towns. From the results of several hundreds of analyses carefully conducted in London, Manchester, and Liverpool, the following conclusions have been drawn:—(1) That in clear breezy weather the amount of sulphurous acid is less than 1 milligramme per 100 cubic feet of air. (2) That in anticyclonic periods it rises very considerably, and in times of fog maxima of 34 and 50 milligrammes have been recorded for the worst districts of Manchester and London respectively. (3) That wherever an open space or a less densely populated area occurs there is a very marked diminution in the amount of impurities in the air. (4) That an increase in the amount of sulphurous acid is accompanied by at least as large an increase in the amount of organic impurities in the air. (5) That smoke, promoting as it does the formation of fog, and preventing free diffusion into the upper stratum of the air, must be regarded as the principal cause of the impure state of the atmosphere in large towns.

ELECTROLYTIC SYNTHESIS.

Professor Crum Brown read a paper in which he described the instruments used by himself and Dr. Walker in their electrolytic synthesis of dibasic organic acids. Among the acids produced by this method were succinic, adipic, suberic, and sebacic, besides two new higher acids of the same series. The secondary products included considerable quantities of unsaturated acids, some of which are known, and some of which have not been previously prepared.

ELECTRIC LUMINOSITY OF VACUUM TUBES.

In the course of a discussion on a paper by Professor Schuster on "Primary and Secondary Cells," Mr. Crookes stated that, if a long vacuum tube containing oxygen exhausted to a point giving the greatest luminosity, is held

somewhere near a plate connected with one of the terminals of a high-tension coil, it becomes very luminous. If the tube has been lighted and put in a cool, dark place, and thereafter held near a coil, it remains dark, and no amount of placing it near the coil will make it luminous. If the tube is rubbed it suddenly flashes into luminosity, and remains so; but if laid down in a dark room for an hour it becomes non-sensitive again. It seemed to him that the gas inside the tube requires to be put in a state of disassociation. Professor H. von Helmholtz, who was one of the lions of the meeting, said he believed that in these vacuum tubes if there is a little stratum of gas adhering to the surface there are always molecules, which can be separated into positive and negative. There is really a measurable stratum of air adhering to the interior of the glass tubes. If a rarefied vacuum is made, the greater part of that air goes away; but there are always traces of gas left even in the vacuum of a glass tube which is completely melted.

ELECTRIC-SPARK PHOTOGRAPHY.

Professor Vernon Boys brought together in the United Presbyterian Church Synod Hall a monster audience on Saturday night to hear his lecture, with experiments, on "Electric-spark Photography." In the course of the lecture Professor Boys explained that by the electric spark articles moving at the rate of 10,000 miles an hour can be photographed, and by the introduction of a revolving mirror a speed of 180,000 miles an hour can be coped with. The mirror makes 1,024 turns every second, worked by electricity, which is equal to about 150 times as fast as a rifle-bullet travels. The whole photographic power of the spark is over in a time equal to the ten or eleven millionth part of a second, and it is during that incredibly brief space that the image is made on the sensitive plate.

PRODUCTION OF OZONE BY ELECTRICITY.

Mr. Shenstone, of Bristol, reported on behalf of a committee on "the influence of the silent discharge of electricity on oxygen and other gases." His statement was that as far as the experiments had yet gone they gave very strong indications that the production of ozone depended not on the quantity of electricity but on the difference of potential between the two surfaces.

A FAITHFUL PAIR.

The papers on "Gas-flames" by Messrs. Lean and Bone and Professors Lewes and Smithells were taken on Friday morning, and attracted a good audience, the experiments, which had already been shown at Burlington House, being watched with interest. Towards afternoon there was a great change: technicality reigned supreme, and the consequent rarefaction of the intellectual atmosphere left only two of our audience—among the faithless, faithful only they.

The Geology Section yielded at least one paper of pharmaceutical interest. This was by Mr. A. C. G. Cameron, of the English Geological Survey, on

FULLER'S-EARTH MINING AT WOBURN SANDS.

The demand for this mineral has been steadily increasing, and mining on systematic principles has been established in Bedfordshire for the first time. The mines worked by the Woburn company show an extensive industry, with underground galleries that extend many hundreds of feet. The layers of earth, as they come to be wrought, are not found disposed quite even, but raised into slight inequalities, ridge and furrow like. It is at Woburn Sands, in the counties of Bedford and Buckingham, that the most valuable deposits of fuller's earth are found.

CATERPILLARS IN PILL-BOXES.

Mr. E. B. Boulton, F.R.S., fascinated the Biology Section with the results of his experiments on caterpillars hatching in pill-boxes. The pepper moth was the particular insect which he experimented on, and his experiments show that if you take an egg of one of these, and grow it in a gilded pill-box, you get a golden caterpillar. Again, if the pill-box be black, so is the caterpillar; while a mixed environment produces a muddled creature, just as in man the environment of the slum or the palace pretty much determines a person's characteristics.

PROTOPLASM AND OXYGEN.

There is nothing which catches the eye of the cultured public so quickly as that word "protoplasm." So the public fancy was taken with the Berlin Professor W. Preyer's communication on "The Physiology of Protoplasm." He said that all living protoplasm produced heat and electricity without any localised process, and there could be no doubt that to a certain extent it was possessed of sensibility. What is it that makes protoplasm behave as it does? He who could answer that question would solve the problem of life. Professor Preyer considers that it is as certain as things can be proved to be nowadays that no protoplasmic movement is possible without oxygen. He published that belief in 1864, and he now upheld it, especially against the objection taken that anaerobes live without free oxygen. It is not at all impossible, he considers, that all sorts of micro-organisms, living as they do in regions containing enormous quantities of oxygen, may by some process yet to be made known develop oxygen from their surroundings, and use it for themselves.

TECHNICAL EDUCATION IN DAY-SCHOOLS.

The report which the committee, of which Dr. J. R. Gladstone is president and Prof. H. E. Armstrong secretary, had to present to Section F in regard to the teaching of science in elementary schools, was not very encouraging to chemists. In 1882-83 there were 286,355 scholars in standards V., VI., and VII., and there were 82,965 examinees in scientific specific subjects. In 1890-91 there were 497,300 scholars, and 100,624 went in for science-subjects—a relative decrease. The most notable points about the figures submitted is the falling-off in animal physiology—viz., from 22,759 to 15,050; in botany, from 3,280 to 2,115; and a fair increase in domestic economy, algebra, and sound, light, and heat. The following are the actual figures for last year:—Algebra, 31,349; euclid, 870; mensuration, 1,489; mechanics, 15,559; animal physiology, 15,050; botany, 2,115; principles of agriculture, 1,231; chemistry, 1,847; scound, light, and heat, 1,085; magnetism and electricity, 2,554; and domestic economy, 27,475. Of cooking-classes, the report stated:—"It goes without saying that the value of the cookery-lessons, which are now being so much encouraged, will depend largely on the knowledge of the principles of chemistry and physics possessed by the teacher, and infused into her teaching." How clever some people are!

COPYRIGHT AND PATENTS.

Mr. Robert A. Macfie, of Dreghorn, a well-known Edinburgh advocate, told the Statistics Section that, in regard to patents for inventions, he would have the value of novelties estimated, and exclusive privileges granted with more circumspection and with due regard to the necessity of using the inventions of different minds in combination, and to the inconsistency of nakedly exposing British manufacturers to only superficially equal competition with their rivals abroad—even the exactions of patentees forming a burden which acts as a favour to foreigners who carry on their business in places, such as Holland, where there are no burdens of the kind to be borne. Mr. Macfie would also abolish the forty-two years' copyright.

AMERICAN BROTHERHOOD.

In the course of a discussion in the Economics Section regarding the American wheat-supply and the present position of British agriculture, Mr. Warrington, F.R.S., of Harpenden, the well-known chemist, adverted to certain sentiments expressed by Mr. Edward Atkinson, of Boston, U.S.A. He said he could not listen with perfect equanimity to the expressions of American brotherhood. It seemed to him that American brotherhood was brought before them on that occasion as a wonderfully one-sided affair. The Americans declared they were our brothers and were ready to supply us with all the wheat and meat we required, but when we proposed that, being our brothers, they should take our manufactures, the Americans at once buttoned up their pockets and said their brotherhood stopped there. (Laughter and applause.) If Americans would simply say they were seeking their own interest, and would stop talking nonsense about brotherhood, we could understand perfectly what was meant. (Applause.) What the British farmer had to do was to look most carefully round him into every department of

his work and see what waste was going on. Farmers should know more science to enable them to see where waste was going on, and how to produce their crops more economically.

SUNDAY SERVICES.

Edinburgh is a city of churches, and so it happened that the cathedrals and more prominent kirks of all denominations had special services last Sunday in connection with the Association. There was a devotional meeting in the Moncrieff Hall, Free Assembly Hall, at which Professor A. Crum Brown, Pres.C.S., F.R.S., presided. In the course of his remarks, he said they would do wrong to turn the meeting into a Section of the British Association, and he impressed upon those present that they were not merely spectators looking on at the natural world around them, but that they were all concerned in its action. What they were there to do was not to discuss the best way of stating that truth, but of confirming it in their hearts and lives. Dr. J. H. Gladstone, F.R.S., London, said that in the early days of the British Association only a few religious men attended the devotional meeting, but now its scope had been widened, and, everyone being invited, it had lost something of its original character. At their last meeting in Edinburgh there was far more need of such a meeting, but at the present time nearly every scientific man was a Christian. Other speakers were the Rev. Henry C. McCook, Philadelphia; Professor F. Barret, F.R.S.E.; Professor A. R. Simpson, M.D.; the Rev. J. A. Jacobs, Bath; and Mr. A. Fletcher, F.R.S., Chief Inspector of Alkali Works.

NEXT YEAR.

The Association will meet at Nottingham on Wednesday, September 13, 1893, with Professor J. Burdon Sanderson, F.R.S., of Oxford, as President. An invitation to meet in Oxford in 1894 has been accepted.

Personalities.

MR. STEPHEN HARRIS, chemist, Droitwich, has been elected on the School Board of that town.

SIR JOSEPH LISTER has retired from his position as lecturer on clinical surgery at King's College.

COUNCILLOR F. E. ESTCOURT and Mr. Reginald Le Neve Foster, manufacturing chemists, Manchester, have been placed on the Commission of the Peace for that city.

PROFESSOR VIRCHOW, the pathologist, has been elected Rector of the Berlin University for the ensuing year. The University had refrained from electing him before because of his advanced progressive views.

MR. ALEX STEPHEN, for many years with Messrs. Clay, Dod & Co., has purchased the branch business in Prescott Road, Fairfield, Liverpool, formerly occupied by Mr. H. Bond, of Breckfield Road North, Liverpool.

DR. WYNN WESTCOTT states that he did not resign his seat on the Islington Vestry when Dr. Tidy died, but three weeks before. Dr. Tidy was in a chronic state of ill-health, and had contemplated resigning in Dr. Westcott's favour; but no one anticipated his early death.

At the usual fortnightly meeting of the Holborn Board of Guardians, held on Wednesday evening, under the chairmanship of Mr. Benjamin Garrod, at the administrative offices, Clerkenwell Road, on the motion of Mr. George Morris the salary of Mr. Thomas Knowles, dispenser, was increased from 130*l.* to 150*l.* per annum.

THE Commissioners of the exhibition of 1851 have placed at the nomination of the Senate of the Liverpool University College a science scholarship of the value of 150*l.* per annum for two years. The Senate recently nominated Mr. James T. Conroy, B.Sc., who has already distinguished himself as a student in chemistry, and the Commissioners have confirmed this appointment. The nominee is required to undertake that during the continuance of the scholarship he will devote himself wholly to scientific study, and not hold any other position of emolument. Mr. James T. Conroy is the eldest son of Mr. M. Conroy, F.C.S., the chief chemist on the staff of Messrs. Evans, Sons & Co., Liverpool.

NEW COMPANIES.

PAUL CLETUS & Co. (LIMITED).—Registered in Scotland, with office in Glasgow. Capital 500*l*. in 1*l*. shares. Object: To manufacture and vend chemicals, drugs, and proprietary medicines, to manufacture and supply artificial teeth, and to practise the art of dentistry in all its branches, and to carry on the trade of wholesale and retail pharmacists and chemists in the United Kingdom.

GAULTER & Co. (LIMITED).—Capital 300*l*. in 1*l*. shares. Object: To carry on business as chemists and druggists, at 6 West Street, Fleetwood, Lancashire. The first subscribers (who take one share each) are:—C. R. Gault, 6 West Street, dispenser; Hannah Gault, 124 Albert Road, Blackpool, widow; Hannah R. Gault, 124 Albert Road, Blackpool, sorting clerk; J. Sankey, 5 Bank Hey Street, Blackpool, chemist; C. H. Turner, 40 Market Street, Blackpool, chemist and druggist; W. H. Gault, 124 Albert Road, Blackpool, decorator; and O. L. Jackson, Adelaide Place, Blackpool, chemist. Registered without special articles of association. Office: 6 West Street, Fleetwood.

NORTH BIRMINGHAM DRUG COMPANY (LIMITED)—Capital 1,000 in 1*l*. shares. Object: To carry on, in all its branches, the business of wholesale and retail chemists and druggists, patent-medicine vendors, &c. The first subscribers (who take one share each) are:—J. C. Dancy, 1 Wainwright Street, Aston, chemist and dentist; W. Clatworthy, 1 Wainwright Street, Aston, chemist and druggist; A. Tibbatts, 165 Summer Lane, Birmingham, drysalter; H. Tibbatts, 134A Witton Road, Aston, drysalter; Laura Tibbatts, Jessie Tibbatts, 134A Witton Road, clerk; and Matilda Tibbatts. There shall not be less than two nor more than three directors. The first are A. Tibbatts (managing director) and H. Tibbatts. Qualification, 5*l*. Remuneration to be fixed in general meeting. Registered office: 165 Summer Lane, Birmingham.

PRESTON AND DISTRICT MINERAL-WATER MANUFACTURERS' AND BOTTLEERS' TRADE PROTECTION ASSOCIATION (LIMITED)—Objects: To protect the bottles, boxes, and other property of members, &c. For the purpose of registration the company is declared to consist of 100 members with an individual liability, in the event of the winding up of the company, of 2*l*. The first subscribers to the memorandum of association are: J. Thompson, Cato Street, Preston, herb-beer manufacturer; J. Seed, Kirkham Street West, Preston, mineral-water manufacturer; E. L. Newsome, Blackpool, mineral-water manufacturer; J. Simpson, Moon Lane, Preston, mineral-water manufacturer; E. Wilkinson, Bell Street, Preston, mineral-water manufacturer; J. J. Duckett, Bow Lane, Preston, mineral-water manufacturer; and G. Croston, herb-beer manufacturer, Greaves Street, Preston. Registered office: 44A Fishergate, Preston.

S. G. CLEMENTS & Co. (LIMITED).—Registered by G. H. Carthew, 1 Verulam Buildings, Gray's Inn, W.C., with a capital of 10,000*l*. in 10*l*. shares. Objects: To acquire the business of wholesale chemists and druggists, drysalters, oil and seed merchants, &c., now carried on at Bristol by S. G. Clements & Co., and to develop and extend the same. The first subscribers (who take one share each) are: J. W. Baker, 12 Lewins Mead, Bristol, wholesale druggist; W. A. Lyddon, The Ferns, Halton, gentleman; J. W. Manks, Keynsham, wholesale druggist; H. Masters, Bishopston, pharmaceutical chemist; C. G. Preece, Keynsham, chemist; A. Slater, 24 Hampton Road, Bristol, wholesale druggist; and John Bicknell, Carlton Chambers, Bristol, accountant. There shall be three directors. The first are J. W. Baker, W. A. Lyddon, and J. W. Manks, managing directors. Qualification, 500*l*. Remuneration: J. W. Baker, 150*l*. per annum; W. A. Lyddon, 100*l*. per annum; and J. W. Manks, 150*l*. per annum. Registered office: 12, 13, and 14 Lewins Mead, Bristol.

LYNCH & Co. (LIMITED).—Capital 25,000*l*. in 1*l*. shares. Objects: To acquire the business of druggists' sundriesman and surgical-instrument maker carried on by T. F. Lynch, under the style or firm of Lynch & Co., and to carry on business as chemists, druggists, druggists' sundriesmen, drysalters, &c. The first subscribers (who take one share each)

are:—T. F. Lynch, 192 Aldersgate Street, E.C., druggists' sundriesman, &c.; B. W. Levy, 17 Tokenhouse Yard, E.C., merchant; H. Hayman, 3 Coleman Street, E.C., merchant; O. Levy, 8 Pembridge Square, gentleman; F. Benbow, 192 Aldersgate Street, clerk; L. S. Cohen, 44 Ranelagh Street, Liverpool, general merchant; and E. Levy, 108 Market Street, Manchester, merchant. There shall not be more than five nor less than two directors, and the first are: T. F. Lynch, B. W. Levy, H. Hayman, and L. S. Cohen. Qualification (other than T. F. Lynch, as to whom no qualification shall be required), 500*l*. Remuneration, 200*l*. per annum, to be divided among them in proportion to their respective attendances at board meetings.

Trade Notes.

MR. WALTER DYER, chemist, has removed from St. Aubyn Street to 36 Fore Street, Devonport.

MR. WILLIAM L. KER, of Cowdenheath, has purchased the business of the late Mr. William Kerr, at 56 High Street, Dunfermline.

MR. A. NEWTON, late senior assistant at the Medical Hall at Yeovil, has opened a chemist and druggist's shop at 75 Hindford, Yeovil.

MESSRS. JAMES WOOLLEY, SONS & Co., of Manchester, are to open their new premises at Victoria Bridge, Manchester, on Monday, August 29.

THE business recently carried on by Mr. W. H. Baker, Frodsham Street, Chester, has been transferred to Mr. W. Turver, who was for some years dispenser with Messrs. Shrubsole, of that city.

THE address of Mr. Stephen Green, the proprietor of Singleton's Golden Eye ointment, was given on page 179 of our Summer number as 210 Lambeth Green. It should have been 210 Lambeth Road.

MR. JOHN MILNE, Ladywell, S.E., wishes us to state definitely, in reference to a paragraph in our report of the British Medical Association's exhibition, that the manufacture of his antiseptic dressings has not changed hand.

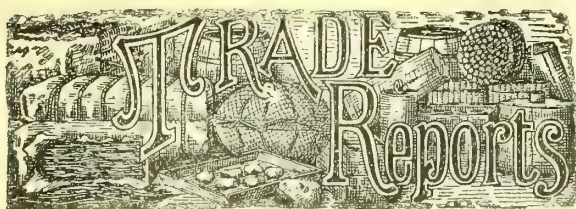
MESSRS. F. ROSENTHAL & Co. consider that a recent Trade Note, concerning their packets of Grace Darling starch, was likely to cause an incorrect impression. They wish us to make it clear that while they will give 500*l*. to the Grace Darling fund if they sell eighteen million packets this year, they will contribute *pro rata* on their sales whatever they may be.

In referring to sol. iodi (Downes') in the description of the British Medical Association's museum, our reporter spoke of it as "colourless." That was not quite correct. The solution is a thickish green solution, apparently containing the iodine in a free state, but when rubbed into the skin we find that it is rapidly absorbed (not evaporated), and leaves no perceptible stain.

MESSRS. ARMOUR & Co., of Tooley Street, S.E., are introducing into this country the essence of pepsin which has met with gratifying acceptance in the United States. The essence is a clear amber-coloured solution of Armour's glycerole of pepsin, possessing a remarkably nice flavour. The essence is to be brought prominently before the medical profession in the United Kingdom.

It is announced that Mr. Charles Kibble has withdrawn from the firms of Horsley, Kibble & Co., of Eastcheap Buildings, London, E.C., and Horsley, McLaren & Co., of 7 Tithebarn Street, Liverpool, of which he was the senior partner. The businesses will be carried on under the same styles by the remaining partners, Mr. George Stevenson and Mr. David Bell McLaren. Mr. James Russell McLaren is authorised to sign for the London firm "per procuration."

OVER PRODUCTION.—It is estimated that the crop of Indian and Ceylon tea for this season will be about 210,000,000 lbs. The United Kingdom can only consume 170,000,000 lbs.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 11.

The London Markets.

London. Although we are now in the full holiday season, business in the drug-market appears to be decidedly more active than it was a few weeks ago. There is little or no speculative demand for anything, but the requirements of ordinary consumption suffice to keep a fair amount of trade going. Disinfectants, as might be expected, are exceedingly active, and there is also an unusually strong demand for antiseptics. The principal alterations in the chemical market may be summed up as follows:—Refined camphor has been raised in price in sympathy with the increased cost of the raw material. Carbolic acid keeps very firm, while there has been a strong demand for boracic. Permanganate of potassium has again been raised in price, and quinine is firmer. Caffeine will not improbably be raised in price. Citric and tartaric acids, as well as cream of tartar, remain very dull of sale, with, perhaps, a lower tendency. There has been no further alteration in the price of mercurials since the recent decline. Lithia carbonate has been raised suddenly by about 50 per cent.

In drugs there has been an advance in crude camphor. Cartagena ipecacuanha has been sold on dearer terms, and to-day Mexican sarsaparilla and copaiba are reported higher. The opium market has also improved. Poppyheads are a little higher. For valerian-root and Malta cumin-seed extreme prices must be paid. Saffron and cevadilla are both dearer. Tonquin-beans maintain their recent advance. Ergot of rye is rather easier. Cinchona sold at a slight improvement this week. Jalap remains firm, but new chamomiles are much lower. French oil of pennyroyal has risen considerably, but in otto of rose there has been no change.

Outside articles may be dismissed in a few words: Shellac is rather better, and so is cocoa butter. Nutmegs and ginger are easier, and Pará indiarubber is also lower. At to-day's gum sales a fair demand for Arabic gums was shown. The supply was heavy, but a large proportion found buyers at a decline of 2s. to 3s. on Cawnpore Amrad, and fully 1s. on Ghatti. Kurachee gums were also generally dull and easier, but Madras kinds brought steady prices.

Liverpool. Our Liverpool correspondent refers to the advance of canary-seeds, which has made further progress since last week. Castor oil has come to hand in large quantities, the importation of which has depressed the market. Quillana is quiet. The Soudan is opening once more up and old-fashioned acacia sorts are coming forward again. Carthagenia ipecacuanha is still held for high prices. Spermaceti remains firm, while Chilean beeswax continues to arrive in quantity.

America. Our New York correspondent, writing under date of August 3, states that the market in general is rather quiet, though some interest is being manifested in a few American articles. Angostura tonquin beans are in rather light supply at the moment, and, if reports are to be trusted, the crop on hand at the point of production

is restricted. Prices for really prime beans are consequently stiffening, and \$2.20 to \$2.40 is generally asked. H.G.H. peppermint-oil is easier in tone, but it is currently reported that the London market is even less firm than the New York. \$3 is the general quantity quotation, but it is intimated by brokers that this price could be shaded pretty liberally. James H. Taft, jun., has just returned from Europe. His close connection with H.G.H. oil and quicksilver, besides the active interest of his firm in South American drugs, creates surprise as to what was his special mission abroad. Seven bales of Mexican sarsaparilla, first hand, sold at 11½c., and resales have been made up to 13c., while 13½c. is asked for single bales. There have been only jobbing sales of jalap, at 33c. to 35c. for prime goods. Golden seal is coming more freely from the country, and has been offered at the equivalent of 20½c. laid down, for new crop. Jobbing lots are held at 22c. here. Coca-leaves are in demand, with sales of 1,000 lbs. Truxillo, to arrive, at 36c. Damiana-leaves are reported scarce at the moment, but are not much wanted. Opium has eased off to \$1.50, under favourable crop reports. Quinine at second hands is 17c. to 17½c. in large bulk, though manufacturers' agents ask 18c. There is nothing doing in it. Ergot has stiffened up to 47½c. to 50c. for German, and 50c. to 60c. for Spanish, though no business is reported. Ipecacuanha is easier, in sympathy with the foreign markets. H. Jacobsohn the agent of the German Bromine Syndicate, has been in this city, ostensibly looking for a site to erect a bromide-works, so that the syndicate can, by working up their bromine into bromides here, avoid the 25-per-cent. import duty on chemical preparations. Oxalic and foreign benzoic acids (43c. to 47c.) have slightly advanced in value. Balsam copaiba is selling quietly at steady rates, while Peru, Tolu, and Canada balsams show no alteration in value. Bromide of potassium remains quietly steady, the foreigners being 1c. per lb. below the Yanks. Chinese cantharides are dearer (32c. to 35c. per lb. for whole flies), and the small stock is pretty well concentrated in the hands of a single speculator. English chlorate of potash has risen to 13c. for quantities. There is a steady business in cubebs, at from 37½c. to 62½c. Gums and gum resins are generally tame, and moving off in jobbing parcels at fairly steady prices. Bergamot and Japanese peppermint oils are dearer, but there has been some reaction in the otto of rose market. Spermaceti remains firm. This is what the *O. P. & D. Reporter* says about the state of the Tonquin-bean market:—"The tonquin-bean market has never been in a stronger position than to-day. The stocks of Angostura beans of old crop in this market are daily becoming lighter, while as yet only 15,000 lbs. of 1892 crop have come forward. In Venezuela large quantities of beans had been seized by the insurrectionists during their transportation down the river to the coast. These beans have been sent about from place to place, and the fact that they have not been properly cured, if cured at all, renders it probable that many of them will be damaged. This will reduce the already light stocks, which are not thought to amount to over 50,000 lbs." Menthol is firm at \$3 to \$3.25, and the "leading brand" is said to be almost sold out. Buckthorn-bark is dearer, and sales have been made at 9c. per lb.

Hours of Labour in the Perfumery Trade.

The perfumery and essence section of the London Chamber of Commerce met on Wednesday, August 3, for the purpose of considering the desirability of petitioning the Board of Customs for an extension of the working hours in bonded factories. It was argued that the present hours for working in bond (from 8 to 4 in summer, and 9 to 4 in winter) were unreasonable. The usual hours of labour in the perfumery trade are from 8 A.M. to 7 P.M. all the year round, and that the short hours of the bonded warehouses added considerably to the cost of production, necessitating, in the first place, a larger number of workers, and consequently a larger wage-bill; and in the second place, larger premises, which meant a heavier rental than need be. It was further contended that in asking for an extension of the hours the trade were asking nothing new in principle, a free custom service being already conceded, and that an extension from 6 A.M. to 6 P.M. had already been granted in the outdoor customs service. It was ultimately agreed that the Chamber of Commerce should petition her Majesty's Board of Customs praying that the hours of attendance of their officers at bonded perfumery

warehouses should be extended from 8 A.M. to 6 P.M. all the year round.

The German-American Bromine War.

There has been for some time a kind of armistice between the German and American producers of bromine, but it would occur that the end of this period is approaching, and that more exciting times are in store. An *Oil, Paint and Drug Reporter* man has interviewed the American representative of the Stassfurt Syndicate, who has told him that the Stassfurt directors propose to establish a plant in America for the manufacture by the German combination of bromides, from their own crude material, which is admitted to the United States free of duty. With a plant in America the German manufacturers will be enabled to sell their bromides much cheaper than heretofore, and hope thus to be in a position to wage war even more bitterly than at present. The agent of the Germans added that he was on the eve of departure to Germany (having in mind five or six suitable locations for the plant), and as soon as the German Bromine Syndicate has decided upon the most desirable of these, work will be begun. The work, he said, will be very simple and inexpensive, it being merely necessary to transform bromine to bromide by crystallisation. This work requires neither an elaborate plant nor skilled labour.

As soon as the work of manufacturing begins prices will be lowered all round to a level with those ruling in the American market, thus shutting off the possibility of American manufacturers getting any advance on export orders. In this way the German manufacturers are prepared to carry on the war to the end.

ACID (BORACIO) has been in strong demand, and as much as 31s. per cwt. has been paid for fine powder.

ACID (CARBOLIC).—Very firm, and still tending higher. Crystals, 39° to 40°, are now held for 6d. per lb. in quantities; 34° to 35° for 5½d. per lb.; and liquid at 1s. 9d. per gallon.

ACID (CITRIC).—Steady at 1s. 4¾d. per lb. Concentrated juice is held for 19½s. f.o.b. per ton. The exports of citric acid in the first week of August have been 133 cwt. The following figures refer to the imports of Sicilian lemon-juice into London:—

	1889	1890	1891	1892
	Pipes	Pipes	Pipes	Pipes
In July	293	110	45	320
Jan. 1 to July 31	3,235	2,789	1,442	1,695

ACID (TARTARIC).—Very slow of sale at 11½d. to 11¾d. per lb. for English, and from 11¾d. to 11½d. per lb. for foreign brands.

ALUM.—Lump may be had at 5l. 5s. to 6l. 2s. 6d. per ton f.o.b. Liverpool, according to packing, and ground alum at from 6l. to 6l. 12s. 6d., same conditions.

AMMONIA SALTS.—Carbonate of ammonia in jars is quoted at 3¼d. per lb.; in bulk the price is 3d. per lb. for large quantities. Rough *muriate* is held for 22s.; white ditto for 28s. per cwt. *Sulphate*, grey 24-per-cent., London and Beekton, 9l. 17s. 6d.; Hull spot, 9l. 15s. to 9l. 16s. 3d.; Leith, 9l. 15s. per ton.

ANISE.—Genuine star-anise is very scarce and inquired for. The price is nominally 105s. per cwt., but none is offering. Fine green *Russian* seed (last year's crop) may still be had at 19s. per cwt.

BALSAM (COPAIBA).—An advance in *Maranham* balsam to 2s. per lb. for good quality is reported to-day.

CAFFEINE.—We hear that an advance in the price of caffeine is in contemplation.

CAMPHOR (CRUDE).—The market has been active and increasing in firmness. Since our last report 5 tons China camphor have been sold on the spot at 127s. 6d.; 300 for July-August shipment at 117s. c.i.f., and 300 ditto at 115s. 6d. c.i.f. Hamburg. For *Japan* July shipment 125s. c.i.f. has been refused. On the spot 135s. is now asked for *Japan*, and afloat 130s. c.i.f. terms. According to advices from China, dated July 7, the stock of *Japan* camphor in the Chinese ports had all been bought up. In *Formosa* camphor there had been very considerable transactions, all for export to India, at prices gradually declining from \$40 to \$38.50 per

picul. There were still 550 boxes in the market, but they were held at prices too high to admit of business.

CAMPHOR (REFINED).—On Friday last prices were advanced 1d. per lb. all round, and the English makers now quote *bells* at from 1s. 7½d. to 1s. 8d. per lb. The Germans have also raised their prices to 1s. 6½d. per lb., net terms.

CANARY-SEED.—Five hundred bags Turkish sold yesterday in Liverpool at 67s. 6d. per 464 lbs.

CANTHARIDES.—The last offers of *Russian* flies (new season) from Hamburg were at the rate of 2s. 9d. per lb. c.i.f. London, but these have now been withdrawn because, it is said, the imports from Russia to Germany have been subjected to certain harassing regulations by the German Board of Health.

CARDAMOMS.—Exports of cardamoms from Ceylon between January 1 and July 18:—1892, 201,630 lbs.; 1891, 175,009 lbs.; 1890, 194,293 lbs.; 1889, 165,601 lbs.

CASSIA LIGNEA.—Dull of sale and neglected at 22s. 6d. per cwt.

CEVADILLA.—The whole of the obtainable supply of cevadilla seeds in Hamburg (which is the principal market for this article) has been bought up by a speculator, who asks an excessive price. Veratrin is much dearer in consequence.

CHAMOMILES.—Good new *Belgian* have been sold at 82s. 6d. per cwt., but are now offering at 80s. per cwt.

CINCHONA.—The auctions on Tuesday were again very light, the total quantity included in the nine catalogues being:—

	Packages	Packages	
	of which	were sold	
Ceylon cinchona	768	760	
East Indian cinchona ..	53	45	
Java cinchona	117	117	
African cinchona	70	70	
South American cinchona	444	267	
	1,452	1,259	

The tone showed some improvement upon the last sales, and at times competition was rather strongly accentuated. The general view is that the auctions resulted in a slight but general advance in values, the average unit being now 1¾d. to 1½d. per lb. The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works	104,129
" American and Italian works ..	32,023
Messrs. Howards & Sons	30,485
Agents for the Paris factory	23,598
" Frankfort o/M. and Stuttgart works	21,545
" Auerbach factory	21,120
" Brunswick factory	18,855
Sundry druggists	22,385
Total quantity sold	274,141
Bought in or withdrawn	37,122
Total quantity offered	311,263

It should be well understood that the quantity of bark bought gives no indication of the quinine value represented by it; some firms who buy large quantities of bark often take the poorer lots, while their competitors, who may buy less bulk, secure parcels of higher test.

The following are the prices paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary weak to fine bright quilly branch and stem chips, 1¾d. to 2½d.; fair to good bright spoke-shavings, 2d. to 3d.; common weak twigs, 1d. to 1½d.; ordinary dusty root, 1½d. to 1¾d. per lb. Grey varieties: Ordinary to fair quilly mixed stem and branch chips, 2d. to 4d.; good strong shavings, 5d.; good bright root, 5½d. to 5¾d. per lb. Yellow varieties: fair quilly chips, 5½d.; root, 5¾d. per lb. Hybrid chips, 2d. per lb. *Renewed.*—Red varieties: Fair to fine bright quilly stem and branch chips, 2d. to 4½d.; fair to good shavings, 2½d. to 3½d.; ordinary thin branch and twigs, 1d. to 1½d. per lb. Grey ordinary to fine strong quilly stem and branch chips, 3d. to 7½d. per lb.

EAST INDIAN CINCHONA.—Of the very small and insignificant supply, the greater part sold at 2d. to 2½d. for fair natural *Succirubra*, and 3½d. to 4½d. for ditto *Officinalis* chips.

JAVA CINCHONA.—*Original.*—Yellow stem and branch chips and siftings, 2½d. to 4¼d.; good root, 3¾d. to 5d. per lb.

WEST AFRICAN CINCHONA.—Seventy bales of recent import, *via* Lisbon, all more or less damaged, sold at 3d. to 3½d. per lb. for medium thin *Succirubra* quill.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian *Calisaya* quills realised from 5½d. to 8d. for medium rather irregular to good stout silvery sound, and from 5¾d. to 7d. per lb. for damaged quills. A small parcel of *Cuprea* bark was bought in.

Crown and grey barks from South America remain neglected, although there have been no imports since June 23. Fine flat bright-red South American bark, however, is very much wanted, and would realise fancy prices if it were obtainable. The statistical position of bark in London is improving. Our stock on August 1 was 43,365 bales, against 50,207 bales and 53,246 bales on August 1, 1891 and 1890, respectively. Our present stock is composed thus:—Eastern barks, 18,723 bales; South American, 24,642 bales, of which 1,013 are Cartagena, 16,212 soft Colombian, Granadian, Pitayo, and *Cuprea*, 68 old red, 1,568 crown and grey, and 5,781 flat and quill *Calisaya*.

The exports from Ceylon from January 1 to July 18 were:—1892, 3,350,563 lbs.; 1891, 3,014,167 lbs.; 1890, 4,638,262 lbs.

CLOVES are distinctly firmer. At auction only 218 bales *Zanzibar* were offered, the whole of which sold at from 2d. to 2½d. for low dark to fair, and 2¾d. per lb. for fine bright. Privately, 300 bales have since changed hands at 2¾d. per lb. for fair quality. Fair picked *Penang* sold at auction at 8½d. per lb. News from *Zanzibar*, dated July 13, states that "there have been some arrivals of the new crop of cloves, which it is expected will exceed last season's crop. An advance in home values under present prospects looks very doubtful; but if the shipments of clove-stems were restricted a larger demand for cloves would result, especially in Bombay, and the value of cloves would be more likely to improve."

COCA.—On August 25, 74 bales of *Java* coca crushed-top leaf, weighing together 5,755 kilos., will be sold by auction at Amsterdam. They are all from the *Soekamadjo* plantation.

COCAINE.—The price of crude Peruvian is nominally 11s. per oz. The makers will not accept less, but there are no buyers.

COCOA BUTTER.—At the monthly auctions of *Cadbury's* cocoa butter on Tuesday, 300 2-cwt. cases sold at a slight increase in value—viz., 12¾d. to 12¼d. per lb.

COPPER (SULPHATE).—A flat market. London quotes 14l. 10s. for good brands, Liverpool, 15l.

CREAM OF TARTAR is tame and neglected, at 84s. per cwt. for best white French crystals on the spot.

CUBEBS.—We hear from Amsterdam that there has lately been a somewhat better demand for bold cultivated berries in that market, and that 57 bales of this kind have been sold at the rate of from 7l. 10s. to 8l. per cwt. Small berries and spurious kinds are neglected.

CUMIN-SEED.—For fine old *Malta* seed 45s. is now asked; the last price paid was 40s. per cwt.

ERGOT OF RYE.—Good bold new Spanish ergot is held at 2s. 3d. per lb. on the spot, while for good German 1s. 10½d. per lb. is asked.

GALLS.—Eight cases fair *China* galls were partly sold at auction at 46s. 6d. per cwt. *Turkey* galls are dull of sale. blue *Basorah* being bought in at auction at 62s. 6d.; green at 57s. 6d.; and white at 50s. per cwt., which are all nominal figures. To arrive, plum-shaped *China* galls have sold at 53s. to 54s. per cwt., "c.i.f." terms.

GAMBIER.—At auction one or two parcels of free but dull cubes sold at 28s. 9d. per cwt. Whole bales have sold on the spot at 18s. per cwt. The market is firmer.

GAMBOGE.—There have been fresh arrivals of 61 cases (in two consignments) by the *Menelaus* from Singapore this week, and 51 cases by the *Glenfallock*, also from Singapore.

GENTIAN-ROOT is rather higher in price.

GINGER.—*Jamaica* root is quiet and rather neglected. Sales could only be effected at lower prices, and at auction the

greater part of 520 barrels offered was bought in, only 40 barrels *Rhatoon* selling at 47s. to 55s. for common to low medium scraped and washed. *Cochin* is sluggish, with small sales at 43s. for small pieces and cuttings. In Liverpool 50 bags *African* ginger have been sold at 29s. per cwt.

GUINEA GRAINS.—Sales are reported from Liverpool at 22s. 6d. per cwt.

GUM ARABIC.—*Niger* gum is selling to a small extent in Liverpool at 25s. Fair *Ghatti* has been sold at from 30s. to 39s., fair pale *Cannopore* at 37s. 6d., and ordinary *Oomra* gum at 30s. per cwt. There has been a good deal of business done in this article by private treaty at full prices.

INDIARUBBER has declined, and fine *Pará* is now offering at 2s. 9½d. per lb. on the spot.

INDIGO.—Reports from India still describe the state of the growing crops as unsatisfactory, particularly in lower Bengal and in the Behar district. The prospects in the north-west of Benares districts, where good rains have fallen, have slightly improved.

IRECACUANHA.—*Cartagena* root has been in good demand privately, and a fair quantity has changed hands at 4s. 6d. to 4s. 9d. per lb., a substantial advance upon the recent auction rates. Now the holders are inclined to stand out for 5s. per lb.

JABORANDI.—Fine leaves are not to be had here. If there were any they would no doubt realise high prices. *Pilocarpine* is also scarce and dear.

JALAP.—Good *Vera Cruz* is held firmly for 1s. 6d. per lb., an offer of 1s. 4d. per lb. has been made to one broker to clear the whole of his supply, but it was refused.

LITHIA CARBONATE has lately been suddenly advanced in price from 4s. to 6s. per lb.

MAGNESIA SALTS.—*Calcined* magnesia in bulk is held for 10d. per lb., in bottles at 1s. 4d. per lb.; *carbonate*, in lump or powder, at 40s. per cwt.; and *Sulphate*, in 1-oz. packets, put up in 7-lb. boxes and cases, at 11s. 6d. per cwt., packing included.

MANNA.—The new crop will be due in about a fortnight, but nothing definite can yet be said concerning the probable output. Last year there was a very big crop; this year it is not likely to be so large.

MERCURIALS.—Since the recent reduction in price of all mercurials by 2d. per lb., there has been no further alteration in prices. The makers' prices are now as follow, according to quantity ordered:—*Hydrarg. chlorid.*, 2s. 7d. to 2s. 5d.; *Bichlor.*, 2s. 5d. to 2s. 3d.; *Nit. oxyd.*, 2s. 10d. to 2s. 8d.; ditto *levig.*, 2s. 10d. to 2s. 8d.; *Præcip. alb.*, 2s. 10d. to 2s. 8d.; *Sulph. alb.*, 1s. 11d. to 1s. 9d.; *Sulph. nig.*, 1s. 11d. to 1s. 9d. per lb. There has been an unusually large demand for bichloride lately, but the makers have been able to fill orders without undue delay.

MUSK.—The exports of musk from Shanghai during the last two years are given as follows in the official Chinese Customs list:—1890, 36,3 piculs, value 181,485 taels; in 1891, 49,6 piculs, value 393,301 taels.

OILS (ESSENTIAL).—There have been sales of *Cassia* oil at 3s. 3d. per lb. privately, which is lower. Japan oil of *peppermint* is held at 6s. to 6s. 3d. per lb. on the spot, and at 5s. 9d. c.i.f., although there is not much offering in the latter position. American oil (H.G.H.) may still be had at 13s. 4½d. per lb. No price has yet been fixed for the new *Otto of rose*. *Pennyroyal*, it is said, will be exceedingly scarce in France this year, the crop being almost a total failure. There is a trifle still left at 3s. 10d.; when that is sold 4s. 10d. per lb. will be the price. *Lavender* is being distilled now in the South of France. *Rosemary* and *Thyme* will come next.

OPIUM.—Our last mail news from Smyrna, dated July 30, is to the following effect:—"Our market is firm, and there is every probability that prices will be maintained owing to the late rains in the Northern districts, which have reduced our crop to 8,000 baskets. The London quotations are lower than ours, but it must be borne in mind that there is a good deal of rubbish shipped to England in the shape of inferior rejections, which are bought by one or two parties here at a very low price to reduce cost. This refers more especially to manufacturing qualities, which have lately been sold in Lon-

don at 5s. 6d. to 5s. 9d. per lb." The consignees of new opium (of which 907 baskets have been received up to date, against 1,053 last year) prefer to pawn it with local banks rather than to accept low figures, hence whoever wants to buy has to pay full value, witness an American firm which has just secured 40 cases. At present the appearances favour the maintenance of the market, and should a decline set in, it is not likely to do so until late in the season, after the Dutch Government purchases, therein following last season's precedent.

ORRIS-ROOT.—We hear from Italy that this drug can hardly be sold, in spite of the reduced quotations made by holders, who offer fine selected *Florentine* at 100s. f.o.b., ordinary ditto at 88s. f.o.b., and common to fine *Verona* at 43s. to 59s. per cwt. f.o.b. It is very questionable whether holders will succeed in getting rid of the small stocks they have left before the arrival of the new crop.

PERMANGANATE OF POTASSIUM has been again advanced. The price is now 90s. per cwt. for small, and 95s. for large crystals.

POPPY-HEADS are 6d. per 1,000 dearer. Small *Belgian* have been raised from 9s. to 9s. 6d., large ditto from 13s. to 13s. 6d. per lb.

QUICKSILVER.—The importers ask 7l. 2s. 6d., while second-hand holders offer at 6l. 17s. 6d. per bottle.

QUILLAIA.—Fairly large sales are reported from Liverpool at the rate of 15l. 10s. per ton.

QUININE.—Prior to the bark auctions the market, though rather disposed to firmness, showed no alteration, and some 25,000 oz were sold at 8½d. per oz., but since then holders have become much less tractable. There is now no second-hand German bulk to be had at 8½d., all the owners asking 9d. per oz. Manufacturers quote as follows:—*Howard*, bulk, 1s. 1d. to 1s. 2d.; vials, 1s. 2d. to 1s. 3d.; *Whiffen*, bulk, 12½d.; vials, 1s. 2d.; *Pelletier*, vials, 1s. 7d.; *Milan*, vials, 1s. 1d.; bulk, 11d.; *Zimmer and Jobst*, bulk, 11d.; *Brunswick*, bulk, 10½d.; *Mannheim* and *Auerbach*, bulk, 9½d. per oz.

SAFFRON comes again higher from Spain, 25s. 6d. per lb. being now the price for best Valencia.

SARSAPARILLA.—Cablegrams from New York state that the stock of *Mexican* is now practically nil; on the spot here some may yet be had at 8½d.

SHELLAC.—The market opened very quietly this week, and in anticipation of the rather heavy auctions on Tuesday (there had been none for a fortnight) little or no business was done on the spot market. For buttonlac, however, the steady demand lately manifested showed no abatement, and several parcels changed hands at full prices. Fine grades are particularly scarce. At the auctions 859 cases shellac were offered, of which 720 sold, with good competition, at almost steady rates as compared with the highest figures paid privately, and an advance of 1s. per cwt. on the last auction rates. The following were the prices:—*Orange*, unworked, good to fine pale, 84s. to 85s.; weak frimsy palish to fair bright flat, 80s. to 81s.; livery and reddish, 78s. to 79s. per cwt.; worked block, 74s. to 76s. per cwt. *Buttonlac*, ordinary unworked seconds, 79s. to 82s.; thirds, 78s. to 79s.; fourth and resin-adulterated from 76s. down to 52s. per cwt.

In the speculative market sales are reported as follows:—*TN orange*, August delivery, 82s. to 82s. 6d.; September, 83s. to 84s.; October, 84s. to 84s. 6d.; November, 84s.

STICKLAC.—Fine qualities remain very scarce and inquired for. At auction 19 cases good *Siam* were partly sold at 82s. 6d. per cwt., while 50 bags wormy and blocky lac from Calcutta were bought in.

TONQUIN-BEANS.—There is very little offering now, but the demand holds on, and holders are very firm. Prices may be quoted as follow:—*Pará*, ordinary brown and foxy mixed, 1s. 3d. to 1s. 9d.; fair black, 2s. to 2s. 3d.; good frosted (*Surinam*), 2s. 6d. to 2s. 9d.; bold frosted *Angostura*, 6s. to 6s. 2d. per lb.

TURMERIC.—At auction a quantity of *Cochin* and *China* root was bought in for want of buyers at the prices asked: Dull rough split *Cochin* bulb at 9s. to 9s. 6d.; mixed finger and bulb *China* at 17s. per cwt.

VALERIAN-ROOT.—The last 4 bales of this root were recently sold at the exceptionally high price of 58s. per cwt.; now there is none available, and none will be until the end of October.

WAX (JAPAN).—Good pale squares have been sold at 38s. 6d. per cwt.

THE LIVERPOOL MARKET.

CANARY-SEED continues to rise, and 67s. 6d. has been paid for fine bright Turkish. Higher prices are talked of by some holders.

CHILLIES.—Sales of bright red *Sierra Leone* have been made at 40s.

GINGER.—A parcel of somewhat poor and broken African sold at 27s. 6d.

OIL (CASTOR).—The arrival of the *Chancellor* with 1,300 cases has depressed the market, and good seconds Calcutta now 2½d. to 2¾d., first-pressure French selling at 2½d. and second-pressure 2¼d.

QUILLAIA.—Small sales have been made at 16l. 10s., which may be considered value.

SPERMACELE.—Sales of American in small boxes at 1s. 5d., at which it is firm.

WAX (BEES).—*Chilian* continues to arrive steadily, and yellow finds buyers at 7l. 10s.

THE DUTCH MARKET.

AMSTERDAM, August 4.

CINCHONA.—The cinchona auctions to be held in Amsterdam on August 25 will consist of 5,152 packages, 145 cases, and 5,007 bales (about 421 tons), divided as follows:—From Government plantations, 55 cases and 271 bales (about 29 tons); from private plantations, 90 cases and 4,736 bales (about 392 tons). This quantity contains: of druggists' bark—*Succirabra* quills, 128 cases; ditto, broken quills and chips, 166 bales; ditto, root, 19 bales; *Calisaya* broken quills and chips, 8 bales. Manufacturing bark—*Ledgeriana* quills, 17 cases; ditto, broken quills and chips, 3,827 bales; ditto, root, 749 bales; *Officinalis* broken quills and chips, 12 bales; ditto, root, 6 bales; Hybrid broken quills and chips, 214 bales; ditto, root, 6 bales.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

THIS week the market has shown considerably more life and 60 cases changed hands, old *Karahissar* opium at the parity of 6s. 10d. per lb., f.o.b., and ordinary kind of manufacturing opium, new crop, at 6s. 7d. per lb., f.o.b. We close firm, with a rising market.

MATTEI'S MEDICINES.—Dr. Potter sends to the *British Medical Journal* the report of the Committee appointed twelve months since to investigate the alleged cures of cancer by what is known as the system of Count Mattei. It is stated that all but five persons who offered themselves for treatment were refused by the Matteists, although selected from those who were in the first stage only of the disease. At an early date, disgusted with the obvious efforts of the Matteists to evade a fair trial, Mr. Lawson Tait seems to have retired, but nevertheless a strict weekly observation by Dr. Potter, as Chairman of the Committee, by a registrar specially appointed, and by other members of the Committee, was made. The result has been, as might have been expected, complete failure, and Dr. Potter adds that, while the chemical analysis of the so-called "electricities" of Mattei, by Mr. Stokes, show that they contain no more active ingredient than distilled water, the clinical results fully confirmed the analysis.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Examiner in Pharmacy in Ireland.

SIR,—Irish pharmacists were somewhat startled to read in the daily papers of Friday last that Mr. T. W. Robinson, of Kingstown, had resigned his seat as Vice-president of the Pharmaceutical Society of Ireland, and had been elected examiner in the important subject of pharmacy. Your issue of Saturday contained no further report of the subject than that there were eight candidates for the post, in spite of which Mr. Robinson was unanimously elected. Now the first and the most important rule by which the Society is bound to conduct the election of examiners is, "No member of Council shall be eligible for the office of examiner." The obvious logical sequence to this very salutary enactment is that a person may not resign his seat as councillor and be elected examiner at the same meeting of the Council. Hence I am anxious to ascertain—

1. When was Mr. Robinson's resignation as a member of the Council accepted by the Society?

2. Did Mr. Robinson send in his application for the post of examiner before July 27, in accordance with the terms of the advertisement, and was his resignation duly sent in and accepted at the time?

3. Has the consent of the Lord Lieutenant been obtained to Mr. Robinson's appointment?

Perhaps you could supplement the information on these points, which merely concern the legal aspect of the case, by enlightening your readers on a fourth question—namely, What are Mr. Robinson's qualifications for the post?

Yours truly,

M.P.S.I. (90/59.)

Dublin, August 7.

The Examinations and Provincial Candidates.

SIR,—I beg through the medium of your valuable journal to protest against the manner in which the Minor examination is conducted at London. The examiners, or whoever make the arrangement, seem to entirely forget or ignore the fact that there are provincial candidates, and that to keep them waiting in London eight days (as in my case) between the practical and theory examinations causes great expense and loss of time. This is not so at Edinburgh, and I fail to see why it should be so at London.

I am, yours truly,

A RECENT A.P.S. (92/51.)

The Insane Root.

SIR,—I was in error in supposing that Gerarde has no mention of this plant. The copy I referred to was an imperfect one, and my search hasty. I now find the mad plums or nuts (*Nuces insanæ*) figured on page 1,548, and described on page 1,551 of his "Herbal," both figure and description being copied from Clusius. The discovery, therefore, adds nothing to my knowledge of the plant, but it does confirm my guess that this is really Shakespeare's "insane root." Gerarde also appears to have been hampered by that modesty the survival of which in these remote parts of Lincolnshire seems to surprise your Stapleford correspondent, for he does not give the story of the Dutchmen from Clusius

in fall; but his description of the effects of the fruit is quite sufficient to have served as a hint to so "quick, nimble, and apprehensive" a spirit as Shakespeare.

I am, &c.,

C. C. BEIL.

Epworth, August 9.

Lord Byron's Tooth-powder.

SIR,—Can the dentifrice for which you gave the recipe in your Summer number be the same as is referred to in the following extracts from Lord Byron's letters to his publisher, Mr. Murray?

P.S. to letter dated Venice, March 25, 1817: "Pray send the red tooth-powder by a safe hand, and speedily."

April 9: "Don't forget my tooth-powder. It is of no use to send it by the d——d and double d——d conveyances, but by some private hand."

Either "safe hands" were not available or Murray was very remiss, for on April 26 his Lordship thus abjures him:—

"For the sake of my personal comfort, I pray you to send me immediately to Venice—mind, Venice—viz, Waites' tooth-powder, red, a quantity; calcined magnesia of the best quality, a quantity; and all this by safe, sure, and speedy means; and, by the Lord, do it!"

Even this doesn't fetch him, and six weeks later Byron complains:—

"June 4. I have received none of your packets, except after long delay, the 'Tales of my Landlord.' . . . no Manuel, no letters, no tooth-powder, no nothing. . . . I wait the extract from Moore's 'Italy' very much, and the tooth-powder, and the magnesia; I don't care so much about the poetry, or the letters, or Mr. Maturin's by-Jasus tragedy."

As usual, the thing least wanted came to hand first.

June 18: "I got Maturin's 'Bedlam' at last, but no other parcel. I am in fits for the tooth-powder and the magnesia. I want some of Burkett's soda-powders." [What were they?]

July 1: "No tooth-powder, no letters!"

The poet seems now to have given it up as a bad job, for no further reference is made to the matter for two months. The publisher, however, had not been idle. But, alas! "Many a slip 'twixt the cup and the lip." On September 4 Byron writes:—

"Mr. Kinnaid . . . has lost by the way all the tooth-powder."

See, now, the advantage of a double-barrelled gun! The very next line reads—

"By Mr. Rose I received safely, though tardily"—fine irony this: six months after order!—"magnesia and tooth-powder."

Finally, writing on October 12, he requests further supplies, at all convenient opportunities, of the tooth-powder, magnesia, and soda-powders.

Another tit-bit of Byroniana. Is it possible to translate or read [the prescription in "Don Juan" so as to make it fit in with the metre?—

But here is one prescription out of many:

"Sodæ sulphat. ʒvj., ʒss. mannæ optim.,

Aq. fervent. f. ʒiss., ʒij. tinct. sennæ."

Haustus" (and here the surgeon came and cupp'd him).

"R pulv. com. gr. iij. ipecacuanhæ"

(With more beside if Juan had not stopp'd 'em),

"Bolus potassæ sulphuret. sumendus,"

Et haustus ter in die capiendus."

Don Juan, Canto x., verse 41.

I have made several futile efforts at various times, and have come to the conclusion that Byron meant it to puzzle and perplex the curious in vain attempts to solve the designedly insoluble. But, perhaps, some of your readers may prove more ingenious than

MALEM KABOBI. (91/31.)

P.S.—Am not sure that Mrs. Beecher-Stowe did not discover an esoteric meaning in "tooth-powder" and "safe hand," like Serjeant Buzfuz with Pickwick's "chops and tomato-sauce."

The Presidential Address to the British Association.

SIR,—"Editorial comments" are generally such marvels of diction and erudition that one requires the courage of a

veteran to call them in question. Still, one or two remarks in your comment on the presidential address at the B.A. might be modified. For instance, one carries away the idea that Sir A. Geikie eulogised Hutton and Playfair because they were Scottish, and that Hutton received an exaggerated attention from him. In the *verbatim* report which I have before me now I find Sir A. Geikie does take notice of those "obstinate questionings" man has made of the rocks from earliest times.

Further, his eulogy of the "Plutonists" and the author of the theory is justified, I fancy, when one considers he was treating of the founders of modern geology. Nor is it only Scotchmen, but an Englishman—Smith, the father of organic geology—who comes in for a good share of the presidential praise. May I add that the chronological sequence of the President's pictures have got somewhat mixed in your last paragraph? The steaming jungles were not Silurian nor were the volcanic lakes. In Silurian times Midlothian was part of an arm of the sea. The picture of broad lagoons and active cones referred to Devonian ages—the Old Red of Hugh Miller—and, finally, Sir Archibald saw in steaming swamps and tropical jungles a view of the Carboniferous era, when our Scottish coal-beds were being evolved in Nature's laboratory.

Yours obediently,
J. BELL-FINDLAY.

Grocers and the Pharmaceutical Council.

SIR,—It accidentally came to my knowledge last week on the best authority—viz., a member of the Council—that the Pharmaceutical Society contemplated taking out almost immediately a batch of summonses against grocers, &c., for selling poisonous proprietary medicines. But I think before the Pharmaceutical Society commences to prosecute that it would be best to try and deal with the vexed question of limited companies. It might take a few years to accomplish, but it would be best and safest in the long run for the legitimate chemist and druggist. It falls to my lot to call upon grocers and chemists and I can see clearly that the former have got their back thoroughly up, and intend, if they are prosecuted, to convert their businesses into limited liability companies. Grocers are men of enterprise, and naturally they will not stand idly looking on, but with their newly-acquired powers will compete more severely than ever with the chemist—and perhaps, in many instances, crush him out of the trade. Of course it must not be forgotten that the question has to be fought out in the courts. Were it not for this limited-company mode of opposing chemists, I would say, prosecute right and left, but I feel convinced that it will be a bad day for the chemists and druggists of this country if the Society do prosecute before tackling the more important question of limited companies.

COMMERCIAL TRAVELLER. (90/62.)

Poisons by Wholesale.

SIR,—I experience a certain amount of friction in obtaining the signatures of persons in the sale-of-poisons book, especially in regard to the sale of arsenical weed-killer. I do not complain of this, but I am informed that any quantity of this preparation can be obtained direct from the works without any troublesome formality, and of this I do complain, as the chemist is handicapped with taking all due and proper precautions in accordance with the Act of Parliament. This is evaded by the wholesaler in virtue of clause 16 of the Pharmacy Act "reserving rights of certain persons." The words depended on in this clause—"nor with the business of wholesale dealers in supplying poisons in the ordinary course of wholesale dealing"—do not, I think, admit of the extension claimed for them.

Wholesale dealing, I take it, does not altogether depend on the idea of quantity—as a retail chemist can buy two-pennyworth of material from his wholesale house and yet it is called wholesale dealing—but rather from the fact of a wholesaler supplying a retailer, whereas in the case referred to the manufacturer merely supplies a private person, which I should imagine the law would hardly call wholesale dealing. I do not know whether our Society would think it necessary to interfere in putting a stop to this branch of trading in poisons, but I certainly think it a point that might be very well ventilated in your columns.

August 8.

S. (91/4.)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Codeine and Cascara Pills.

SIR,—Would you kindly inform me through THE CHEMIST AND DRUGGIST the best way to make a firm pill of the following?—

Codeine	gr. 1.
Ext. nucis vom.	gr. 1.
" cascar. sagrad.	gr. 1.
Ft. pil.	

I have frequently made them and have always evaporated extracts, but find after a few days the pills all run together into a very soft mass.

Yours truly,

FRANK PORTLOCK.

[Do not evaporate the extracts. We cannot understand why this should be done, as the pills are fairly firm. Simply rub the ingredients all together, add about $\frac{1}{2}$ grain of pulv. tragac. co., and mass with a very little water, if necessary. It is not always advisable to dry extracts too much, as it often renders them more hygroscopic. Keep in a dry and cool place. The pills should be varnished or coated with gelatine if they are to be kept long. For similar difficulties see "The Art of Dispensing."]]

Croton, Chloral, and Quinine Pills.

SIR,—Will you be good enough to tell me what you think the best excipient for the following pills? I am using p. trag. and water, but I find them so very large—more like a 6-grain pill—and patient complains of the size. I want to find something to lessen size.

Quinine sulph.	gr. v.
Croton chloral	gr. v.
In pil. ij. Mitte xij.	

Yours obediently,

ROSE. (91/24.)

[Rub the ingredients together, and add a very small quantity of rectified spirit—about 3 drops to each dozen pills—and mass. The spirit partially dissolves the chloral, which, with the quinine, forms a tough plastic mass, easily worked with the fingers, and forms a clean white pill, not larger than a medium-sized 5-grain pill.]]

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-6.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

88/39. *Omega*.—We should think if the Pharmaceutical Society of Ireland were able to prove that a proprietary medicine, compounded in Ireland by any person other than a pharmaceutical chemist or apothecary, were a "medical prescription," they could obtain a penalty from such compounder. But it is not at present possible to define what is compounding a "medical prescription," and we should think if the question came before a competent Court in the form suggested by our correspondent, the result would be to decide that only the extemporaneous compounding of the prescriptions of qualified medical men would be regarded as within the meaning of the words in the Act of Parliament.

89/3. *T. M. H.* asks: "Could any person, after obtaining the Apothecaries' Hall certificate (qualifying as dispenser) open a drug-stores and dispense prescriptions, also retail poisons?"

[He would be acting illegally in dispensing and selling poisons, or in keeping open shop for that purpose.]]

90/60 *Quiz*.—It is illegal for Irish pharmaceutical chemists to sell poisons in Great Britain. In that sense an Irish pharmaceutical chemist is not a qualified assistant in Great Britain, but otherwise his qualifications might meet with acceptance by employers. We know cases of the kind.

90/11. *W. J. H.*.—We do not think from what you tell us that you have reason to complain of the manufacturers. As we understand the matter, they are willing to appoint an unlimited number of agents, giving a commission to those who send them orders. It would be unreasonable to expect them to recognise your claim for a commission on an order which you had indirectly influenced. It is conceivable that they might be called upon to pay a dozen commissions on one order if that principle were adopted. You must land your fish as well as hook him.

90/02. *Dubitation*.—Magistrates have unlimited discretion as to penalties in regard to first offences in Excise prosecutions. But after a first conviction they cannot reduce the amount below one-fourth of the statutory maximum.

MISCELLANEOUS INQUIRIES.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

80/73. *Tonic*.—The previous dispensers had doubtless filtered the mixture, which was wrong.

83/15. *Robert*.—Coca Wine may be made by digesting an ounce of the leaves in a pint of port wine or malaga.

85/45. *Citric*.—To stop the fermentation of Orange Wine heat it in a covered vessel to the boiling-point. Do this as rapidly as possible, and add to each gallon 1 drachm of salicylic acid dissolved in 1 oz. of rectified spirit.

83/5. *W. D.*.—Cultivation of Essential oil Plants.—There is a constant stream of information flowing upon this subject, and if you will consult the back numbers of THE CHEMIST AND DRUGGIST you will find as much as you want to know. Perhaps it is a singular coincidence, but it is a fact, that simultaneously with the arrival of your letter a small sample consignment of the very oils you mention—patchouly, vétiver, and lemongrass—distilled in Dominica, was offered for sale in Mincing Lane. West Indian patchouly and lemongrass have been offered tentatively here before, and realised very high prices, the quality being excellent. We are afraid, however, that there is great danger of over-production in oil of patchouly, the demand for which is always limited, and, to a lesser extent, also in lemongrass. You should consult the following books: J. R. Jackson, "Commercial Botany of the Nineteenth Century," Cassell, 3s. 6d.; Lindley and Moore's "Treasury of Botany," Longmans, 12s.; Loudon's "Encyclopædia of Agriculture," Longmans, 21s.; and Bentley and Trimen's "Medicinal Plants." The Botanical Gardens of Jamaica also publish a *Bulletin*, which you will find very useful, and the director of the gardens, we have no doubt, will be glad to assist you with his advice. Three things more: Don't start with the idea of making a fortune out of the business: there is none in it. Don't send over any products except of the finest possible quality. Don't bind yourself to sell the whole of your production to a single firm, but keep an open market.

90/70. *N. F. W.*.—See page 39 for hectograph masses and inks.

90/69. *A. B. C.*.—Warner's Safe Cure.—See THE CHEMIST AND DRUGGIST, January 5, 1889, page 32.

90/74. *J. H.*.—To Preserve Flour-paste use 1 drachm of boric acid and the same of alum to the pound. A few drops of oil of cloves is a beneficial addition.

91/7. *Minor*.—We cannot add to the information which you will find in our Educational number and in our advertisement pages. You cannot be wrong in selecting a place near your town.

91/10. *Enquirer*.—The Eyelashes should not be dyed. Pencils of cosmetic are supplied for the purpose of blackening them. There is no vegetable dye which will impart a black colour to the hair.

89/28. *Ergot*.—The only value of your query to THE CHEMIST AND DRUGGIST is that it contains a formula which you wish us to improve, but you say that you do not wish it to be published. How can you expect us to advise you, then?

90/68. *C.*—Liq. Euonymi et Cascara Comp.—For this we have not a working formula. Try equal parts of proof spirit, liquid extracts of euonymus and cascara, flavoured with tincture of fresh orange-peel, and a dash of cascarrilla.

90/45. *Tartar*.—It is, we think, soluble glass that is used for Coating the Beer-casks internally.

90/15. *Subscriber (W.)*.—(1) The golden fluid is solution of peroxide of hydrogen. (2) There is no preparation which we know of that will meet all the requirements specified.

90/9. *Gympie*.—You will find full information in regard to what should be done To Become an Analyst in our last Educational number. But there are analysts and analysts. Some confine their attention to foods, waters, manures, and the like; others make a speciality of oils, soaps, and the like; some are iron-analysts, brewers' chemists, paper chemists, and so on. Obviously, each department requires specially training; but up to a certain point all do the same work, which is much like what is required for A.I.C. In a general way, Allen's "Commercial Organic Analysis" and Wanklyn's books are indispensable, and these may be worked through by any who have a sound knowledge of chemical science.

91/56. *Dens*.—There is nothing to prevent teeth decaying after the process has commenced, besides excavating and stopping.

91/40. *F. E. A. R.*.—Pulv. Calumbæ Co. (St. George's Hosp. Phar.):—

Bismuth. subnit.	ij.
Sodii bicarbonat.	ij.
Gum acaciæ	ij.
Rhei radicis	partem iss.
Calumbæ radicis	iss.
Cinamomi cort.	iss.
Zingiberis	iss.

M.

Dose: From 15 to 30 grs.

91/69. *Salutaris*.—The most useful work is Sutton's "Volumetric Analysis," in which the special chapter on water-analysis includes and compares all the different methods. Wanklyn's process is certainly a very good one, and although it does not always enable one to draw definite conclusions as to the purity of a water without knowing its previous history, the analytical results are reliable and strictly comparative. In all the operations cleanliness and good manipulation are absolutely essential, and if these points be attended to it is difficult to go far wrong in the ammonia process. Of course the analytical data obtained by Wanklyn's method in respect to organic carbon and

nitrogen do not compare with those of Frankland, although some relations have been established between them. Frankland's method is undoubtedly the more scientific and accurate, as also the most difficult. Williams's modification of the zinc-couple process is the best method for determining nitrates and nitrites.

86/68. *G. D. Coy.*—A Soothing-mixture for Children can be made according to the following formula. It is Well-suited for Gripes:—

Potass. bicarb. ..	..	..	..	3iss.
„ bromid. ..	..	..	..	3ies.
Syrupi ..	..	..	..	3iv.
Aq. anethi ad ..	..	..	..	3viij.

Solve et misce.

Dose : A teaspoonful for infants of three to twelve months.

87/74. *Kola Nut.*—The active principles of Kola Nut are extracted with water, which you may use in making the solid extract.

87/47. *Newtown.*—Very full information is given in our Educational number (September 19, 1891) regarding the conditions, &c., for entering the medical profession. If you will please refer to that you will find all you want.

87/36. *P. Evans.*—A $\frac{1}{4}$ -inch objective magnifies to a greater extent than a 1-inch. The screw at the bottom is the fine adjustment. You had better read a book on the microscope before you begin to work with one. See the article on page 461 of our issue of September 19, 1891.

87/21. *W. H. Burrell.*—There is a Liquid Belladonna Plaster in the B.P.C. Unofficial Formulary. It is as follows:—

Alcoholic extract of belladonna..	..	5 oz.
Spirit of camphor ..	..	2½ fl. oz.
Dissolve and add—		
Flexible collodion to ..	..	1 pint.

Set aside, and decant the clear liquor.

The trouble is that the formula will not work (see Mr. Conroy's paper, THE CHEMIST AND DRUGGIST, xxxix. page 610), but Mr. Martindale says that "better results are obtained by adding the pyroxylin constituent of the collodion last. It is preferred from an alcoholic extract of the leaves." That is because the plaster introduced by Smith is green.

87/28. *Ajax.*—(1) If it is silver ink that the linen is marked with, a solution of potassium cyanide will remove it. (2) Borax is the most popular Starch Glaze, and is put in the starch. Two parts of borax and 1 part of powdered spermaceti also make an excellent glaze. (3) "Ajax" feels himself unequal to the following. So do we at the present moment. Can anyone interpret?

2 Py papnyries
2 of minges Bay
6 of oil of Rodia
2 of A annies Seed
2 of Juckel of full
in one bottle.

Information Supplied.

81/56. Gum Ivy is obtained by making incisions in the stem of the common ivy, *Hedera Helix*. It is reddish-brown in colour and burns with an aromatic odour. Dissolved in vinegar it has been recommended as a depilatory and odontalgic. It is sometimes rubbed on bait to render it attractive to fish.

ADELAIDE.

Newmarket Sauce—In the formula of "the celebrated" sauce which we printed in our Summer issue, page 157, "Capsicum, 1 oz." occurs. The contributor of the formula now writes: "The quantity of bacci capsici cont. to be used is 1 lb., not 1 oz. as inserted." We presume that the mild

capsicum used as a condiment, not B.P. capsicum fruit, is meant when 1 lb. is used. An ounce of the medicinal fruit is as hot as a pound of the other.

Warbles in Horses and Cattle. *G. D. Coy* (86/68) says that the following is a good formula; the lotion sells well and does its work well:—

Zinci sulphat. ..	..	..	..	3iij.
Liq. ammon. fort. ..	..	..	..	5vj.
Spiritus vini ..	..	..	..	3iss.
Liq. plumbi subacet. ..	..	..	..	3iss.
Tr. myrrhæ co. ..	..	..	..	3iss.
Aq. ad ..	..	..	..	3viij.

M. Ft. lotio.

"To be used twice daily."

78/54. "Ol. scinethona." This may be Ol. Sancta Maria (syns. Bals. Tacamacha, Bals. Sancti Thomæ, Bals. Calabar), from *Calophyllum apetalum*. It is sweet-scented, yellowish in colour, and becomes thick and green by drying.

ADELAIDE.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

Acetum Scillæ.—We shall be glad if a number of our subscribers who are making acetum scillæ would each send us a postcard with the following particulars:—

Quantity of acetum made.
Volume of the filtered acetum.

Also, if possible—

Specific gravity of the acid. acetic. dil. employed.
" " of the filtered acetum scillæ.

Our object is to obtain such particulars as will enable us to show whether there is any appreciable yield of acetum when following the Pharmacopœia directions. Those in wholesale as well as retail laboratories will oblige by replying.

89/50. Sunflower-oil: where obtainable in quantity?

87/64. Carbo-eucalyptine Sanitary Tablets (trade-mark, a running man): who makes?

90/67. Formula for Dr. Kidd's tr. ferri pyrophosph.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors

Stennett, William Whitaker, 16 Regent Parade, High Harrogate chemist and druggist. Trustee, George Renton, Harrogate, auctioneer and valuer. Dated July 29; filed August 4. Unsecured liabilities, 1,301l. 13s. 5d.; estimated net assets, 591l. 1s. 11d. The following are scheduled as creditors:—

	£	s.	d.
Ackrill, Robert, Harrogate	10 8 0
Bradford Old Bank, Harrogate	60 1 8
Chemists' Aerated Water Company, Harrogate	30 7 10
Coupland, Mrs., Ripon	27 10 0
Dent, George, Harrogate	12 18 0
Hirst, Brooke & Hirst, Leeds	11 11 5
Ismay & Sons, Newcastle	12 2 10
King, W. S., York	50 0 0
Kinskill, T., Harrogate	31 1 8
Sanger, John, & Sons, London	15 0 0
Stennett, J., Newark	835 0 0
Wright, Layman & Umney, London	10 12 6



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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POPULAR BOOKS FOR CHEMISTS.—The following are published at the offices of this journal, and may be obtained from most of the wholesale houses at the published prices:—

"The Art of Dispensing," 3s. 6d.; by post, 3s. 10d.
Alpe's "Handy-book of Medicine-stamp Duty," 2s. 6d.; by post, 2s. 9d.

Proctor's "Pharmaceutical Testing," 2s. 6d.; by post, 2s. 9d.

"Veterinary Counter-practice," 3s. 6d.; by post, 3s. 9d.

These books have been written for daily use, and their successful publication has proved their value to business men.

Summary.

MR. ALPE contributes some important notes on Medicine-stamp Act interpretation.

WE continue our notes on photographic matters, and comment upon several novelties.

WE note the formation of several limited companies associated with the drug-trade.

THE report which we published last week regarding the condition of pharmacy in British Guiana is confirmed by another correspondent.

ANOTHER view of the Medical Staff Corps as an outlet for pharmaceutical energy is presented this week. It is even more unfavourable than the account given in our Summer issue.

THE use of Indian opium, notoriously deficient in morphine, for pharmaceutical purposes is discussed in our Correspondence and Editorial columns. In Burma chemists are being compelled to use it.

THE Pharmaceutical Council have issued to the trade a circular in regard to the sale of proprietary medicines containing poisons, and drug-stores and grocers are taking steps to fight the matter out. Upon this subject we comment.

THE Apothecaries' Company have signally failed at Morpeth in a prosecution against an unqualified assistant acting for a club doctor. Judge Digby Seymour had clear views as to the incidence of the Apothecaries Act in such cases.

MESSRS. FARR AND WRIGHT summarise in this issue the work which they have done during the past five years on the preparation of tinctures of alkaloidal drugs, to which they add an account of their experiments on tincture of gelsemium.

These gentlemen also call attention in our Correspondence columns to the fact that B.P. laudanum does not contain the theoretical percentage of morphia, but about a third less. This fact has an important bearing upon the Nottingham prosecutions of last week.

Notice.

PARTNERSHIPS DISSOLVED.

Bell & Bradley, Leytonstone, surgeons and apothecaries.

Evans, Rees, & Latham, West Bromwich, surgeons and apothecaries.

Goodall, J. C., and Armstrong, H., under the style of J. C. Goodall & Co., Cardiff, oil merchants and grease manufacturers and merchants.

Hardman, J., and Holden, J. J., under the style of Hardman & Co., Newton Heath, Clayton, and Bradford, near Manchester, and Black born, tar distillers and chemical manufacturers.

Hardman, J., Holden, J. J., and Holden, G. H., under the style of Hardman & Holdens, Newton Heath, near Manchester, manufacturers of alizarine and carbonisers of coal.

Lowndes, S., and Finch, H., under the style of the Marple Chemical Company, Marple, chemical manufacturers.

Morison, A., and Morison, B. G., Green Lanes, Highbury, and Marquess Road, Canonbury, surgeons, accoucheurs, and general practitioners.

Perkins, Steele, and Smith, H. E., Streatham, surgeons, apothecaries, and accoucheurs.

THE BANKRUPTCY ACTS, 1883 AND 1890

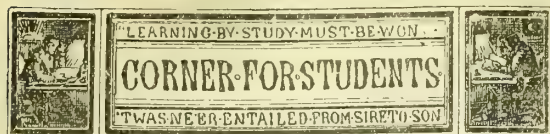
ADJUDICATIONS.

Martin, Alfred George Edmunds (described in the Receiving Order as George E. Martin, and trading as George E. Martin & Co.), Fenchurch Street, City, and Hoc Street, Walthamstow, importer of essential oils.

Parry, John William, Bagillt, Flintshire, physician and surgeon.

RECEIVING ORDERS.

Parry, John William, Bagillt, Flintshire, physician and surgeon.
Wise, Joseph Norman, Durham, chemist and druggist.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

A MIXTURE of three salts will again form the subject of the analytical exercise. The mixture is to be submitted to a thorough systematic examination; its constituents are to be detected, and all other substances proved absent.

Students' applications for portions of the mixture will be received up to Wednesday, August 24, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, September 3. Each report should contain a concise account of the work done, and should include a list of the constituents detected; in this list accidental impurities should be distinguished from the principal constituents of the mixture.

REPORTS.

The subject of the last exercise was a mixture consisting of 3 parts of potassium alum, 1 part of sodium sulphite, and part of calcium phosphate.

The calculated composition of such a mixture is:—

Al	3.48
Ca	7.74
K	4.93
Na	3.01
PO ₄	12.28
SO ₃	5.23
SO ₂	24.23
H ₂ O	39.07
	<hr/> 100.00 <hr/>

The only impurities of note were traces of iron and chlorine.

Sixty-five students received packets of the mixture, and forty-two reports were sent in. Only six students detected the constituents of the mixture correctly. The failures in the detection of the several constituents were:—Calcium, 11; potassium, 9; sodium, 8; aluminium, 3; sulphurous radicle, 32; phosphoric, 10. Nobody failed in the detection of the sulphate.

It is noteworthy that only one student out of every four succeeded in detecting the sulphurous radicle, of which the mixture contained nearly 5½ per cent. It is scarcely less remarkable that in several cases the sulphur dioxide which was evolved when the powder was treated with an acid was regarded as odourless, and accordingly it was assumed to be carbon dioxide. Air containing a large proportion of carbon dioxide may be taken into the lungs without any appreciable effect; but air containing a very small quantity of sulphur dioxide is so irritating that it is quite irrespirable. It is therefore difficult to understand how anybody with the most elementary knowledge of practical chemistry could confound the two gases; yet such is the fact. This can scarcely be attributed to a defect of the sense of smell analogous to colour-blindness, as there is a wide difference between the chemical effects of the two gases on the membrane of the organs of respiration. A more likely explanation is that many persons are very careless in the use of the sense of

smell, and take no trouble to cultivate it. We have repeatedly drawn attention to mistakes that are made about the smell of acetic acid; various irritating gases and vapours are constantly set down to this acid notwithstanding its very characteristic smell. Such mistakes cannot be avoided without some trouble; but surely it is worth while cultivating a sense so useful and important in a variety of ways as that of smell. We recommend our correspondents not to decide hastily that a certain smell is due to a certain substance without actual comparison with the known substance. For example, in the present case, when the gas evolved was supposed to be like carbon dioxide, it would have been more satisfactory if carbon dioxide had been prepared under similar conditions from a carbonate, and the smell and other properties of the two gases directly compared. In making such a comparison it is scarcely necessary to observe that all the conditions should be as nearly as possible the same; it would never do to compare a slight trace of an unknown gas or vapour with a large excess of a known one. It must be remembered, too, not to confound mineral gases or vapours with substances in the pure state. With a little practice it is wonderful what an amount of assistance may be derived from the sense of smell in chemical work.

PRIZES.

The first prize for the best analysis has been awarded to JAMES A. HARE, care of Messrs. Bell & Riddle, Hexham, Northumberland.

The second prize has been awarded to WALTON PORTER, 9 Edge Hill, Whitehaven.

Marks Awarded for Analyses:—

J. A. Hare (1st prize)	100	Aconitum	76
Walton Porter (2nd prize) ..	98	Atropine	75
W. Hood	96	H. F.	75
Belladonna	95	F. F. A. Tunbridge	75
Danwer	95	Elexine	74
Bee Gee	92	Salipyrin	73
Pepsine	90	Vigovina	73
Verax	90	Schizocarp	72
A. Lander	89	Ornum	71
John	88	J. Rose	70
P. Macrocephalus	87	T. O. B.	63
N. Howard	87	Sapientia	65
T. K. Dublin	86	Acidulous	65
Zirconium	85	Nena	63
H. McL. R.	85	Verdant Green	60
A. Bunsen	83	Tyro	58
Moyhitt	83	Seille	55
L. F. M.	82	Botanic	45
H. Bowden	80	Victory	45
Cogito	79	Potassium	40
KCy.	78	Bowser	35

HALF-YEARLY PRIZE.

This being the second month in the special prize competition, we give the names of the first twenty competitors in order of merit, viz.:—

J. A. Hare	199	John	182
Walton Porter	198	A. Bunsen	179
Belladonna	192	T. K. Dublin	178
Bee Gee	187	Cogito	177
A. Lander	186	Danwer	177
Pepsine	185	H. Bowden	176
Verax	185	Moyhitt	176
W. Hood	184	F. F. A. Tunbridge	173
A. Howard	183	Atropine	172
Zirconium	183	L. F. M.	172

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

DANWER.—Your results were correct, but your report was not as carefully prepared as that which received the full number of marks.

PEPSINE.—You obtained correct results more by accident than by design. Calcium phosphate was precipitated along with aluminium hydrate, and the detection of calcium under such conditions required a different method from that which you employed.

VERAX.—You obtained an indication of the sulphite in the preliminary examination, which you ought to have followed up.

JOHN.—Your report this time shows great improvement.

P. MACROCEPHALUS.—When the powder was tested with water and warmed, sulphurous anhydride was evolved, showing that the action of water alone was sufficient to effect a transposition of some of the constituents. Under such circumstances one would expect to find some of the calcium phosphate in the aqueous solution.

ZIRCONIUM.—The effervescence you observed was due to the escape of sulphurous anhydride, and you ought to have recognised it from its peculiar suffocating odour.

H. McL. R.—See remarks to "Zirconium." It was unfortunate that you overlooked the sulphite, as your report seems to have been drawn up with great care.

MOYHITT.—The discharge of colour which you observed on adding hydrochloric acid to the solution to which you had added ferric chloride was due to the reduction of the ferric salt by free sulphurous acid.

L. F. M.—You did not account for the "pungent smell" observed as a result of the action of sulphuric acid on the powder.

COGITO.—The precipitate with sulphuretted hydrogen was not of the brilliant lemon-yellow colour of arsenious sulphide; further examination would have shown it to be due to sulphur.

KCY.—Although the quantity of sodium was small, it gave a flame-coloration almost sufficient to obscure that of the potassium.

ACONTUM.—You omitted to describe the method followed for the examination of the precipitate produced by ammonium hydrate. A little of this precipitate heated in the Bunsen flame on a platinum wire would have shown that something more than alumina was present.

ATROFINE.—If you had employed a sufficiency of ammonium hydrate as a group-reagent, nothing could have been left in the solution which would have given a precipitate with sodium phosphate.

H. F.—See remarks to "Atropine."

ULEXINE.—The molybdic-acid test is by far the best for phosphates. With ordinary care a trace of phosphoric acid can scarcely escape detection.

SALPYRIN.—It was not likely that manganese would be found in a colourless powder. You can always make sure of the presence or absence of manganese by igniting the suspected precipitate with sodium carbonate and nitrate: a trace of manganese gives a green colour.

VIGOVINA.—The white precipitate which you obtained with calcium chloride was calcium sulphate. An oxalate would have revealed its presence by the production of a carbonate on the ignition of the powder.

J. ROSE.—The acidity to test-paper is accounted for by the presence of alum. In applying the molybdic-acid test for phosphoric acid, you must have the reagent in excess, as ammonium phospho-molybdate—the yellow crystalline precipitate which is formed—is slightly soluble in an excess of phosphate.

SAPIENTIA.—The metals sodium and potassium constituted nearly 8 per cent. of the mixture, and when the ammoniacal solution from which the other constituents had been separated was evaporated and ignited, a very noticeable residue was left. According to your report, this operation was not carried out.

ACIDULOUS.—See remarks to "Sapientia." You did nothing to detect the alkalis.

NENA.—The calcium was precipitated in the form of phosphate along with the aluminium hydrate, and you did not adopt the proper method for its detection. On this point you must consult your text-book. Your test with silver nitrate in the presence of free nitric acid did not prove the absence of phosphates.

VERDANT GREEN.—Effervescence may be due to many causes other than the evolution of carbon dioxide; you should have examined the gas evolved.

TYRO.—The method you employed was not adapted for the analysis of a mixture of salts containing a phosphate insoluble in water. Finding that ammonium hydrate as a group-reagent gave a precipitate, the first thing to be done with the precipitate was to see whether it contained a phosphate, oxalate, or other salt soluble only in acid solutions; the next point was to employ a method of separation adapted to the circumstances of the case. For information as to the method to be employed we must refer you to your text-book.

SCILLA.—The fact that you failed to obtain a precipitate on adding ammonium hydrate to the acid solution shows clearly that you did not use enough of the reagent; it was necessary to add it in decided excess.

VICTORY.—Your test for phosphoric acid must have been very carelessly applied; the quantity present was large. See remarks to "Scilla."

POTASSIUM.—You ought to test your power of distinguishing between acetic and sulphurous acids by smell. If you are not able to recognise each acid with certainty, both in traces and in quantity, you must be careful to avoid the errors that a defective sense of smell will lead to.

English News.

Lady-pharmacists.

Lincolnshire now boasts a lady-chemist (says the *Spalding Free Press*) in the person of Miss Tillson, daughter of Mr. Tillson, of Long Sutton. This young lady is said to be an earnest student, and the first in the county to achieve the distinction. Both Miss Tillson and the little town of Long Sutton are, therefore, to be heartily congratulated. But the "Lords of the Creation" may very well ask in what walk of life are they to be permitted to hold the field all to themselves?

Midland Counties Chemists' Association.

A meeting of the Council of the above Association was held at the Mason College on Friday, August 12, when the following officers were appointed:—President, Mr. C. Thompson (Birmingham); Vice-Presidents, Mr. W. Jones (Birmingham) and Mr. J. Hinds (Coventry); Hon. Treasurer, Mr. C. J. Arblaster (Birmingham); Hon. Librarian, Mr. G. E. Perry; Auditors, Messrs. T. W. Chapman and E. G. P. Ferriday; Hon. Sec., Mr. F. H. Alcock. Messrs. Hutton, W. Jones, and T. Barclay were appointed delegates to the B.P. Conference.

The Marbles Tempted Him.

A remarkable prosecution was instituted at Cardiff on Friday by the Bristol and District Bottle Exchange and Protection Association. It appears that the loss arising from broken and lost bottles in the mineral-water trade in Cardiff amounts annually to no less than 4,000*l.*, and as during a recent gala in the Sophia Gardens Field, a lad named Edward Tooze Hawkins, was caught in the act of wilfully breaking a number of bottles, it was determined to prosecute him. The bottles belonged to Messrs. Basker & Co., who, it was stated, had delivered, amongst other orders to caterers at the sports, 20 dozen ginger-beer bottles. These when empty were left on the ground to be collected on the following day, and it was proved that the boy Hawkins, in his anxiety to get possession of the glass marbles inside them, had wilfully destroyed the bottles, so that when the vanman of Messrs. Basker reached the ground, he found that out of 240 bottles delivered, only fourteen remained whole. The lad pleaded guilty, and was fined 1*s.*, and ordered to pay the damages, which amounted to 28*s.* The Stipendiary expressed the hope that the lad's father would administer a sound thrashing.

Half a Million a Year Profit.

The report of the directors of Brunner, Mond & Co. (Limited) for the half-year ended June 30 last shows a balance to credit of profit-and-loss account on the working for the half-year of 261,450*l.* 1*s.* 1*d.*, which, with 35,916*l.* 6*s.* 7*d.* brought forward from the previous half-year, makes a total of 297,374*l.* 7*s.* 8*d.* The directors propose to deal with the balance as follows:—Dividend on the Preference capital at 7 per cent. per annum, 15,356*l.* 5*s.*; on the Ordinary capital, at 50 per cent. per annum, 152,500*l.*; amount to be written off patents account, 2,500*l.*; amount to be placed to reserve fund, 50,000*l.*; balance to be carried forward, 77,018*l.* 2*s.* 8*d.*—total, 297,374*l.* 7*s.* 8*d.* For the previous half-year, ending on December 31 last, the dividends and amounts written off and placed to reserve fund were the same as for the six months just closed, the only difference in the two reports being that 77,018*l.* 2*s.* 8*d.* is carried forward this half as against 35,916*l.* 6*s.* 7*d.* for the half-year ending December 31 last.

Stealing a Chemist's Sovereign.

The Hanley magistrates have committed for trial a man named William Cotton on a charge of having stolen 1*l.*, the money of Mr. Fresson, chemist and druggist, of that town. The prisoner had been employed to help move some goods for the prosecutor. Mr. Fresson placed a packet containing 30*s.* in gold and 4½*d.* in coppers on a shelf in the shop, and the prisoner professed to have found half-a-sovereign and 4½*d.* Information was given to the police, and the prisoner was arrested. He admitted the theft, and said he was "hard up" at the time.

Unsatisfactory Drugs in Birmingham.

Dr. Alfred Hill, the Birmingham city analyst, has reported that of fifteen samples of sal volatile purchased six were not of the proper strength or composition, and not one of six seidlitz powders was of the Pharmacopœia standard.

Institute of Chemistry Reform Association.

This body, at the end of its contest, finds itself somewhat short of cash. There were 131 half-crowns subscribed (16l. 7s. 6d.), but the expenses of conducting the contest from January 12 to March 21 amounted to 58l. 11s. 9d., viz:—Printing and stationery, 29l. 10s.; postage-stamps, 13l. 11s. 1d.; telegrams, 16s. 7d.; railway fares, 8l. 0s. 10½d.; and sundries, 6l. 13s. 2½d. At the meeting at the Guildhall Tavern on July 20 it was resolved to ask those members of the Institute who are specially interested in the movement to subscribe to extinguish this debt, and form a fund to cover future expenses. As a result of this, 30l. 9s. has been subscribed so far, and the "hat" is going round now for the balance.

Government Chemistry.

There appears to be little improvement in the quality of the chemistry which students under the South Kensington scheme annually present to the examiners. The chemistry examiners of the Science and Art Department (Professors Thorpe and Tilden) report that the work done in advanced theoretical inorganic chemistry was the least satisfactory, and in this section the greatest number of failures occurred. It seems that few candidates possess any real knowledge of chemical principles or show accurate observation of facts, owing to students in this stage being left by the teachers very much to themselves and their text-books. A considerable reform is also needed in the teaching of practical chemistry in both the elementary and advanced stages. A large proportion of the candidates succeed in detecting the constituents of the salts given, but the work seems to be done mechanically without any proper understanding of the nature of the operations employed. The students carry the tables in their heads, and are more liberal in transferring them to the examination-paper than the nature of their specimens allows.

Is Diachylon an Abortifacient?

An inquest was held at Leicester last Friday regarding the death of Alice Wright, 22, the wife of a shoemaker, and herself a hosiery-hand. The evidence of her husband went to show that deceased had a miscarriage ten months ago, and a return of hemorrhage about eight weeks ago. Two or three days after that she was taken very ill at her work. Dr. Haydon was called in, and attended her up to August 2, when he ordered her removal to the Infirmary, where she died. Dr. Haydon was suspicious of an irritant poison having been taken for producing abortion, and this suspicion was supported by another witness (deceased's aunt), who stated that eight or nine weeks ago deceased pointed out a shop as that where she got "the stuff" she took. She mentioned the medicine she was taking, and witness said, "I thought that was poison," to which deceased replied, "Well, it doesn't poison me." She also gave witness to understand the object with which she took the drug. Witness remarked that she would ruin her constitution. She replied, "I can't help it if I do." A week or two afterwards deceased told her she had had a miscarriage. An assistant to Messrs. Butler & Son, chemists, 125 Church Gate, said that in the ordinary course of business they often sold diachylon in the lump. It was used for wounds, and also for making "drawing" plasters. He had never heard of it being used for the purpose of procuring abortion. Mr. Lewis Ough, F.C.S., analyst and laboratory manager for Messrs. J. Richardson & Son, gave evidence as to the contents of diachylon, and also its effect on the system. Dr. P. Paget, house physician at the Infirmary, detailed the result of a *post-mortem* examination, and said that he found plenty of evidence of lead-poisoning. The appearances were consistent with deceased having taken diachylon. The Coroner, in summing up, said that they had no direct evidence of the deceased having taken diachylon, but they had the very important statement made by deceased herself to her aunt that she was in the habit of taking it. The jury, acting upon the Coroner's advice, returned a verdict of *felo-de-se*.

The Drug-trade at Southampton.

Trade in Southampton is, says a correspondent there, in a poor way. About three months ago, Mr. James Douglas, of East Street, sold his stock and fixtures, and removed to London, and the shop is now a fish-shop, after being open as a chemist's for twenty years. Mr. John Bienvu's business in St. Mary's Street, another old-established concern (of between twenty-five and thirty years), is to be disposed of. These two were the nearest chemists to one another. They say that it is the "sixpenny doctors" who have spoiled them, of whom there are five. The "officers of health" have during the past month been busy, having bought samples of seidlitz powders, citric acid, and cream of tartar, but in all cases the drugs have been "A 1." Visitors from Somerset House have also been going about on the look-out for medicine-stamps omitted, &c.

Strychnine-poisoning.

A mysterious death from strychnine-poisoning took place at Gainsborough on Tuesday evening, when a man named Morley died in terrible agony. The deceased had gone into a public house with a fishmonger named Morgan and a woman named Booth. Morley ordered some ginger-beer, the woman left, and shortly afterwards Morley was taken suddenly ill with violent paroxysms, and accused Morgan of having given him a white powder. Drs. Marvin and Leader were quickly on the spot, and administered an antidote. Morley repeated his accusation against Morgan, and died within half an hour of the seizure. The corpse presented all the appearances of poisoning by strychnine, the muscles being rigid. A portion of white powder was picked up in a paper on the floor, and a whitish sediment in the bottom of a tumbler on the counter was taken possession of by the police. Morgan is under arrest.

Arsenic Instead of "Pop Powder."

On Tuesday last an inquest was held at Oldbury, touching the deaths of Hannah Debney, 3, and Walter Harold 6, who died last week from the effects of poisoning. On Friday of last week the children, with others, were playing in Debney's house. One of them obtained a quantity of white powder, which had been placed upon a shelf by Mrs. Debney. Under the impression that the powder was what is known in the district as "pop powder," the youngsters mixed it with water in a jug, and each child drank some. Immediately all became seriously ill. The parents of the children thought they were suffering from sunstroke, and medical assistance was not obtained until a few hours later, when three of them were unconscious, and all of them in a state of collapse. The powder was a mixture used in the manufacture of glass, and had been given to Mrs. Debney by a workman employed at a neighbouring glassworks, for the purpose of killing mice. Dr. Buttery, who made the *post-mortem* examination, said he found traces of arsenic in each child's stomach. Death was due to poisoning by arsenic. The jury returned a verdict of accidental poisoning, and they requested the Coroner to caution the mother to be more careful in dealing with poison in future.

Risks of the Chemical-trade.

An inquest was opened on August 12 touching the deaths of the two men, Henry Stone (42) and Dominick Kelly (33), who lost their lives on the previous day by the falling of a vitriol-chamber at Hutchinson's works of the United Alkali Company. Evidence of identification was given, and the inquest adjourned. We hear later that another death has occurred in connection with the accident, a man named Routledge having succumbed to his injuries.

Carbolic acid Poisonings.

On Saturday of last week a woman named Sarah Richards, aged 62, the wife of a market gardener, died from the effects of carbolic acid. Mrs. Richards had been ill and depressed. A verdict of suicide whilst in an unsound state of mind was returned.—On Tuesday of last week a young woman named Mary Ellen Taylor, of Ellison Street, Liverpool, was found in an unconscious condition in the road at Saughall Massie, near Birkenhead. She was at once conveyed to the hospital, where she died later in the day, the cause of death being carbolic acid poisoning. The deceased's mother at the

inquest said that her daughter had lately been keeping company with a young man who had been talking of enlisting in the army, but whether this had anything to do with her sad end did not transpire. A verdict of suicide by carbolic acid poisoning was returned.—On Saturday of last week a girl named Betsy Cottrill, 18, in domestic service at Liverpool, took carbolic acid and died notwithstanding medical assistance called in. No reason could be assigned for the rash act.

Irish News.

Pharmaceutical Society of Ireland.

Quarterly Registered Druggists' examinations will be held next month as follows:—At Dublin on the 1st, at Belfast on or about the 6th (if twelve apply). All applications should be lodged with the Registrar, 67 Lower Mount Street, Dublin, by Monday morning, August 22, at latest.

The New Examiner.

The Lord Lieutenant and Privy Council in Ireland have signified their approval of the appointment of Mr. Thomas William Robinson, M.P.S.I., to be an examiner to conduct examinations for the purposes of the Pharmacy Act (Ireland), 1875, in place of Mr. John Evans, M.P.S.I., whose term of office had expired.

Tartar Emetic for Tartaric Acid.

The Rev. Dr. Irwin, residing at the Manse, Castlerock, Coleraine, and his family had a narrow escape last week. The doctor sent to a shop in the neighbourhood for some tartaric acid to make a drink with. Tartar emetic was supplied in error. The beverage was made, and all the family took some, and all became very ill. Happily, no fatal results have ensued.

A Purchaser Found.

The business of Mr. Charles Johnston, chemist, Upper Sackville Street, Dublin, has been disposed of by the Court of Bankruptcy to Mr. Wm. H. Griffin, pharmaceutical chemist, of Britain Street, Dublin, for the sum of 1,000/. The rent of the premises, together with taxes, amounts to 140/. per annum, and the lease extends for a period of nine years. Mr. Griffin also possesses an establishment within a couple of hundred yards of the one he has now purchased.

A Draught of Liquor Fowleri.

An elderly lady named Woodhouse, of Cork, who had been in the habit of using arsenic medicinally, drank the contents of a phial of solution of arsenic a few days since, and died. At the inquest Mr. R. Sunner, chemist, Cork, said he had dispensed the arsenic on the prescription of Dr. Townsend. The bottle contained 1½ oz. of Fowler's solution. A verdict of arsenical poisoning while insane was returned.

Death of Mr. Doran, M.P.S.I.

We regret to record the death of Mr. Alex. E. Doran, M.P.S.I., of Bray, co. Wicklow, one of the oldest members of the Pharmaceutical Council. Mr. Doran had been in failing health for some time past and has been unable to attend the meetings of the Council, in which he always took a deep interest. Mr. Doran's establishment at Bray is one of the best and highest-class medical halls in that fashionable seaside resort.

"Apothecaries."

Sir Robt. Jackson, M.D., and Dr. Furlong, of Sundycove, co. Dublin, have been elected as members of the Board and Court of the Apothecaries' Hall of Ireland. The emoluments of the office amount to about 30% per annum to each member, in addition to the large percentage yielded by shares.

Scotch News

Aberdeen.

Messrs. Broomhead, Clark, J. Cruickshank, Johnston, J. Paterson, Ritchie, and Strachan, are to attend the approach-

ing Conference meetings as delegates from the Aberdeen and North of Scotland Society of Chemists and Druggists.

The Excise have again been making a raid on the trade here. On this occasion they have devoted their attention to the purchase of unstamped proprietaries. It is reported they have been successful in landing as many as eight, some on as many as four counts. A few have elected to pay a demand of 21s. rather than appear.

French Pharmaceutical News.

(From our Paris Correspondent.)

THE FLY PEST.—M. Carles, a Bordeaux pharmacist, recommends for the abatement of the fly nuisance a liquid composed of $\frac{1}{3}$ methylated alcohol and $\frac{2}{3}$ water, in which is dissolved 80 grammes of carbolic acid per litre. Sprinkle the places where the flies congregate with this mixture during several days. This will kill the majority of the insects and drive away the rest. Carefully remove any excretions, &c., that may serve to attract other flies.

A MIDNIGHT EXPLOSION of a carboy of sulphide of carbon occurred at the laboratory of M. Heimbach, pharmacist, 8 Rue Pierre Charron, last Friday, setting fire to a portion of the premises. Jules Mechaud, a young man of 20, in the pharmacist's employ, ran to extinguish the gas, which might help to spread the fire, but fell choked by the fumes. He was, however, rescued, and the fire was got under before any serious damage was done.

A VICTIM OF THE ATHLETIC CRAZE.—The recent Paris-Belfort walking-match organised by a leading French newspaper has created a craze for pedestrian efforts, which, however laudable in themselves, are unfitted for southern climes in the dog days. The sad death of a young pharmacien at one of these walking-matches is reported from Bayonne. He was 27 years of age, and did two or three miles at a sharp pace when he fell in a faint on the grass still wet with the morning dew. Not coming to himself, he lay so long on the wet grass that the cold struck him internally, and medical skill came too late to save him.

HONOURS FOR A VETERAN.—An interesting and somewhat uncommon event marked the recent final public examination of students at the Nancy Faculty of Medicine. The youngest primary student advanced with befitting gravity to present a magnificent beribboned bouquet to an elderly gentleman who had successfully "maintained his essay" and satisfied his examiners. This "senior student," as the inscription on the ribbon termed him, was M. Charles Vouillemin, pharmacist, of Bourmont, who is mayor of his native town and a member of the Hygienic Council of his department. His fifty-nine years' have not deterred him from adding a doctor's degree to his many other titles to the respect and esteem of his fellow citizens.

PHYLLOXERA IN THE CHAMPAGNE DISTRICT.—Although many exaggerated reports have been spread, it would seem unhappily beyond doubt that certain cases of phylloxera have broken out in Champagne. Government officials and chemists vie with each other in stamping out the scourge from the vineyards of Reims, Epernay, Ay, &c. Once the presence of the insect is proved, Dr. Baudin and his "Phylloxera Squad" are quickly on the alert. The plants are hacked away to the level of the ground and the roots are destroyed by sulphide of carbon. On Saturday the indefatigable doctor was at Hautvillers, and held out hopes for the success of his endeavours to the "Committee of Defence" of the Champagne district.

A DANGEROUS SPECIALITY FOR THE HAIR.—At the last meeting of the Council of Hygiene of the Seine Department, M. Bourgoin presented a report concerning the use and sale of a hair-restorer prepared by a Paris coiffeur. This speciality is sold in the form of a rose-coloured liquid, having a very strong odour of essence of bitter almonds. An analysis made by a chemist at the Municipal Laboratory showed that the preparation contained a proportion of 27 centigrammes of prussic acid per litre. The coiffeur recommended that the liquid should be rubbed in with

pumice-stone! After reviewing the facts of the case, the Council decided that the sale of the speciality should be prohibited as dangerous and likely to cause serious accidents.

SERIOUS CHEMICAL EXPLOSION.—On Tuesday morning last a serious explosion occurred on the premises occupied by A. Billault, chemical manufacturer, at the corner of the Place and Rue de la Sorbonne. The catastrophe was first announced by a laboratory assistant, Paul Delune, appearing at the top of the staircase which leads to the cellars, enveloped in flames. Another assistant, named Hedde, rushed to his aid, and tried to stifle in his arms the fire that was burning his colleague. Continued detonations were heard in the cellar, and an immense column of fire soon filled the interior courtyard of the house, and rose as high as the third storey. The explosion was caused by the bursting of a carboy of alcohol which Delune was manipulating, being lighted in his work by a small spirit-lamp. He now lies in a very precarious state at the Hôtel Dieu Hospital. Hedde has his right hand badly burned.

ANOTHER PASSIONATE CRIME, to use the accepted expression of French journalists, is reported from the sunny South, in which deadly drugs played a salient part. A young married lady of Sarascon, Mme. Veran, arrived at the Hôtel du Louvre, Avignon, at 8 A.M. last Wednesday morning, engaged a room, and sent an unsigned letter to Mme. Rey, her cousin, asking her to call. The latter fell into the trap. An unwitnessed scene took place, when cries drew the waiters to the apartment. Letters were found scattered on the floor. Mme. Rey was seen to be blinded with vitriol, and Mme. Veran was unconscious, with an empty bottle, which had contained some 10 grammes of laudanum, in her hand. M. Boyac, pharmacist, endeavoured, unsuccessfully, to administer an antidote, and the unhappy victim of her own fit of jealousy lies at the hospital in a precarious state. Her cousin's condition is also desperate. The affair is as yet enveloped in mystery, but official inquiries have been instituted.

Foreign and Colonial News.

A FILTER EXHIBITION is to be held at Avellino, in Italy, on September 25. The filters are to be confined to those adapted for the filtration of wines and musts.

SUGAR OF MILK IN GERMANY.—A large sugar-of-milk factory is being erected at Schwiebus, in Germany. Hitherto the Germans have bought the bulk of their requirements in Switzerland.

THE PROJECTED BERLIN EXHIBITION.—There is to be no International Exhibition in Berlin. The wholesale dealers and middlemen generally offered strong opposition. Most of the local Legislatures of the German States have pronounced against it, and now the Emperor has squelched the project by his veto.

WANT TO GO TO CHURCH.—American assistants at Richmond and Manchester, &c., are also moving in the matter of hours of labour. They held a meeting on July 18, and unanimously passed a resolution asking their masters to keep open only two hours on Sunday mornings and two in the evenings, so as to allow the opportunity to attend church. It is thought that the request will be granted.

CO-OPERATIVE PHARMACY IN SWITZERLAND.—According to the *Pharmaceutische Post* the Société des Pharmacies Co-operatives in Geneva has just published the results of its business transactions during the first eight months of its existence. The sales amounted to 13202^{fr.} (9347^{fr.} to the public and 3855^{fr.} to members), and the net profit to 94350^{fr.}, which are to be distributed among the thirty-eight sick-funds who form the Society.

DISCOVERY AND PHARMACY.—The quicquiescentenary of the discovery of America has yielded a bounteous crop of congress and conference papers at the meetings of various societies. Pharmacy is to have its share of these, Dr. Hartwich, of Brunswick, President of the German Pharmacopœia Commission, having announced his intention to read

a paper on "Pharmacognosy Notes from the Discovery of America," at the meeting of the German Apotheker-Verein.

AMERICAN HOP BITTERS COMPANY.—The Rochester *Post Express* reports on July 14 that an order was filed in the county clerk's office that day, dissolving the Hop Bitters Manufacturing Company. Asa T. Soule made his fortune out of the medicine, and last March some of his family applied for a voluntary dissolution of the corporation. The report of the referees showed that the receipts of the company have not, for the last five years, been more than from \$5,000 to \$7,000—not enough to pay the salaries at one time. Asa T. Soule, as president of the company, drew a salary of \$15,000 a year, and Wilson Soule a salary of \$5,000 as secretary. The assets now are not more than \$2,000, and the liabilities, about \$40,000, are entirely to the Soule family. The sales of hop bitters had fallen off so that it did not pay to run the concern. The manufacture of the bitters has been discontinued for some time.

A TEA-MUSEUM FOR RUSSIA.—St. Petersburg is to have a tea-museum, in which everything connected with the tea-industry, from young tea-shrubs to the various processes of packing tea for retail and the tea-preparing utensils in use among all nations, is to be shown. A large part of the requisites of the museum is already on the road from Kiachta, the Siberian frontier station of the principal overland route to China. In connection with this announcement it may be mentioned that Professor of Pharmacy Tichomiroff, of Moscow University, has recently returned from a semi-official mission to India and China, undertaken with the special object of gathering information concerning the tea-industry in those countries. The Professor, since his return, has been delivering a series of public lectures. These are now appearing in print in the *Pharmaceutische Zeitschrift für Russland*, and are chiefly remarkable for their violent Anglophobism.

INOCULATION AGAINST CHOLERA.—The *Deutsche Medicinische Wochenschrift* contains particulars of the result of a series of experiments in inoculation against cholera which have recently been made at the Berlin Institute for Infectious Diseases. They were initiated by Drs. Kitasato (a Japanese student of some repute), Brieger, and Wassermann. After Kitasato's return to Japan last year, his two colleagues continued the investigations with the assistance of Professor Koch. The experiments have been made exclusively upon guinea-pigs. The animals were inoculated with diluted cultures of *Cholera vibrios*, and it was proved that they were thereby rendered immune from disease upon subsequent introduction of the cholera-bacillus. The inoculated animals were able to stand without injury several times the quantity of cultivated bacilli to which uninoculated guinea-pigs succumbed. The inoculating substance was prepared by breeding the cholera-bacillus in an aqueous solution of cellular-tissue, especially thymus-glands.

UNITED STATES TRADE-MARKS.—Registered August 2 "Linonine," for a substitute for cod-liver oil, by Danbury Pharmacal Association; "Phosforine" on a label, for a remedy for general debility, &c., by Richard Hudnut, New York; "Wonder Oil" under figure of a dog, for a topical remedy, by Christian Hesse, Minorik, Ill.; figure of a balloon, for perfumery, by Bean & Vail Brothers, Philadelphia; "Almadino," for toilet preparations, by Joseph S. Lurie, Kansas City; "Tonkatalpa," for cleaning and disinfecting soap, by Henry C. Stewart, Cincinnati, Ohio; "Cinch," for gonorrhœa-remedy, by W. L. Cochran, Burlington, Iowa; "Tiko," for rheumatism-remedy, by Parinton Medicine Company, Detroit, Mich.; "Enterprise," for druggists', &c., hardware, by the Enterprise Manufacturing Company of Pennsylvania, Philadelphia; figure of a crowing rooster, for a liquid tonic, by M. J. Olsen, Des Moines, Iowa; Menth-Iod-Gold upon a square, for adhesive plasters, by Alva H. Keller, Sioux Falls, S.D.; "Nervo-Matte," for medicinal beverages, &c., by Fred H. Perkins, Shrewsbury, Mass.

"CHOLERA-CHESTS" AND CARBOLIC ACID IN RUSSIA.—The Russian provincial pharmacist has to pay 340rs. per pood for 50-per-cent. crude carbolic acid to his Moscow wholesale house. By the time his acid is ready for sale in his shop, however, it costs him 660rs. per pood. The Government compels him to sell this same acid at 384rs. per pood, and punishes him if he refuses to supply it

at that price. But if the pharmacist is a loser on carbolic transactions, he recoups himself to some extent by the sale of "anti-cholera medicine-chests," which he can hardly supply fast enough to satisfy the demand. These "chests" are all uniform and contain the following sixteen ingredients: peppermint-leaves, compound spirit of ether, essence of peppermint, tincture of nux vomica, simple tincture of opium, ethereal tincture of valerian, castor oil, spirit of camphor, powdered camphor and saccharin (in 8-grain doses), powdered calomel (in 15-grain doses), tannin (in 30-grain doses), subnitrate of bismuth in powder (in 30-grain doses), mustard-seeds, powdered ipecac., hydrochloric acid, and liquor ferri perchlor. fort.

THE WORD "VASELINE" IN GERMANY.—The claims of the Chesebrough Manufacturing Company with regard to the word "Vaseline" in this country are well known. In Germany it has been the habit for many years to manufacture and sell petroleum jellies of various degrees of excellence under the name of "Vaseline," and hitherto no proceedings appear to have been taken against the manufacturers or sellers of these products. Now, however, the Chesebrough Company, in their new German price-lists call particular attention to the fact that the word "Vaseline" is their property, and that infringements on their rights will be prosecuted under the German Trade-marks Act. The *Pharmaceutische Zeitung*, in reporting this fact, appears to question the company's right to the word, although it admits that the manufacturers of petroleum jellies are in the habit of using the word constantly. It suggests that the German product is at least as good as the Chesebrough vaseline, and it further points out that the German Pharmacopoeia as far back as 1882 gave the word vaseline as a synonym for unguentum paraffini. It further states that the German Trade-marks Law only protects marks and not words, and altogether indicates that the chances of the company establishing their rights in Germany are not very hopeful.

HOW PLATINUM IS MINED IN RUSSIA.—An American gentleman (who travelled, by-the-way, with a silk miniature Stars and Stripes in his pocket to be "hoisted" on July 4, wherever he might be) has just returned to his native State from the Urals, and furnishes a Boston paper with some particulars about the way platinum is obtained in Russia. He found that the stories about the scarcity of platinum circulated about two years ago were false, and that the increase in price was due to a combination between the English handlers of the ore and a broker in St. Petersburg, who, together, managed to control the production and get up a corner. The price went up to \$19 an ounce, but could not be maintained because a number of new mines were quickly opened, and the production was largely increased. There are now at least forty mines along the course of a river in the distance of fifty or sixty miles. The ore-grains are obtained from their native sand by crude washings in tubs, provided with dashers like butter-churners. It is primitive work at the best, although some of the mine-owners employ steam-power to agitate the dashers, and nothing but the extraordinary weight of the platinum prevents a serious loss in washing. After the grains are obtained they contain from 50 to 70 per cent. of pure aluminium, combined with iron, gold, osmium, iridium, and other metals of this group. The sand-ore undergoes seven operations before the platinum is technically pure. This purification, however, is not performed at the mines, but at a works in Germany, where the work is superintended by a trained chemist and assayer, who acts also as bookkeeper, and receives an equivalent of a guinea a week for his work.

RUSSIAN PHARMACISTS AND THE CHOLERA.—Apotheker Berthold Hermann, of Sarepta, in Russia, who has the misfortune to be located in the centre of the cholera district, relates in the *Russian Pharmaceutical Journal* particulars of the murder of his neighbour and colleague, C. F. Jansen, of Stréni Achubinskola, in the Government of Astrakhan. Jansen appears to have been a German by birth, and after completing his studies, settled as "rural apotheker" in the village where he has just been murdered, marrying a Russian girl, and embracing the Orthodox faith. When the cholera riots commenced, a band of some thirty ruffians broke into the shop of the unoffending pharmacist, whom, in the presence of his wife and child, they seized and tortured in the most abominable fashion. They tore out one of his

eyes and filled the cavity with carbolic acid, they partly flayed him alive, they broke all the bones in his body, sacked the shop, smashed everything not portable, and left the dying apotheker to breathe his last among the wreckage. Two local policemen, who endeavoured to stop the mob, were also murdered. In the town of Sarátov, a comparatively large place, one of the two pharmacies was sacked by the mob; the other was saved in the nick of time by a strong military force. The cause of the ill-feeling against pharmacists appears to be that the latter have been ordered by the Government to stock and supply certain disinfectants against the use of which there is a strong popular aversion. No wonder that Apotheker Hermann describes himself as feeling like a soldier upon duty at a "lost outpost." The demand for disinfectants is of no advantage to him and his colleagues, as the Governor has peremptorily commanded them to supply all such remedies at 25 per cent. below cost price.

MODERN PHARMACO-THERAPY.—The first instalment of what promises to be a very interesting series of articles on modern pharmaco-therapy appears in the last number of the *Pharmaceutische Zeitung*. It is based upon a paper read by Dr. Julius Weiss before the Vienna Medical Club. The author commences by pointing out that formerly pharmacists only were in the habit of noticing remedies and bringing them to the notice of the medical profession, and that the manufacture of chemical remedies on a large scale in factories, many of which have nothing whatever to do with pharmacy, is a development of modern times. The usual process, as followed now, is for the factory to send specimens of its new remedy to some medical authority or other, who tests it, and usually reports in enthusiastic terms upon its efficacy. Other medical men, anxious to be up to date, then commence to experiment with the drug, and the result is a long series of papers, all extolling the remedy. Gradually, however, another phase in the progress of the remedy is reached, and voices are heard which decry the value of the medicine, and point out that in several cases the excellent results first reported have not been observed, but that, on the contrary, the remedy has been proved to possess many undesirable qualities, and in the end the downfall of the preparation is almost as rapid as its rise. Such has been, taken on the whole, the history of recent medical antipyretics, all of which have now become among medical men objects of silent disdain. The last antipyretic given to the world is phenocoll. This drug was the result of efforts to obtain from acetanilide and phenacetin, which have the disadvantage of being very insoluble, a body which, without lessening anything in antipyretic value, would be easily soluble. It is only a short time ago since various authorities spoke in the very highest terms of phenocoll as an antifebrile, anti-rheumatic, and anti-neuralgic, but it now appears that the usual feeling of reversion has set in with the publication of an exceedingly unfavourable estimate of the remedy by Eichhorst, of Zurich, who states that given in the prescribed doses it does actually reduce the temperature, but that most of the patients afterwards perspire freely, and that some of them are seized with cold shivers, after which their temperature again rises. In the beginning of last year it appeared as if modern medicine were to find in extracts of bacteria the solution of all its difficulties, but already, after painful experience, this illusion has been shattered, and we are again thrown back upon the doctrine of internal medicinal antiseptics. But here, again, the efficacy of the most vaunted preparations is strongly denied by authorities equal in reputation with those who recommend them. The author of the article then passes on to review the separate history of a large number of modern remedies, and places upon record the principal advantages and disadvantages which they have been found to possess. His conclusion appears to be that most of these remedies have had their time, and that the reaction against their employment, which has lately gathered considerable strength, is destined to grow still further in future.

LINSEED OIL is not a bad thing therapeutically. It is as good as cod-liver oil for phthisis, says the *prescription*, and when properly emulsified and flavoured, it can be taken readily, and is assimilated quickly.

Trade Notes.

MR E. R. SMITH, chemist and druggist, of Eccleshall, has disposed of his business to Mr. F. W. Godman, who was for many years with Messrs. Corbyn & Co., of London.

MESSRS. LYNCH & CO. (LIMITED) ask us to state that the capital of the company into which they have converted their business has been all subscribed privately, and that no shares are offered to the public.

MR. THOMAS CHRISTY, of Lime Street, has just received from Paris samples of vanilla-pods, imported "from a place in the French colonies," in alcohol. He has shown us some of the beans, which are of fine appearance and good aroma. They are, of course, partly exhausted, and we suppose that it is the intention to sell them along with the spirit in which they have been sent over. It is claimed that by placing the pods in alcohol when freshly gathered a much more fragrant tincture is obtained than by exhausting the cured beans purchased in Europe.

THE LIQUOR CARNIS COMPANY (LIMITED), of 50 Holborn Viaduct, E.C., have sent us a copy of a very striking show-card which they are issuing. This shows in facsimile bottles of Caffyn's liquor carnis and malto-carnis, and between them the series of eight test-tubes which demonstrate the superior albuminoid value of the liquor. As a piece of lithography the card is excellent, and as the company's "first attempt" at advertising in this manner it deserves to bring in good returns. They tell us that if any subscribers of THE CHEMIST AND DRUGGIST wish one of the cards they have only to ask for it.

We have received a prospectus of a company styling itself Gordon, Murray & Co. (Limited). The capital of the company is named at 10,000*l*, and we and the rest of the public are invited to subscribe 4,500*l* of this. The "highly successful" business, shares in which are thus offered to us, appears to consist in a number of remedies comprised in and known as the "Birley Treatment," "together with the goodwill of the said business, the recipe, trade-marks, copyrights, plants, machinery, fixtures, fittings, and stock-in-trade thereof, and together also with the lease of the premises No. 10 Adam Street, Strand, aforesaid, which premises are admirably suited for the company's requirements and are held for an unexpired term of eighteen years on very advantageous terms." The gentleman who, according to the prospectus, has been "so long known in connection with the business as Mr. Edgar Birley," appears to be a Mr. E. J. Rowbotham. "The directors are glad to be able to state that that gentleman has consented to act as managing director for at least five years." There is a probability, it appears, of a profit of 26½ per cent. upon the whole nominal capital of the company. This calculation is based upon a report professedly signed by "R. H. Sloley & Co., chartered accountants 3 King Street, London, E.C." R. H. Sloley & Co. say that the accounts of the business for 1889, 1890, and 1891 have been laid before them, and "from these it appears that the net profits, after allowing for wear and tear of plant, depreciation of lease and expense of advertising, but not charging interest on capital, have been at the rate of 22½ per cent. per annum of the average gross business, and at the rate of 75 per cent. on the present working capital." Along with the prospectus we have a pamphlet describing the Birley treatment, and a form to fill up on which we may describe all the symptoms of our case, say how much and how often we take stimulants and smoke, give our present weight, and so on. We observe that "W. B. Mason, Esq., Lifton House, Leeds, managing director of Taylor's Drug Company (Limited), London, Leeds, Bradford, &c.," is the chairman of this company. We beg to inform Mr. Mason that we cannot judge of the value of the company from the prospectus which bears his name. Will he tell us what was the actual capital of the business on which 75 per cent. profit has been realised? We want to know that before we invest; and before we send in particulars of our diseases we should like to know who is the person who is going to advise us in respect thereto, and what are his qualifications.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

GREEN—AINSWORTH.—On August 10, at Homchurch, Essex, by the Rev. Robt. Johnson, Joseph H. B. Green, chemist and druggist, Wood Street, Swindon, to Lottie, second daughter of Henry Ainsworth.

HUTTON—JORDAN.—On August 10, at Lillington parish church, by the Rev. F. Conway, Harry Hutton, pharmaceutical chemist, Leamington, to Ellen, eldest daughter of Joseph Jordan, Blakedown, Leamington.

TURNER—RICHARDSON.—On August 17, at the Parish Church, Alford, by the Rev. C. S. Dawe, assisted by the Rev. W. Blin Stoye, Charles Turner, F.C.S., of Manchester, to Edith, youngest daughter of E. J. Richardson, veterinary surgeon, Alford.

DEATHS.

BELL.—On July 23, James Bell, chemist and druggist, Haltwhistle. Aged 52.

BURNABY.—On July 16, Francis Burnaby, pharmaceutical chemist, Manchester. Aged 53.

GEDDES.—At Seafield House, Bridge-of-Allan, on August 14 George, eldest son of the late George Geddes, chemist, Aberchirder. Aged 17½ years.

JAAP.—On August 15, suddenly, Mr. John Jaap, pharmaceutical chemist, Buchanan Street, Glasgow. The deceased gentleman was in the best of health until a few days before his death, when he caught a chill at a friend's funeral. On Saturday he was in the city at business, but was taken unwell in the shop, and had to be driven to his residence at 23 Oakfield Terrace, Hillhead. A complication of pleurisy and inflammation of the lungs supervened, which terminated fatally within forty-eight hours. Mr. Jaap was apprenticed in Edinburgh, and was for several years principal assistant to Mr. John Mackay in that city. Upwards of forty years ago he went from Edinburgh to Glasgow, and commenced business on his own account in the shop in Buchanan Street. There he had remained ever since, conducting a large retail business, and in recent years an extensive wholesale trade. Of a retiring and quiet disposition, Mr. Jaap had all along declined to take any part in public affairs. He was on more than one occasion offered nomination for the Council of the Pharmaceutical Society, but always refused. He was a staunch supporter of the Established Kirk of Scotland, and was a Conservative in politics. He was about 65 years of age, and leaves a widow, but no family.

MATTHEWS.—On July 23, Charles Matthews, chemist and druggist, Middlesborough. Aged 52.

PITTS.—On July 23, R. P. Pitts, chemist and druggist, Norwich.

REID.—At Cairnsmore House, Nottingham, on August 5, James Reid, L.R.C.P., L.R.C.S., chemist and druggist, late of Edinburgh and Aberdovey. The deceased, after passing the Minor examination in 1880, opened a pharmacy in St. Leonard Street, Edinburgh, and commenced medical studies at the University there, taking the double qualification in 1887. While at the University he took a prominent place in the prize-list, being medallist and prizeman in midwifery, chemistry, practical chemistry, and practical anatomy. After practising for a little in Edinburgh, he went to Aberdovey, and afterwards to Nottingham. For some time he was resident medical officer of the Montgomery Infirmary, and was also surgeon for Cwmebol Slate Quarry.

WILLIAMS.—On July 20, John Williams, chemist and druggist, Sheffield. Aged 56.

GUM ACACIA IN JAVA.—Dr. de Vrij, the Dutch pharmacist, calls attention to the fact that the *Acacia dealbata*, a native of Australia, from the stem of which exudes an excellently soluble gum, grows in profusion in the Java mountains, and states that some thirty-five years ago he was in the habit of using this gum regularly for pharmaceutical purposes. It might be worth while to collect and export it.

Personalities.

MR. J. CLOUGH, chemist, of Northwich, has been made a county magistrate for Cheshire.

MR. WILLIAM ARTHUR WILKINSON, son of Mr. Wm. Wilkinson, chemist, Colne, has taken the M.B. and Ch.B. degrees at Victoria University, Manchester. Dr. Wilkinson passed the Preliminary examination of the Pharmaceutical Society at the age of 13 years.

THE *Yarmouth Independent* of August 13 gives an interesting account of a cycling trip from Yarmouth to Paris and back, made by Mr. George Waller, son of a homœopathic chemist in that town. He started on July 18, and was back again on July 30. He computes that he covered 700 miles of road.

ON the occasion of Mr. Charles Turner's marriage, the students of the Manchester College of Pharmacy presented to him and Mrs. Turner a handsome case of table cutlery and silver, with an illuminated address, including, besides the names of the present students, ten pharmaceutical chemists and twenty-five chemists and druggists who joined with them in this testimony of esteem.

Legal Report.

ACTION BY THE APOTHECARIES' SOCIETY.—THE SOCIETY DEFEATED.

AT the Morpeth County Court last week, before his Honour Judge Digby Seymour, the Master, Wardens, and Society of Apothecaries sued J. Taylor Hancock, Amble, to recover the sum of 20*l.* for that before the commencement of this action—to wit, between February 4 and 19, 1892, inclusive—the defendant (he not being a duly qualified apothecary) did act and practise as an apothecary at Amble, attending and advising, and furnishing and supplying medicines to and for the use of one Hugh Armstrong.

Mr. Strachan appeared for the plaintiffs and Mr. Joel for the defendant.

Mr. Strachan, in opening the case, said the proof that he had a certificate lay upon the defendant.

The Judge : Is that so ?

Mr. Strachan : Yes ; it has been decided. In February of this year he attended the child for about a fortnight, prescribed medicines, and supplied medicines, which is an offence under the Apothecaries Act. And inasmuch as he is not a person authorised to do that sort of thing it is felt by the Company of Apothecaries that proceedings must be taken against unauthorised persons doing these things. Although they may be thoroughly qualified—that is not the question—if it were once allowed it opens the door to people who have no knowledge whatever doing this sort of thing. Therefore the Company of Apothecaries feel they are bound to take these proceedings. I will prove that he did attend and did furnish medicines for that child for a period of about a fortnight.

The Judge : That won't be enough.

Mr. Strachan : Surely, your Honour.

The Judge : Certainly not ; you might make me responsible for that. Did he receive any fee ?

Mr. Strachan : That is not necessary. It has been held over and over again that it is not necessary to show he has received a fee.

The Judge : I have dispensed.

Mr. Joel : So has my friend.

Mr. Strachan : I was fully qualified at the time. I was serving my apprenticeship.

Mr. Joel : So is my client.

The Judge : If you prove he dispensed in the sense contemplated by the Act—

Mr. Strachan : He having a surgery and dispensing it from that place.

Mrs. Hugh Armstrong, the mother of the child, then gave evidence. She said her child died on February 19 last, aged 2½ years. He had been ill for about a fortnight before.

Dr. Forrest attended him. She never saw him. She saw Mr. Hancock, but she was not well part of the time.

The Judge : Who is Dr. Forrest ?—He is our doctor.

The Judge : Did he attend the child ?—I did not see him, but I was not well part of the time of my child's illness, and he might have been there and me not see him. I was in bed upstairs.

It appeared from a lengthy examination and cross-examination of this witness that Mr. Hancock had attended the child as the assistant of Dr. Forrest, who was the club doctor. She had not paid anything to Mr. Hancock.

That, said Mr. Strachan, after this witness had given her evidence, is my case.

The Judge : What is it ?

Mr. Joel : I submit there is no case.

The Judge : The case now is that the witness, being a member of a sick-club, is attended by the doctors in succession, first Dr. Carrie and then Dr. Forrest. The defendant, Mr. Hancock, who she swears was reputed to be and regarded by her as assistant to the surgeon of the club, calls and asks questions as to the child's suffering, looks at it, which may have been very probably to report to his principal the condition of the child. You (Mr. Strachan) don't produce any of the bottles supplied, you don't produce the plate ; all I have is that he is the assistant of the regular surgeon—a fully qualified member of the Apothecaries' Hall—who calls on the patient of his principal to ascertain certain facts, presumably to report the condition of the patient to the doctor. He does no more. There is no proof that he prepared medicine or supplied it or sold medicine or mixed medicine or prescribed medicine. How is he acting as an apothecary ?

Mr. Strachan : Suppose there was no Dr. Forrest for a moment.

The Judge : I cannot suppose that. You had better treat the case as it is.

Mr. Strachan : If he was an assistant to an apothecary the penalty would only be 5*l.*, and I could only recover that instead of 20*l.* But I must argue it in that way, supposing there was no Dr. Forrest, and supposing he were there simply attending this patient and medicine is sent from that surgery—

The Judge : You must not snap a verdict or snap a penalty. You bring that woman, who evidently is in bad health, and cannot give much evidence. If the great institution, the Apothecaries' Hall, wish to put the law in force, let them do it in a dignified manner, and not try and snap a verdict. I have no evidence that he held himself out to prescribe medicines or acted or served as an apothecary. I have evidence that there is a presumption that the real person who supplied the medicine was the doctor of the club in which the witness was insured, and which was kept back from the Court.

Mr. Strachan (warmly) : I beg your pardon ; we kept nothing back.

The Judge : Not you. The company ought to have found out.

Mr. Strachan : I must protest against your saying that we kept anything back.

The Judge : If that is your case I see no case. I find for the defendant.

Costs were allowed on the higher scale, Mr. Strachan protesting.

BANKRUPTCY REPORT.

Re JOSHUA JAMES THOMAS, High Street, Rhymney, Chemist.

THIS bankrupt came up for his public examination at the Tredegar Bankruptcy Court on Friday of last week, before Mr. Registrar Sheppard. Mr. W. Beddoe, solicitor, Merthyr, appeared for the debtor. In reply to the Official Receiver (Mr. W. L. Daniel), debtor stated that in November, 1891, he borrowed from a certain company a Bristol a sum of 40*l.*, for which he was to pay interest at the rate of 20*l.* for twelve months. In February last he contracted a loan of 30*l.* with a money-lender at Cardiff. Of this sum, however, he only received 22*l.* or 23*l.* He undertook to pay the full amount, with 10*l.* interest, in monthly instalments of 5*l.*, making altogether 40*l.*, and he had already paid 15*l.*, leaving 25*l.* still due. The examination was declared closed.

PHOTOGRAPHIC NOTES.

AMIDOL AS A DEVELOPER.

IT was mentioned in these notes recently that under the name of amidol a new developer had been introduced, possessing the remarkable property of working independent of accelerators. Amidol is made by Mr. J. Hauff, of Feuerbach-Stuttgart, who has appointed Messrs. Fuerst Brothers, 17 Philpot Lane, E.C., his agents, and this circumstance has given us an opportunity of trying the developer. In our experiments we used Ilford plates of "ordinary" rapidity, which had been exposed under different conditions, and the developing-solution was made as follows:—

Amidol	20 grains
Crystallised sodium sulphite	200 "
Water	1,000 fl. grains

Dissolve.

One part of this solution is diluted with three parts of water before use. The first point to be noted is that development takes place with amazing rapidity—say, in as many seconds as it takes minutes with pyrogallol acid—so that if more than the high lights flash out when the negative is drenched with the developer, the addition of potassium bromide is necessary as a restrainer. But very little bromide is required—2 drops of a 1-in-10 solution in $\frac{1}{2}$ oz. of the developer sufficing to delay the process for many minutes. The second point which may be noted is the certainty of getting a good picture from a negative taken under bad conditions. For example, we had a few cathedral interiors; light the most dim religious possible. Pyrogallol and hydroquinone gave very poor pictures, only the best-lighted parts coming out at all well, but with amidol we obtained two excellent negatives in which the detail was brought out uniformly and clearly. Our results, altogether, are so good that we advise a fair trial of amidol. As a single-bottle developer it is obvious that it has great advantages. Note that neutral sodium sulphite should be used: the metaspulphite retards development unduly, and sufficient density is not obtainable with it.

STEREOSCOPIC PHOTOGRAPHY.

THERE is a growing interest being taken in this, the most beautiful section of photographic work. Nearly all the large firms making photographic apparatus are making a speciality of stereoscopic cameras. It is a very easy matter to convert an ordinary half-plate camera for stereoscopic work: the expense is chiefly in the lenses. It is, of course, imperative to have a pair of twin lenses: these may be purchased from 35s. upwards.

POPULARISING PHOTOGRAPHY LOCALLY.

LOCAL photographic competitions, prizes given for the best negatives taken with the "Clean Hands" developer, &c., will cost little, and not only popularise photography amongst a certain class, but bring business to the enterprising chemist.

DEVELOPERS.

MR. F. C. BEACH, of New York, has given much attention to the making-up of developers, and has just published the following formulæ:—

No. 1.

Pyrogallol (a commercial ounce)	437½ grs.
Sodium sulphite (crystals)	4 oz.
Warm distilled rain, or melted ice water .	5 "
Sulphurous acid (strong)	3½ "

Dissolve the sulphite in water; when cool add the sulphurous acid, and astly the pyrogallol; a solution is formed equivalent to 48 grs. of pyro. to the ounce, every 10 minims representing 1 gr.

No. 2.

Carbonate of potash	480 grs.
Water	3 oz.

Equivalent to 20 grs. to 1 dr. of solution.

In practice a good developer is made by adding to 2 oz. of water $\frac{1}{2}$ drachms of No. 1 and $\frac{1}{2}$ drachm of No. 2. More of No. 2 may be added for under-exposed plates.

PRINT-MOUNTING MACHINE.

MR. C. C. VEVERS, of 12 Market Street, Briggate, Leeds, has introduced a simple machine for mounting prints, which can be fastened to a table by means of clamps. The mountant is applied to the prints in the usual manner, a piece of blotting-paper is placed over the print, and it is then passed through the machine as in burnishing. The only precaution to be taken is to keep the rollers perfectly clean.

THE PHOTOGRAPHIC IMAGE UPON PORCELAIN.

THOSE who have time may, with comparatively small outlay, produce permanent photographs in enamel upon glass or porcelain by the process described by Dr. H. E. Gunther in *Photographic News*. To do this a transparency is at first made with high lights, showing plenty of detail combined with brilliancy. The solutions may, before being mixed, be kept in daylight, but when mixed it is necessary to keep them in a dark room. As a freshly-prepared mixture gives much better results than an old one, it is better to mix only sufficient for one or two days in summer, or eight days in winter. The solutions are as follows:—

No. 1.

Distilled water	35 fl. oz.
White sugar	5½ oz.
Gum arabic (powdered)	2 "

Shake well until all has been dissolved, and then add 500 grammes of saturated aqueous solution of borax.

No. 2.

Honey	1½ drachms
Saturated solution of borax	5½ fl. oz.

No. 3.

Ammonium bichromate	7½ drachms
Distilled water	8½ fl. oz.

To prepare the sensitive composition, mix No. 1, 2 parts; No. 2, 1 part No. 3, 3 parts.

In hot weather a little more of solution No. 2 should be added. A plate of glass is thoroughly cleaned, and then coated with the sensitive mixture after the manner of collodion, the surplus solution being allowed to run off into a filter. After draining, the plate is placed on a piece of sheet iron, mounted at an angle of about 15°, and kept warm by a spirit-lamp placed underneath, and the plate dried. As soon as the surface has become clear and hard, it is ready for exposure. Into the printing-frame is placed the transparency, film side up, and on it the prepared sensitive plate, film side down; then the frame is closed and exposed for about twenty or thirty seconds in summer sunshine, or for about twenty or thirty minutes in dull light. The development of the plate should be done in a warm room. The plate is held with the left hand, and some of the enamel colour is sprinkled on it with the right hand, and worked round and about with a long-haired camel-hair pencil. The plate is then placed aside for about five minutes, and the moisture of the air allowed to act upon the film during this period. The dusting-on of the enamel pigment is repeated four times in all, at intervals of about two or three minutes. When the development is finished, the image ought to appear as finely modelled as the transparency. All non-adherent powder is now removed from the plate by means of a clean brush, care being taken that none of the already fixed enamel colour is removed. The plate is next coated with a collodion containing $\frac{1}{2}$ oz. of pyroxilin to 34 fl. oz. of ether menstruum, to which about 25 drops of castor oil are added, and after the film has set, it is rubbed away from the edge of the plate so as to leave a clear border of about $\frac{1}{8}$ inch. The glass plate with the image is then placed in a dish containing a 2-per-cent. solution of caustic potash in water, and allowed to remain until the yellowish colour has entirely disappeared. The plate is then immersed in another dish containing clean water, and is after a few moments removed and placed upon blotting-paper. The water is then poured off and replaced by fresh. Placing the plate in this bath and gently manipulating the film with the fingers, it becomes quite easy to detach it. It is then caught, collodion side down, on the enamel tablet. The latter is laid on blotting-paper, picture side upwards, and allowed to dry. After being retouched, if necessary, the picture may be burnt-in in the usual manner in a muffle furnace.

PHARMACOPŒIAL TINCTURES.

By E. H. FARR and R. WRIGHT, Pharmaceutical Chemists.

IN the issue of THE CHEMIST AND DRUGGIST for July 28, 1888, a postcard competition was inaugurated, and prizes were offered for the best suggestions as to subjects suitable for discussion at meetings of the British Pharmaceutical Conference. Among the subjects suggested by various competitors were the following:—

"How may tinctures be made without waste?"

"Is there any difference between tinctures made with powdered and coarsely-cut drugs, and between tinctures made by maceration and macero-percolation?"

"Can a ready and accurate method be devised for the estimation of alkaloids in tinctures?"

"Could not many of the tinctures prepared with proof spirit be as efficiently prepared with a weaker spirit, and by a different process?"

Subjects like the above are of considerable pharmaceutical importance, and it is not to be wondered that during the past few years such questions as those of tincture menstrua, processes, and standards should have received more attention at the hands of practical pharmacists than formerly was the case.

In January, 1889, and subsequently, a very valuable series of articles on the B.P. tinctures was published by Mr. F. W. Fletcher, in THE CHEMIST AND DRUGGIST. The articles dealt specially with the subjects of the determination of specific gravity, alcoholic strength, percentage of extractive, and the estimation of alkaloids, and were accompanied by tables of results. Our work upon the subject of tinctures was commenced in the autumn of 1887, and has been continued, so far as time and opportunity have allowed, up to the present time. The investigation was at first conducted quite independently, and the first papers were read at the Conference meeting held at Leeds in 1890.

The results obtained were in many instances very closely accordant, but several discrepancies were pointed out in the discussion on the papers, and it was felt desirable to carry the investigation further, and also to undertake the work conjointly.

The objects aimed at have been as follows:—

1. To ascertain whether the alcoholic strength of the menstruum ordered in the B.P. for the preparation of tinctures was in all cases the most suitable.

2. To devise accurate and reliable methods for the estimation of the alkaloids in alkaloidal tinctures, and to find the average alkaloidal strength of such tinctures.

3. To test the comparative value of alternative processes for the preparation of the tinctures.

The first part of the work is now almost completed. Notes on the tinctures of conium, colchicum, aconite, jaborandi, henbane, belladonna, and stramonium have already been published, and the following is a summary of the principal results hitherto obtained:—

it has so far advanced that we are now able to present the results in regard to

TINCTURE OF GELSEMIUM-ROOT.

Gelsemium-root was first submitted to systematic examination by Kollock, in 1855, and was found to contain an alkaloid, gelsemine, a yellow colouring-matter, two resins, a fixed oil, a volatile oil, gum, starch, albumen, pectic matter, gallic acid, and from 3 to 4 per cent. of mineral salts.

It has since been investigated by Maisch, Eberle, Wormley, Robbins, Sonnenschein, Dragendorff, Schwartz, Gerrard, and Thompson.

The fluorescent principle, gelseminic acid, was first isolated by Wormley, in 1870, and has since been studied by Robbins, Schwartz, and Dragendorff, who have concluded that it is identical with *æsculin*, the glucoside of the horse-chestnut. This view has, however, been contested by Wormley.

The last-named investigator also obtained the alkaloid gelsemine, in a fairly pure condition, in the form of a very hard, brittle, transparent mass, yielding a powder almost or quite colourless.

In 1883 Gerrard succeeded in preparing a perfectly pure crystalline alkaloid, and also obtained several of its salts in a crystalline condition. The formula of the alkaloid is given as $C_{12}H_{11}NO_2$, and that of the hydrochlorate as $(C_{12}H_{11}NO_2)HCl$. In 1885 Thompson announced the discovery in gelsemium-root of a second alkaloid, which he named gelseminine. This was obtained from the mother-liquor from which the gelsemine had been removed, by crystallisation, in the form of the sparingly soluble hydrochlorate.

For the purpose of our work on the pharmacy of gelsemium-root, twelve samples of the drug were obtained from various sources, and after being reduced to No. 40 powder, a series of tinctures was made from each with menstrua of 80, 70, 60, 50, and 40 per cent. alcoholic strength. The process for the preparation of the tinctures was varied, six series being prepared strictly according to the B.P. process, and the remainder by that of continuous percolation.

In order to ascertain what process was best adapted for the estimation of the alkaloids, 300 c.c. of a standard tincture was prepared, and its estimation attempted by each of the following processes, the usual precautions being taken to prevent loss of alkaloid in washing with chloroform, &c.:—

Experiment I.—The tincture was evaporated until all spirit was driven off, the residual liquor allowed to cool, and acidified with dilute sulphuric acid. It was then filtered into a separating-funnel, and colouring-matter removed by means of chloroform. The solution was then rendered alkaline by the addition of ammonia in slight excess, and the alkaloids removed by agitation with three successive small portions of chloroform. The chloroformic solutions were mixed, the alkaloids recovered by shaking with successive small portions of acidulated water, the acid liquids mixed and made alkaline, the alkaloids again extracted by means of chloroform, the chloroformic solutions mixed and shaken with ammoniated water and, after separation, drawn off and

Tincture	Official Menstruum	Proposed Menstruum-Alcohol by Volume	Alkaloidal Content (Per Cent.)	Alkaloidal Standard Proposed (Per Cent.)	Process Recommended for Preparing the Tincture
Conium	Proof spirit=57 per cent. by volume ..	70 per cent.	·06 to ·16	·08	Continuous percolation
Colchicum	Proof spirit	50 per cent.	·064 to ·119	—	Continuous percolation
Aconite	Rectified spirit=90 per cent. by volume ..	70 per cent.	·045 to ·086	—	Continuous percolation
Jaborandi	Proof spirit	50 per cent.	·040 to ·152	·10	Continuous percolation
Hyoscyamus ..	Proof spirit	50 per cent.	·008 to ·015	·01	Macero-percolation or continuous percolation
Belladonna	Proof spirit	50 or 60 per cent.	·015 to ·045	·025	Macero-percolation or continuous percolation
Stramonium ..	Proof spirit	60 or 70 per cent.	·020 to ·034	·025	Macero-percolation or continuous percolation

The subject of standardisation will be dealt with subsequently; a standard has only been proposed in cases where the results obtained were thought sufficiently decisive to admit of this being done. The figures in the third column indicate the highest and lowest percentages of alkaloid obtained from the standard tinctures examined.

The work on the tinctures of gelsemium, green hellebore, cinchona, opium, and lobelia has yet to be published, and

evaporated over a water-bath, and the residue dried at 100° and weighed.

Experiment II.—The tincture was evaporated till free from spirit, the residual liquor acidified when cool, filtered into a separator, and colouring-matter removed by agitation, first with chloroform, and then with benzol. The solution was then rendered alkaline by the addition of a slight excess of ammonia, and shaken with three successive

15 c.c. benzol. From the mixed benzol solutions the alkaloids were extracted by agitation with acidulated water, the mixed acid solutions made alkaline, the alkaloids shaken out with three doses of chloroform, the chloroformic solutions mixed and shaken with ammoniated water and, after separation, drawn off and evaporated, and the residue dried at 100° till constant, and the weight taken.

Experiment III.—This was conducted exactly as Experiment II.—ether, s.g. 717, being substituted for benzol.

Experiment IV.—The tincture was evaporated, and the alkaloids removed from the residual extract by means of chloroform, as in Experiment I. The chloroformic alkaloidal solution was then shaken with successive small quantities of acidulated water until all alkaloid had been removed, the acid solutions mixed, and the alkaloids precipitated by a solution of iodine in potassium iodide. The alkaloidal periodides were collected on a filter, and, after washing with a little water, were treated with a solution of sodium hyposulphite. As this only dissolved a small portion of the precipitate, the remainder was dissolved in dilute sulphuric acid, and after mixing the solutions the alkaloids were recovered by means of chloroform from the solution previously made alkaline.

Experiment V.—The residual liquor obtained by evaporating the tincture was made alkaline with ammonia, and the alkaloids shaken out with three successive portions of chloroform. From the mixed chloroformic solutions they were extracted by agitation with acidulated water, the latter solution mixed, a slight excess of ammonia added, and the alkaloids again extracted by shaking repeatedly with small portions of ether, s.g. 717, until the latter came away colourless. The ethereal solutions were bulked, the alkaloids again extracted with acidulated water, and finally recovered with chloroform, the chloroformic solution being subsequently washed and evaporated, and the residue dried and weighed.

Experiment VI.—The tincture was evaporated until free from spirit, and the residual liquor made alkaline and shaken with three portions of chloroform. The mixed chloroformic solutions were washed twice with an equal volume of water, and the alkaloids shaken out with acidulated water. The acid solutions were mixed, a slight excess of ammonia added, the alkaloids extracted by agitation with chloroform, and the mixed chloroformic solutions, after being washed with ammoniated water, were evaporated, and the residue dried and weighed.

The results came out as follows:—

Experiment I.—100 c.c. tincture	=	·028	gramme	alkaloids
II.—100 "	"	=	·016	" "
III.—100 "	"	=	·024	" "
IV.—100 "	"	=	·024	" "
V.—100 "	"	=	·024	" "
VI.—100 "	"	=	·028	" "

The alkaloidal residues obtained in the above experiments had a yellowish-brown colour, and it was quite evident that although several of the processes might be capable of giving results sufficiently accurate to admit of their being utilised for the rough quantitative estimation of a sample of tincture of gelsemium, yet neither of them yielded the alkaloids in a sufficient state of purity to warrant its adoption for strictly comparative work.

The colouring-matter appeared to be of a resinous nature, and in subsequent experiments we found that it was present in greater amount in the more strongly alcoholic tinctures. The crude alkaloid from some of the 70 and 80 per cent. tinctures contained from 10 to 25 per cent. of this impurity, while, as a rule, the alkaloids extracted from a 40 per cent. tincture by means of ether or chloroform were practically uncoloured.

The colouring-body was closely adherent to the alkaloid, and was removable from its solution in chloroform or ether by means of acids, and also readily extracted from an alkaline solution along with the alkaloid.

The preliminary experiments were taken as having established the fact that the elimination of this foreign body by means of solvents was a practical impossibility, and two processes suggested themselves whereby it was hoped to free the alkaloid from its adherent impurity and obtain a pure product.

By the first it was sought to take advantage of the recorded fact that gelsemine, like strychnine, is capable of resisting the action of strong sulphuric acid.

The process was worked as follows:—

The chloroformic solution of the alkaloids, as obtained by Process 1, was shaken up with 5 c.c. sulphuric acid, s.g. 1.84, the containing vessel placed in water at 140° F., and allowed to remain in contact for half an hour. The alkaloidal solution was then diluted, a slight excess of ammonia added, the alkaloids shaken out with chloroform, the chloroformic solution shaken with ammoniated water and then drawn off and evaporated, and the residue dried and weighed.

By the second process, the alkaloids were precipitated from an acid solution as periodides, and the precipitate treated with 5-per-cent. sulphurous acid recently prepared. In this way it was found possible to get out all the alkaloids, and, on filtering, the impurity was left on the filter in the form of a chrome-yellow coloured powder. On rendering the alkaloidal solution alkaline, and shaking with chloroform, the alkaloids were obtained in a state of purity.

The two processes were tried, in comparison with that outlined under Experiment I., upon a complete series of tinctures, with the following results:—

ALKALOID IN GRAMMES FROM 100 C.C. TINCTURE.

Process	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
1. By Chloroform	·056	·052	·043	·044	·048
2. By Precipitation	·030	·034	·030	·028	·028
3. By H ₂ SO ₄ Conc.	·022	·022	·020	·022	·026

It was found, as the result of further experiment, that the method of estimation by precipitation gave exactly concordant results, but that the weight of alkaloid obtained by Process 3 varied considerably, according to the length of time during which the alkaloids were subjected to the action of the concentrated acid, and it was therefore decided to employ the former for the estimation of all the tinctures.

The exact details of the process are as follows:—

Fifty c.c. of the tincture is introduced into a porcelain dish and evaporated over a water-bath to low bulk, water being added, if necessary, until all spirit is removed. The residual liquor is allowed to cool, 1 c.c. semi-normal sulphuric acid added, and the liquor filtered through cotton-wool into a separator. The dish is rinsed, first with a little acidulated water, and then with 10 c.c. chloroform, and the whole transferred to the separator, and the mixture well shaken. After separation the chloroform is drawn off, and the process repeated with two successive 5 c.c. chloroform. The mixed chloroformic solutions are then shaken with two successive small quantities of acidulated water to remove mechanically-adherent alkaloid, and the acid washings added to the contents of the funnel. The latter solution is then rendered alkaline by the addition of ammonia in distinct excess, and the alkaloid extracted by shaking with two successive 15 c.c. and then with 10 c.c. chloroform. The chloroformic solutions are drawn off in turn and mixed, and the alkaloids taken out by agitation with four successive small quantities of acidulated water. (Twenty c.c. distilled water is acidified with 2 c.c. dilute sulphuric acid B.P., and the mixture employed in four portions.) The acid alkaloidal solutions are mixed; an excess of solution of iodine in potassium iodide added, and the mixture allowed to stand until the precipitate has subsided and the supernatant liquid has become clear. The fluid portion is then poured upon a filter, and when filtration is complete, the filter is washed with a little distilled water, and is then transferred to the bottle containing the alkaloidal precipitate, and 5 c.c. 5-per-cent. sulphurous acid poured over it and allowed to filter into the bottle. The latter is then allowed to stand, with occasional agitation, until the alkaloidal periodides have been completely decomposed—indicated by the absence of dark-coloured particles. The solution is then filtered from the lemon-coloured residue, the bottle and filter rinsed with 2 or 3 c.c. sulphurous acid, and washed with water until the washings cease to give an alkaloidal reaction. The filtrate is then treated with a slight excess of ammonia, the alkaloids shaken out with 10 c.c., and then two successive 5 c.c. chloroform, the chloroformic solutions mixed, washed with ammoniated water, and then drawn off into a platinum dish and evaporated over a water-bath,

and the residue dried at 100°. The dish is finally transferred to a desiccator and allowed to cool, and is then weighed.

The bulk of the estimations were made exactly according to the process above detailed, but we subsequently found that by a slight modification it was possible to shorten the process considerably without interfering with its reliability. By this modification the alkaloids are extracted from the alkaline residual liquor by means of chloroform, as above described, and then taken out by agitation with water acidulated with sulphurous acid. (Twenty c.c. distilled water is mixed with 5 c.c. 5-per-cent. sulphurous acid, and the solution employed in four successive portions). The acid alkaloidal solutions are mixed, and a few drops of 1-per-cent. iodine solution added, care being taken not to add the latter in quantity sufficient to precipitate any alkaloid. The liquid is then filtered, the precipitate washed with a little water, and the alkaloids recovered from the filtrate, previously made alkaline, by means of chloroform. The addition of iodine to the sulphurous-acid solution appears to break up the compound of alkaloid and colouring matter, the liquid becomes turbid, and the colouring-substance separates in the form of a pale

with solution of iodine in potassium iodide, and with Mayer's reagent a white curdy precipitate, which dissolves on heating, but is re-precipitated on cooling. It gives a white precipitate with mercuric chloride, and with tannic acid a white curdy precipitate, which is readily soluble in water, and is therefore not obtained in a dilute solution of the alkaloid.

Gold chloride, platinum chloride, and phospho molybdic acid each gives a lemon-yellow precipitate, the two former being soluble in hot water, and being re-precipitated in a crystalline form as the solution cools.

If ammonia or potash be added to an acid solution, a white precipitate is obtained, which dissolves in an excess of the reagent.

The results of the estimation of the tinctures are given in Table I.

The percentage yield of alkaloid by the tinctures prepared by continuous percolation was so greatly in excess of the amount given by those prepared by the B.P. process that it has been thought advisable to give the results in two divisions, and also to call special attention to the yield of

TABLE I.
Showing Quantitative Results of Estimation of Tinctures of Gelsemium.

A.—From Tinctures made by Macero-Percolation.

No.	Amount of Alkaloid in Grammes from 100 c.c. Tincture					Amount of Extractive in Grammes from 100 c.c. Tincture				
	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
1	·040	·042	·042	·038	·035	1·84	1·81	1·81	1·96	2·08
2	·030	·034	·030	·028	·028	1·50	1·54	1·54	1·55	1·68
3	·021	·020	·021	·020	·017	1·20	1·22	1·22	1·26	1·24
4	·018	·024	·024	·024	·024	1·64	1·68	1·64	1·68	1·78
5	·018	·018	·020	·020	·015	1·03	1·20	1·16	1·20	1·25
6	·039	·041	·043	·039	·037	1·79	1·82	1·83	1·86	1·92
Average	·028	·030	·030	·028	·026	1·51	1·54	1·53	1·60	1·66

B.—From Tinctures made by Continuous Percolation.

No.	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
7	·057	·072	·076	·066	·054	1·48	1·70	1·68	1·68	1·68
8	·043	·040	·048	·039	·032	1·72	1·74	1·82	1·78	1·74
9	·059	·060	·065	·063	·060	2·42	2·48	2·48	2·46	2·36
10	·055	·058	·063	·052	·052	2·56	2·38	2·50	2·50	2·36
11	·072	·072	·073	·058	·063	2·82	2·88	2·74	2·84	2·76
12	·025	·026	·023	·021	·022	1·16	1·16	1·18	1·22	1·18
Average	·052	·055	·058	·051	·048	2·03	2·09	2·07	2·08	2·01

yellow, flocculent precipitate. The alkaloid is retained in solution, the reducing action of the acid decomposing the brown alkaloidal precipitate as rapidly as it is produced. The results obtained are from 2 to 3 per cent. higher than by the original process, but the alkaloidal residue is slightly coloured, and is, presumably, not absolutely pure.

The colouring-substance left on the filter is soluble, though not very readily, in dilute sulphuric acid. We have not attempted to determine the nature of this compound, but find that its solution is not precipitated by alkaloidal reagents, and that even after prolonged boiling it does not reduce Fehling's solution.

As obtained by either of the above processes, the alkaloids are in the form of a colourless or slightly straw-coloured fused mass, having a vitreous appearance. When heated for some time at a temperature approaching the boiling-point of water, it darkens somewhat in colour. It is very sparingly soluble in cold water, more so in boiling water, the latter solution becoming turbid on cooling, owing to separation of alkaloid.

The alkaloidal residue is perfectly soluble in dilute acids. A solution in dilute sulphuric acid gives an orange precipitate with Thresh's reagent, a chocolate-brown precipitate

alkaloid and extractive by the tinctures prepared by the two processes.

A reference to the table will also show that the most perfect exhaustion of the drug may be effected by the employment of a 60 or 70 per cent. menstruum, the former giving slightly the better results.

The alkaloidal strength of the tinctures varies between the limits of ·020 and ·073 per cent., and it is evidently desirable that a fixed alkaloidal standard should be adopted for this tincture.

The percentage of extractive was ascertained by evaporating 10 c.c. of the tincture over a water-bath, drying the extract at 100° C., weighing, and multiplying the result by 10.

The effect produced on mixing the tinctures (1) with water and (2) with 90 per cent. alcohol was noted, and the results given in Table II. show the appearance presented immediately on admixture, and also after standing for twelve hours.

Having ascertained the most suitable menstruum, and also the average alkaloidal and extractive strength of the tinctures, it was thought expedient to test the comparative value of alternative processes for the exhaustion of gelsemium-root.

TABLE II.
Showing results obtained on mixing the samples of tincture (1) with 90 per cent. alcohol, and (2) with water.

No.	Result when 1 vol. of tincture is mixed with 3 vols. alcohol					Result when 1 vol. of tincture is mixed with 2 vols. water				
	80 per-cent. Tincture	70 per-cent. Tincture	60 per-cent. Tincture	50 per-cent. Tincture	40 per-cent. Tincture	80 per-cent. Tincture	70 per-cent. Tincture	60 per-cent. Tincture	50 per-cent. Tincture	40 per-cent. Tincture
1	Clear : then clear, with no deposit	Clear : then clear, with trace ppt.	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with slight ppt.	Cloudy opalescence : then clear, with slight ppt.	Turbid : then clear, with copious ppt.	Milky opalescence : then opalescent, with copious ppt.	Milky opalescent : then opalescent, with copious ppt.	Cloudy opalescent : then opalescent, with ppt.	Opalescent : then opalescent, with trace ppt.
2	Clear : then clear, with faint trace ppt.	Clear : then clear, with faint trace ppt.	Very faint opalescence : then clear, with trace ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky opalescent : then turbid, with ppt.	Milky opalescent : then turbid, with ppt.	Milky opalescent : then turbid, and ppt.	Cloudy opalescent : then milky opalescent, and slight ppt.	Opalescent : then cloudy opalescent, and trace ppt.
3	Clear : no deposit	Clear : then clear, with faint trace ppt.	Clear : then clear, with faint trace ppt.	Clear : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Milky opalescent : no change	Milky opalescent : no change	Cloudy opalescent : then milky opalescent ; no separation	Cloudy opalescent : no change	Opalescent : no change
4	Clear : then clear, with faint trace ppt.	Clear : then clear, with trace ppt.	Very faint opalescence : then clear, with trace ppt.	Opalescent : then clear, with trace ppt.	Cloudy opalescent : then clear, with slight ppt.	Milky opalescent : no change	Milky opalescent : no change	Cloudy opalescent : then milky opalescent	Opalescent : then cloudy opalescent ; no ppt.	Faint opalescent : then opalescent ; no ppt.
5	Clear : no deposit	Clear : then clear, with trace ppt.	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with slight ppt.	Cloudy opalescent : then clear, with slight ppt.	Cloudy opalescent : then milky opalescent ; no separation	Cloudy opalescent : then milky opalescent ; no separation	Cloudy opalescent : then milky opalescent ; no separation	Opalescent : then cloudy opalescent ; no ppt.	Faint opalescent : then opalescent ; no ppt.
6	Clear : no deposit	Clear : then clear, with faint trace ppt.	Clear : then clear, with trace ppt.	Opalescent : then clear, with slight ppt.	Cloudy opalescent : then clear, with slight ppt.	Turbid : then clear, with copious ppt.	Milky opalescent : then opalescent, with copious ppt.	Milky opalescent : then opalescent, with copious ppt.	Cloudy opalescent : then opalescent, with ppt.	Opalescent : then opalescent, with slight ppt.
7	Clear : then clear, with faint trace ppt.	Clear : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with much flocc. deposit	Opalescent : then clear, with much flocc. deposit	Turbid : then clear, with copious flocc. deposit	Turbid : then clear, with copious flocc. deposit	Cloudy : then clear, with copious flocc. deposit	Opalescent : then clear, with flocc. deposit	Slight opalescent : no change
8	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with grey deposit	Milky : then clear, with grey deposit	Cloudy : then clear, with slight deposit	Faint opalescent : then opalescent ; no ppt.	Faint opalescent : then opalescent ; no ppt.
9	Faint opalescence : then clear, with very slight flocc. ppt.	Opalescent : then clear, with slight flocc. ppt.	Opalescent : then clear, with slight flocc. ppt.	Opalescent : then clear, with slight flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Cloudy : then clear, with white ppt.	Cloudy : then clear, with white ppt.	Cloudy : then clear, with white ppt.	Cloudy opalescent : then opalescent, with slight deposit	Opalescent : no change
10	Clear : then clear, with faint trace ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with bulky sep. of resin	Milky : then clear, with copious deposit	Cloudy : then clear, with deposit	Opalescent : then cloudy ; no separation	Slight opalescent : then opalescent ; no ppt.
11	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with trace flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with bulky ppt.	Milky : then clear, with bulky ppt.	Turbid : then clear, with bulky ppt.	Cloudy : then clear, with bulky ppt.	Opalescent : then cloudy opalescent ; no ppt.
12	Clear : then clear, with trace flocc. ppt.	Clear : then clear, with trace flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then cloudy ; no separation	Opalescent : then cloudy ; no separation	Opalescent : then cloudy opalescent ; no separation	Faint opalescent : then opalescent ; no separation	Clear : then faint opalescent

For this purpose two good specimens of the drug were selected, and tinctures prepared from them with a 60-per-cent. menstruum, by each of the following processes:—

I. An ounce of the drug in No. 40 powder was macerated in 8 fluid ounces of menstruum for seven days, with occasional agitation. The fluid portion was then strained off, the marc expressed, the liquids mixed, and a sufficient quantity of menstruum added to make the volume of the tincture up to 8 fluid ounces, and the whole filtered.

II. An ounce of the drug in No. 40 powder was macerated in 4 fluid ounces of menstruum for forty-eight hours, with occasional agitation. It was then strained and the marc pressed, the pressings being added to the strained liquid. The marc was then macerated in the remainder of the menstruum for twenty-four hours, the tincture strained off, the marc again pressed, and the liquids mixed and made up to 8 fluid ounces, and the whole filtered.

III. The B. P. process—maceration and percolation—the last portion of the tincture being displaced.

IV. An ounce of the drug in No. 40 powder was moistened with $1\frac{1}{2}$ fluid drachm menstruum, and was then packed in a conical percolator; more menstruum was then added, and percolation allowed to proceed, slowly and continuously, until 8 fluid ounces of percolate had been collected.

TABLE III.

Showing Results of Experiments on Process for making Tincture.

No.	Alkaloid per cent.				Extractive per cent.			
	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation
1	·038	·044	·050	·071	1·78	1·90	2·04	2·16
2	·043	·047	·052	·062	2·02	2·30	2·44	2·56

The tinctures were estimated by the process already given, with the results indicated in Table III. From those results it is quite evident that perfect exhaustion of the drug can only be effected by the process of continuous percolation.

NEW COMPANIES.

MASON & Co. (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business of patent-medicine vendors and drug merchants, hitherto carried on by Mason & Co., at South Shields and Jarrow-on-Tyne, and to develop and extend the same. The first subscribers (who take one share each) are:—T. H. Mason, Westoe, South Shields, medicine vendor; J. C. Tosbach, 49 Ward Street, Sunderland, agent; A. Bainton, 16 Hillary Street, Leeds, chemist; W. Veitch, 45 Harold Street, Leeds; F. V. Butterfield, 14 Beulah Street, Harrogate, chemist; J. Dawson, 65 Warwick Road, Batley, chemist; and W. Firth, 24 Barclay Street, Sunderland, agent. The qualification of a director is 1,000*l.* Managing director, Thomas Henry Mason. Registered office, 80 King Street, South Shields.

KERNICK & SON (LIMITED).—Capital, 5,000*l.*, in 5*l.* shares. Objects: To acquire and carry on the business of wholesale and manufacturing chemist and grocers' sundryman now carried on by R. P. Kernick, at Cardiff, under the style of Kernick & Son. The first subscribers (who take one share each) are:—Louisa Kernick, 21 Glynrhondda Street, Cardiff, widow; Laura S. Prunier, 21 Glynrhondda Street; Edith Kernick, 21 Glynrhondda Street, spinster; D. Harries, 108 Queen Street, Cardiff, chemist and druggist; Charles Radcliffe, 13 Richmond Crescent, Cardiff, shipowner; R. P. Kernick, Cardiff, wholesale druggist; and G. Hopkins, The Hayes, Cardiff, merchant. There shall not be less than three nor more than five directors; and the first are: J. L. Trehanne (chairman), D. Harries, G. Hopkins, and R. P. Kernick. Qualification, 25*l.* Remuneration, 1*l.* 1*s.* for each board attendance. Registered office: 12 New Street, Cardiff.

JOHN THOMPSON (LIMITED).—Capital, 25,000*l.*, in 5*l.* shares. Objects: To acquire the business of wholesale druggist and chemist now carried on by John Thompson, at 58 Hanover Street, Liverpool, and to carry on business as chemists, druggists, drysalers, oil and colour men, &c. The first subscribers (who take one share each) are:—J. Thompson, Grassendale Park, Liverpool, wholesale druggist; C. Blood, Brows Lane, Formby, warehouseman; I. J. Nicholson, Tarbock Road, Huyton, cashier; W. P. Lake, 11 Olive Mount, Birkenhead, druggists' salesman; W. Wilson, 8 Broadbelt Street, Walton, Liverpool, salesman; Jas. Logan, 28 Underley Street, Liverpool, warehouseman; and G. H. Burroughs, 29 Christ Church Road, Birkenhead, chemist. The number of directors shall be determined by special resolution of the company; qualification, 500*l.* Managing director, John Thompson; qualification, 5,000*l.*

LONDON GUM COMPANY (LIMITED).—Capital, 20,000*l.*, in 1*l.* shares. Objects: To carry on the business of gum merchants and manufacturing chemists under certain patents. The first subscribers (who take one share each) are:—J. F. Drescher, 25 Camden Grove, Peckham, manufacturing chemist; R. Guy, 82 Bishopsgate Street, E.C.; George Graveley, Sydney Road, Enfield, ironfounder; W. Moses, 13 Rodney Terrace, Putney, retired captain; H. M. F. Drescher, 5 Pope's Road, Brixton, commercial traveller; C. H. Revill, 105 King's Road, Peckham, artist; and J. Filley, 9 Trafalgar Road, Dalston, housekeeper. The first directors shall be W. Moses, J. F. Drescher, and R. Guy, and two persons to be nominated from the shareholders in general meeting. Remuneration, 100*l.* per annum each, W. Moses and J. F. Drescher, as managing directors, receiving 600*l.* per annum each. Qualification for directors, 100*l.* Registered office: Mildmay Chambers, Union Court, Old Broad Street, E.C.

COCOA AND CHOCOLATE COMPANY (LIMITED).—Capital 50,000*l.*, in 1*l.* shares. Objects: To acquire the business of cocoa and chocolate manufacturers hitherto carried on by H. Schweitzer & Co. (Limited)—a company incorporated in 1888—and generally to carry on business as manufacturers of and dealers in cocoa in all its forms, manufactured or unmanufactured, including cocoatina, chocolate, cocoa-beans, and cocoa-butter. The first subscribers (who take ten shares each) are:—Major-Gen. F. E. Cox, 6 Pierrepont Road, Acton; Major-Gen. J. E. Symonds, 13 Clarendon Road, Jersey; Mrs. J. Symonds, 17 Gloucester Place, Hyde Park; J. A. Hallett, 7 St. Martin's Place, W.C.; F. Miller, Telegraph Street, E.C.; A. P. Seymour, Waterloo House, Weymouth; J. Symonds, Waterloo House, Weymouth; and W. H. Simpson, 6 Moorgate Street, E.C. There shall not be less than three nor more than five directors. The first are: Major-Gen. F. E. Cox, F. Miller, and J. A. Hallett. Remuneration, 200*l.* per annum, and a commission of 5 per cent. on the amount distributed as dividend.

FREDERICK N. TURNEY & Co. (LIMITED).—This company consists of not more than 100 members, each of whom, in the event of winding-up, is liable for 1*l.* Objects: To acquire, develop, and turn to account certain patents; to carry on the business of extracting grease from skins and hides of all kinds; to buy, sell, split, degrease, purify, tar, prepare for market, manufacture and deal in skins, hides, and skivers, and to carry on the business of chemists, druggists, bleachers, dyers, cleaners, mechanical engineers, metal-founders, millwrights, machinists, smiths, and manufacturers of machinery connected with the preparation of leather. The members are:—F. N. Turney, Sherwood Rise, Nottingham; T. Leman, St. Peter's Church Walk, Nottingham; R. Sande, 5 Baker Street, Nottingham; C. M. Leman, The Park, Nottingham; T. C. Leman, The Park, Nottingham; H. M. Leman, Magdalene Cottage, Cambridge; J. J. Taylor, 18 Cromwell Street, Nottingham. For the purpose of determining the proportions in which the members are interested in the company, members shall be deemed to be interested in the company in proportion to the number of holdings to which they are entitled, of which holdings there are 1,000. The number of directors is not to exceed six, the first being F. N. Turney and T. Leman. Remuneration to be fixed by the company in general meeting.

THE FLUORESCENCE OF QUININE is, according to Sestini and Campani, destroyed by phenacetin.

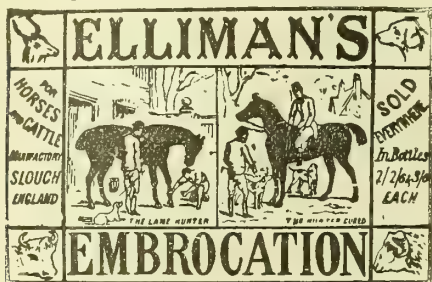
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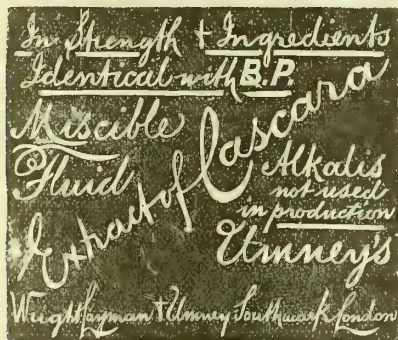


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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✕ CARRIAGE PAID ✕ To Railway Stations within the radius of 200 miles from London, and up to 2s. To Stations beyond, on 112 lbs. and upwards of above articles.			

Fletcher's Concentrated Liquors

TEN-GUINEA

Prize Competition.

See page 5, August 6th.

Editorial Comments.

THE PHARMACEUTICAL COUNCIL
AND POISONOUS PROPRIETARY
MEDICINES.

THE Pharmaceutical Council has issued its circular respecting
the sale of proprietary medicines containing poison to

all chemists on the British register within the past week. We cannot think that there are many of the 14,000 persons thus addressed to whom the information will come as news. There are chemists, we suppose—indeed, we have known such—who consider that, having served an apprenticeship to the business, and being themselves exceptionally gifted, they require no further information such as trade journals give during the rest of their lives. Such men do exist, and we hear of them occasionally when calamity, represented by the Board of Inland Revenue, the Apothecaries' Society, the Food and Drugs Inspector, or some other authorised prosecutor comes down upon them. Then there is indignation and execration. The trade journals are called upon then to witness to the monstrous injustice of the proceedings, and an associated protest or defence fund is urgently demanded. It is very good of the Pharmaceutical Council to show so much consideration to this class of persons—men who will not take the trouble to acquaint themselves through the ordinary channels with matters which so directly concern their business.

The circular states quite accurately that the effect of the magisterial decision on April 30 last in the chlorodyne case was "that proprietary preparations containing poisons within the meaning of the Pharmacy Act, 1858, although bearing a medicine-stamp are not exempt from the restrictions and conditions as to sale by retail imposed by the Act." The circular then proceeds to state that the Council, having instituted proceedings against several large shopkeepers not registered as chemists and druggists, for keeping open shop for the sale by retail of poisonous proprietary preparations, these persons have paid penalties and given undertakings to discontinue the practice.

So far as the shopkeepers referred to are concerned, the Council have followed up the Bow Street decision satisfactorily. They are not to be blamed because certain cocks will not fight. But their circular would have been infinitely more effective in deterring unregistered persons from selling medicines containing poison if they could have printed on it the report of a suit actually tried. This is a point which has to be fought through before it can be regarded as settled law. There surely cannot be any difficulty in discovering a defendant ready to figure behind the *versus* for the purpose of testing the opinion of a court. In our own columns the Association of Owners of Proprietary Medicines have declared their intention of defending any member who may be proceeded against under the Act, and to carry the matter to the High Court if the facts and evidence are such as to ensure an authoritative exposition of the Act. The grocers' Associations have made similar announcements, and we have before us a circular, issued by a Mr. Leggett, of "Leggett's Drug Stores, 95 Brunswick Road, Liverpool," giving the following names as those of persons who have subscribed towards a "Drug and Grocers' Store Patent-medicine Defence Association":—

Mr. W. B. Mason, 78 Albion Street, Leeds; Burgon & Co., merchants, Manchester; Seymour, Mead & Co., merchants, Manchester; Mr. Withnall, 73 Moss Lane, West Manchester; Mr. Owen Owen, London Road, Liverpool; Mr. Howard Burton, High Street, Gravesend; Mr. W. Green, Central Supply Stores, Bolton; Mr. J. Shaw, Newgate Street, Bishop Auckland; Mr. L. Burton, 23 Otley Road, Shipley; J. Airey & Son, grocers, Windermere; Mr. D. Melia, merchant, Manchester; Messrs. Bentham & Co., grocers, Farnworth; Mr. J. Carrie, grocer, Bolton; Mr. W. Holdew, grocer, Plumstead; Mr. J. P. Dedrick, Cash Stores, Maidstone; Messrs. Clarkson & Sons, Supply Stores, Hereford; Mr. Edward Hughes, Mid Kent Stores, Tunbridge Wells; Messrs. Harris & Hall, Stores, Chichester; Messrs. Stranaghan & Stephens, Stores, Cardiff; Mr. Geo. Wilson, 96 Bean Street, Hull; Messrs. Gregory, Love & Co., Reading.

Certainly very few of these are registered chemists and druggists, and, we suppose, many of them are ready to welcome a correspondence with Messrs. Flux & Co.

Besides their hint to unregistered persons, the Pharmaceutical Council offer a warning to chemists and druggists against selling proprietary medicines containing scheduled poisons without observing the statutory conditions in regard to labelling, &c. This caution seems to have alarmed some of our correspondents. We have been asked, from three different parts of the country, to say whether a quinine-and-iron tonic made up with chloroform-water is to be labelled "poison." We do not know whether the question is put as a *reductio ad absurdum* or seriously. Certainly, taken literally, the Council's circular would involve such labelling; but, as we have often pointed out, the Act does not authorise this construction, and no chemist need trouble himself about it. It would certainly not be prudent on the part of the Council to commit itself to a definite indication of how much poison a chemist may mix in his medicines without labelling them as such; but this consideration only raises the question of the expediency of issuing such a circular at all.

THE MEDICINE-STAMP DUTY.

MR. E. N. ALPE, of the Solicitor's Department, Somerset House, and of the Middle Temple, has just written for us some notes on subjects treated in his "Handy Book of Medicine-stamp Duty," and which will appear in subsequent issues of that work in the form of an appendix. The object of these notes is to give information concerning new forms of procedure and new methods in practice, so as to bring the work fully up to date with regard to the views of the Commissioners of Inland Revenue as far as the Medicine-stamp Acts are concerned. The following are a few of the notes which will be thus incorporated in the "Handy Book":—

BREAKING STAMPED PACKETS ("Handy Book," pp. 28, 29).

A duly stamped box or packet of powders may be broken and the contents retailed singly or otherwise by a person licensed to sell dutiable medicines, without payment of further duty, provided that the powder or powders when retailed are handed to the purchaser or merely wrapped in paper which is not made into a "packet" by being fastened with gum, wax, string, &c. In the same manner may be retailed pills, tabloids, lozenges, and any other medicines which are capable of being separately handled without payment of further duty. It must be carefully observed that this method of handling dutiable medicines, as well as that described on pp. 23 and 29, is only permissible to retailers who are licensed to sell medicines chargeable with stamp-duty.

MEDICATED HERBS ("Handy Book," pp. 54, 55).

The charge of duty applies to *medicated* herbs only. Packets containing herbs which have not been subjected to any process of medication are not chargeable with duty whether the herbs are of one kind or several, and, if of several kinds, whether mixed in known or unknown proportions; and they may be held out as proprietary and recommended without incurring liability. Directions for making a decoction from such herbs may also be given, but if the decoction itself be sold its liability to duty will be governed by the general rules (p. 63). "Medicated" in the Act is doubtless a mistake for "medicinal."

MEDICATED WINES ("Handy Book," pp. 58, 59).

Wine so medicated as not to be unfitted for use as a beverage is regarded as a beverage, and the vendor selling it must hold the proper Excise licence for the sale of wine. Such wine may be held out as a proprietary article and

recommended for the prevention, cure, and relief of ailments, &c., without becoming chargeable with medicine-stamp duty, and the vendor may sell it without a medicine-licence.

THE POSSESSIVE CASE ("Handy Book," p. 73).

The statement upon a label, &c., that the medicine which the label describes is prepared according to the British Pharmacopœia rebuts the presumption of proprietorship conveyed by the use of the possessive case and authorises the sale of the medicine unstamped as regards the claim of proprietorship. Thus a medicine labelled "Smith's compound tincture of benzoin, prepared according to the British Pharmacopœia," is not chargeable with duty as a proprietary medicine. This regulation has been extended to include other Pharmacopœia of recognised reputation and authority, such as the French Codex and Martindale's Pharmacopœia. When the formula of a medicine is adopted and published by a standard text-book (Stokes), it certainly ceases to be a "nostrum."

MEDICINAL DRUG VENDED ENTIRE—EXEMPTIONS ("Handy Book," pp. 104, 105).

Adulteration.—A vendor who desires to avail himself of the benefit of the second general exemption from stamp-duty in favour of "all medicinal drugs whatsoever which shall be uttered or vended entire without any mixture or composition with any other drug or ingredient whatsoever," &c., must take care that the drug is not *adulterated*. For example, it is or was a common practice to adulterate menthol with spermaceti and sell the compound as pure menthol. Pure—*i.e.*, unadulterated—menthol is not chargeable with duty; but the benefit of this exemption has been denied to the compound, which has been held to be liable.

TINCTURES (see also "Handy Book," p. 54).

Although tinctures are included in the classes of preparations which are chargeable with duty, it is permissible to add to an essence the quantity of spirit necessary to prevent decomposition without making it a "tincture," so as not to deprive the maker or vendor of the benefit of this exemption. The quantity of spirit necessary for this purpose is considerably less than that used in tinctures, so that there is no difficulty in distinguishing between such preparations. It should always be borne in mind that any potable medicinal preparation containing alcoholic spirit in a considerable quantity must be so flavoured as to be rendered unfit for use as a beverage.

PERMITTED AILMENTS ("Handy Book," pp. 101, 102).

To the list of ailments, on pp. 101, 102, which are not considered to attract a charge of duty should be added "tender feet."

APPROPRIATED STAMPS ("Handy Book," p. 222).

The annual charge for printing appropriated stamps is now at a uniform rate of 8*l.* 8*s.*, whether the stamps required are at one rate of duty or more. Not less than 10*l.* worth of appropriated stamps are supplied at one time.

DISCOUNT ("Handy Book," p. 23).

No discount is now allowed upon the purchase of medicine-stamps.

THE GROWTH OF THE REVENUE.

The amount realised by the medicine-stamp duty during the last four years has been:—Year ending March 31, 1889, 202,375*l.*; 1890, 217,264*l.*; 1891, 225,701*l.*; 1892, 240,062*l.*

INDIAN OPIUM.

THE letters which appear in our Correspondence section regarding the use of opium for medicinal purposes in India raise two questions of much importance to the drug-trade of our great dependency. The point noted by our Rangoon correspondents may first be commented upon. The Financial Commissioner of Burma has lately promulgated an order under which any person "following the profession of chemist in the district of Rangoon Town" who wishes it must take out a licence "for the retail of opium, pure or mixed," which licence is granted "on the condition that such opium shall be procured from the Government Treasury and shall be used *bonâ fide* as medicine or in medical preparations and prescriptions." The fee payable for this licence is 25*r.* Under the Opium Act of 1878 the Administration of Burma, in common with the Government of Bengal and the North-West Provinces, and the Administrations of Assam and the Central Provinces, have the power to permit the sale of *Abkari*, or Excise opium, in districts within their jurisdiction according to the rules framed under the Act. *Abkari* is an opium specially prepared at Patna and Benares, and it is the quality most used in India, being issued to the various district authorities at cost price, and they in turn issue it to licensed dealers on payment of the Excise duties. The annual consumption of this class of opium in India is over 1½ million pounds, and it has been noticed of recent years that the consumption in Burma has very largely increased, so that now the quantity used there amounts to nearly a fourth of the whole of the opium ranked for home consumption. So much of the Indian revenue depends upon the sale of opium, that it is not unreasonable that the different Administrations should look very closely after the sale of the drug, the bulk of it being used for other than medicinal purposes. Moreover, the recent agitation in England regarding the opium-traffic has, to some extent, influenced those in authority, and the consequence is that close attention is being paid to the conditions of sale. This applies to Burma especially, with the result complained of by our Rangoon correspondents. Against the restriction of the sale of opium *per se* by imposing upon all retailers, whether chemists or not, the necessity of taking out a licence, there can be no valid objection while the conditions of the opium-traffic in India remain as they are. But the terms of the Burma licence are highly objectionable to chemists, since they imply that the vending of pharmacopœial preparations of opium is the same as the sale of the drug to opium-eaters, and they further exclude the use of any but Excise opium for medicinal purposes. To chemists who take some pride in their work, and who follow the precepts of the British Pharmacopœia, the latter restriction must be very irksome; for, as we had occasion to show in our issue of October 24, 1891, Indian opium is peculiar in that it contains just about 4 per cent. of morphine, and almost 6 per cent. of narcotine. The latest analysis that we can find of Benares opium (which may be taken to represent *Abkari*) is quoted by the authors of *Pharmacographia Indica*, and shows on the dried article 3.86 per cent. of morphine and 5.91 per cent. of narcotine, which figures practically agree with Scott's results of thirty years before, and Flückiger's of 1878. In spite of "Anglo-Indian's" protestations that Excise opium is extensively used for medicinal purposes in Bombay, there is no question that the opium would in this country be condemned as unfit for use in the preparation of British Pharmacopœia galenicals, such as laudanum. It may give a fine-looking tincture, since the opium is rich in extractive matter, but by no process of reasoning can we make a 4-per-cent. opium equal the 10-pe.-

cent. official article; and, as we have previously pointed out, the large percentage of narcotine in Indian opium is pernicious. For these reasons it is to be hoped that the Administration of Burma will withdraw the restrictive conditions which accompany the opium-licence. The occasion is also a good one for an inquiry into the morphine value of Excise opium by a competent pharmaceutical chemist resident in India. Literature is woefully deficient in exact information derived from modern methods of assay. The inquiry should include trial of the opium in the preparation of pharmacopœial galenicals and comparison with B.P. opium used in the same way. The results from such an investigation could not fail to be of much interest to all pharmacists, and they would be the first practical step towards placing the medicinal use of Indian opium on a proper footing, while they might lead to experiments in opium-production with the view to determining if its morphia value can be increased on Indian soil.

COMMENTARY.

A NEW ANÆSTHETIC.—A leading German firm of chemical-manufacturers have patented a process for the production of a new anæsthetic, amido-eugenol acetate, prepared by the action of alcoholic ammonia upon eugenol-aceto-ethyl ether. It is obtained as a fine powder, which has the peculiarity of producing local anæsthesia when placed upon the mucous membrane.

SOZAL is described by Dr. Schaerges, of Berne, in the *Pharmaceutische Zeitung* as aluminium paraphenol sulphonate $(C_6H_4.OH.SO_3Al)_2$. It is a bactericide having the advantages in surgery that corrosive sublimate possesses, without its toxicity. It occurs in small crystals, which have a strong astringent taste and only a slight odour of phenol. The salt is readily soluble in water and glycerine, and also in spirit. Clinical experiments with it are being made.

THE INTERNATIONAL PHARMACOPŒIA.—We are sorry for the Americans. They have got hold of the International Pharmacopœia idea. At a recent meeting of the *Materia Medica and Pharmaceutical Section* of the American Medical Association it was suggested that one of the objects of the Association should be the promotion of an International Pharmacopœia. The idea is only in embryo yet, but meanwhile Professor Remington is advocating a Pan-American Pharmacopœia—i.e., one which will be used over the whole of South and North America.

PRIORITY.—The French are indeed an amusing people. At the last meeting of the Paris Society of Pharmacy there was a solemn discussion as to whether M. Dumontier or M. Boulé deserves the credit of having given to the world first, in 1889, the brilliant idea of preserving chloroform in hermetically-sealed flasks. To satisfy them a reference might have been made to *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1888, page 195, where an advertisement states that chloroform "for export is supplied in hermetically-sealed flasks when required." And that had been going on for years before.

F.C.S. AND F.I.C.—In the prospectus for the School of Pharmacy which has just been issued it is noteworthy that the title F.C.S. is rigidly excluded from the names of those who have it, but whenever it can be done F.I.C. is given. The distinguished men who constitute the officers and committee of the Chemical Section of the British Association appear to adopt an opposite course, for in the whole list as published in the *Chemical News* there is only one gentleman

who carries the Institute title, although most of them have it, and nearly all sport the F.C.S. It would appear that the latter title is at a discount in Bloomsbury Square, and the guinea one the favourite.

METHYLATED IODINE LINIMENT.—Referring to last week's Inland Revenue prosecutions, the *Medical Press* says that "the use of methylated spirit in solutions of iodine ought to be rigorously punished, for the combination has most markedly irritating properties on the conjunctivæ when applied to the chest." That is true. We have referred on several occasions to the objectionable character of methylated iodine preparations. With the allyl alcohol, acetone, and similar bodies in the crude vegetable naphtha used for methylating, iodine compounds are formed which have a most pernicious influence upon the mucous membrane.

FATAL RESEARCH.—Dr. Henry J. Tylden, a young Oxford medical graduate, who was working on a typhoid-fever research at the Research Laboratories of the Royal Colleges, on Victoria Embankment, has died of the fever. The *Lancet* says there is "hardly room for doubt that he contracted it directly from the bacillary cultures which he was studying." Two other inmates of the building were also attacked, and one of these cases proved fatal at an early stage of the disease. Obermeier, the discoverer of the spirillum of relapsing fever, fell a victim to the disease contracted in his investigations, and Dr. Tylden's is the first case recorded where typhoid fever has been contracted from cultures of the bacillus.

A WARNING.—The *Newcastle Chronicle* has a peculiar habit of posing as an authority in scientific matters; why, it is difficult to tell. We cut the following paragraph from a recent issue:—

Yesterday, in reference to the sad case of accidental poisoning by carbolic acid at Consett, we spoke of the danger attending the use of this antiseptic, and of sodium fluosilicate as a safe and efficient substitute for it. To-day we read of a new antiseptic, the invention of a French chemist, M. de Christmas, who claims for it the properties of the best disinfectants. It is so slightly poisonous as to be without danger. It is a compound consisting of—

Carbolic acid	8 parts
Salicylic "	1 "
Lactic "	2 "
Menthol "	0.10 "

Menthol is peppermint camphor—the camphor extracted from oil of peppermint.

It is, of course, absurd to say that this composition is "so slightly poisonous as to be without danger," and we reproduce the paragraph so that chemists may be able to give applicants for the disinfectant a warning as to its corrosive and poisonous nature.

HOW TO PROFIT BY "SCIENTIFIC MYSTERIES."—A correspondent of *The Chemist and Druggist* of Australasia writes as follows to the editor of that journal:—"A customer came into the shop a few weeks ago and asked for some liquid ammonia and sulphuric acid. On hearing he was giving a children's party at his house that evening, and wanted the articles to produce the 'penetrating smoke' experiment, I could see he had made a mistake, and showed him that hydrochloric acid was the right thing. I then showed him some other simple experiments which would amuse the children, such as nitric acid and iron filings; the result when a mixture of chlorate of potash and sugar is touched with a glass rod wetted with sulphuric acid; showed him how to turn sugar into carbon; placed a chlorate-of-potash lorange on end and ignited it; introduced a 'Scientific Mystery' book, and netted about 4s. or 5s. for the ten minutes' conversation, besides the sale of one of the above books. He has been a frequent customer for other chemicals

since then. It is not often that a customer comes into the shop for such materials, but it takes little ingenuity to introduce the subject, and the effect generally will be good."

This note shows how useful the little book "Scientific Mysteries" can be in promoting the chemical business. We supply it at 8s. 6d. per dozen, delivered free in the City only.

PHYSIOLOGICAL ACTION OF NITRITES.—Professors Cash and Dunstan have recently communicated to the Royal Society a second part of their physiological research on the action of the paraffin nitrites in connection with their chemical constitution. In this instance the vapour of the nitrites was brought into contact with muscle and the effects were noted. The nitrites employed were iso-butyl, tertiary amyl, secondary butyl, secondary propyl, propyl, tertiary butyl, butyl, alpha-amyl, beta-amyl, ethyl, and methyl, and so far as the connection between physiological action and chemical constitution is concerned it was observed that the action is not solely, and in some cases not even mainly, dependent on the amount of nitroxyl (NO_2) represented by the different nitrites. The secondary and tertiary nitrites are more powerful than the corresponding primary compounds. This is chiefly attributed to the great facility with which these compounds suffer decomposition mainly into the alcohol and nitrous acid. In respect of the acceleration of the pulse, the power of the nitrites is directly as their molecular weight, and inversely as the quantity of nitroxyl they contain. They, therefore, fall into an order of physiological activity which is identical with that in which they stand in the homologous series. This same relationship holds, though less uniformly, in their power of reducing blood-pressure, and of inducing muscular contraction. This order appears to be the result not so much of the direct physiological influence of the substituted methyl groups as of the increased chemical instability which their presence confers on the higher members of the series. But in duration of subnormal pressure and rapidity of muscular contraction, the activity of the nitrites is the reverse of the foregoing. In these respects the more volatile nitrites of low molecular weight, which contain relatively more nitroxyl, are the more active. A large proportion of an organic nitrite is changed into nitrate in its passage through the organism, and is excreted as an alkali nitrate in the urine. The authors consider that their results have an important bearing on the therapeutic employment of the nitrites, and they will lay their views upon this part of the subject before some other body."

NEWSPAPER SCRIBES ON THE COUNCIL'S CIRCULAR.—It is rather amusing to read the comments of the sub-editors on the circular which the Pharmaceutical Council has lately issued on the subject of the sale of poisonous proprietary medicines. We have noted a few of these. We find identical notes in the *Pall Mall Gazette* and the *Manchester Guardian*, and one slightly abbreviated in the *Western Daily Mercury*. All these authorities agree in declaring that "the enforcement of the conditions of this useful Act, together with the systematic employment of the safeguards it provides, cannot fail to contribute in a marked degree to the protection of the public against accidental poisoning." The *Sussex Daily News* and the *Eastern Evening News* also express themselves in identical terms, but their paragraph is a variation from that which appeared in the organs already named. It is herein stated that "these safeguards are evidently of great advantage to purchasers, and the authorities have shown commendable activity in dealing with what at one time gave promise of becoming a serious public danger." The curious unanimity of sentiment thus displayed suggests the suspicion that the pars. might have been concocted along with the circular. There was one journalist,

however, who was not to be got at. He is on the *Evening Standard*, and evidently thinks for himself. His readers must find it a tough business to ascertain exactly what he thinks, but it is clear that he looks down on everybody with lofty disdain. After narrating briefly the Bow Street case, he says:—

Forthwith the Pharmaceutical Society swooped down and "promptly instituted proceedings against shopkeepers who were infringing the provisions of the Act." Reasoning persons in general can behold such activity with undisturbed composure, so long as Holloway's ointment and the like are assailed; but the dead-set against chlorodyne, one of the most blessed discoveries of the age, is an abuse which the uncharitable interpret, after their fashion, as trade jealousy. Anyhow, it is monstrous that a pedantic stretch of law should forbid the instant application of a remedy which the British Government has pronounced invaluable. But there are plenty of other cases as gross. Such a panic has been spread by these later proceedings of the Society that dealers in gardening appliances actually decline to sell weed-killers and insecticides. One contains acids, evidently; another is suspected of something awful; a third has been attacked and condemned, they say. The weeds on your lawn and the thrips in your houses have a glorious time under this grandmotherly administration of the law.

REVIEWS

AND

LITERARY NOTES.

Handwörterbuch der Pharmacie. Edited by A. Brestowski. Vienna and Leipsig: W. Braumüller. 2m. 40pf. each part.

SINCE our preliminary notice of this dictionary (vol. xl. 404) we have received three additional parts of it, which bring the work as far as *Burtonisiren*. Considering that the dictionary is to be completed in twenty-four parts, it is evident that it is being compiled in so comprehensive a manner that the later articles must either be much condensed, or the dictionary must be considerably extended. We fancy that the latter will be the course adopted, for it would be a pity to spoil by heartless sub-editing a work which has begun so well. The dictionary is a sort of German "Cooley" scientificated—if we may use the word. Chemical formulæ rather than medicinal formulæ prevail, and great attention is paid in the dictionary to synthetic products, and to physiological and technical matters which have a bearing upon pharmacy. We also note that care is bestowed upon the pharmacognosy and pharmacology of drugs, while tests of all kinds, and medical and technical terms, are explained briefly but with precision. The dictionary promises to be thoroughly valuable to physicians and pharmacists who can read German.

The Tannins: A Monograph on the History, Preparation, Methods of Estimation, and Uses of the Vegetable Astringents. By Henry Trimble, Ph.M. Vol. I. 1832. Philadelphia: J. B. Lippincott Company. Small 8vo. Pp. 168.

MR. TRIMBLE is professor of chemistry in the Philadelphia College of Pharmacy, and he is well known for several researches in regard to tannins. But he does not pretend in the present volume to deal with tannins as he has studied them; the book, in fact, is the result of a bibliographic research which has extended over twelve years. Whatever the ultimate object of that research may have been, there can be no question that Mr. Trimble has done chemistry excellent service by presenting so condensed a bibliographic review of his subject as we read in this book. It is "a century of tannins," for the body which we call tannin was discovered by Deyeux in 1793, and all that has been written on the subject from that time to now is referred to in the graphic historical sketch which constitutes a large part of the volume. Gallotannic acid is the only tannin which is treated at length, and this is divided into sources, history, preparation and purification, properties, and composition and constitution of the acid. The unique feature of the

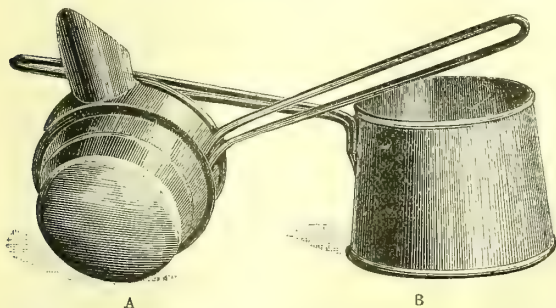
volume is the index to the literature of the tannins from 1791 to 1891 inclusive. The list appears to be remarkably complete, and its value can only be fully appreciated by those who are working in this department, which, in spite of the many researches of the past century, is far from being in a satisfactory condition, approximation in tannin assays still dominating. We have the hope that Mr. Trimble's book will help to concentrate the somewhat attenuated knowledge which exists regarding the tannins.

Ptomaines and other Animal Alkaloids: Their Detection, Separation, and Clinical Features. By A. C. Farquharson, M.D. Bristol, 1892: John Wright & Co. Imp. 8vo. Pp. 170. 3s. 6d.

HITHERTO English text-books on this subject have not been very fortunate, authors or translators having demonstrated their insufficiency in the chemistry of the ptomaines. To some extent Dr. Farquharson has fallen into the same unlucky error. This is all the more regrettable from the fact that his book is an eminently readable one, and the author gives ample evidence of a true appreciation of the importance of ptomaines in the causation of disease, and an intelligent grasp of the subject as a whole. When, however, we have said that we have practically said the best possible for his effort, as there is much evidence of want of care in the first five chapters of the book dealing with the chemistry of the ptomaines. The author is careless about spelling. He speaks of "asparagin," "*claviceps purpurea*," "arsenic and strychnia," "arsenite and strychnine," "anaerobic," "aerobic," "anaerobic," "neurin," "neurine," and so on. The descriptions of processes are such as to leave some doubt of accuracy in the chemical mind. For example, on page 36, in Gautier's method, we are told that "the sulphates of the ptomaines are extracted with chloroform, ether, or petroleum ether," but whether an alkali is first to be added or not the author does not say. Mytilotoxine is said (page 57) to be isolated "from poisonous mussels in the form of a double salt with mercury, decomposing this with *hydrogen sulphate*," &c. Is "hydrogen sulphate" sulphuric acid or sulphuretted hydrogen? We expect the latter—i.e., hydrogen sulphide. The author's loose English appears in the same paragraph. On exposure to the air this ptomaine "*becomes harmless as a poison*." Elsewhere he speaks of "corpses dead of arsenical poisoning." We would suggest that Dr. Farquharson, in the next edition of the book, if there be occasion for it, should submit all the chemical descriptions to very careful revision. It is not enough to know that the chloride of this base or that has "peculiar reactions" or "special reactions"; chemists want to know what these reactions are.

A SUPPOSITORY-PAN.

MR. S. W. WOOLLEY, pharmaceutical chemist, of Dresden Road, Hornsey Lane, N., brings under our notice a neat and handy suppository-pan which is being sold in London just now by an itinerant tinman. The pan is repre-



sented in the annexed figure and is made of strong tinplate. It consists of the water-bath B, and the pan or dish A. The dimensions of B are $1\frac{1}{2}$ in. deep, 2 in. diameter at the bottom, and $1\frac{3}{8}$ in. at the top. Its capacity is fully 2 oz. It is

provided with a double wire handle $3\frac{1}{2}$ in. long. The pan A has a similar handle. This pan is $1\frac{1}{2}$ in. deep, 2 in. in diameter at the top, and $1\frac{1}{2}$ in. at the bottom. The rim round the centre does not quite meet, thus leaving an exit for steam. The spout of the pan is a special feature, being very wide and shallow. At the junction with the edge of the pan the width of the spout is $\frac{3}{4}$ in., and the depth $\frac{1}{4}$ in. The spout narrows to $\frac{1}{8}$ in. The bottom of the pan is perfectly rounded. We have seldom seen a piece of apparatus for suppository-making on a small scale so well adapted for its purpose as this. The fact of the matter is that the tinman offered a pan of the kind to a well-known leader of pharmacy in the West-end of London, who has notions of his own regarding such matters, and he thrashed the tinman, metaphorically, into putting some extra ideas into his apparatus with the result as shown. Now the tinman goes about London selling his bath and pan at 1s. It is not a big novelty, but it is a useful one.

EXTRACT OF MALT.

MR. EDMUND WHITE, B.Sc., pharmacist to St. Thomas's Hospital, communicates a note on this subject to the last volume of the "Hospital Reports." After referring to the difficulties to be met with in determining the starch-conversion value of the extract, Mr. White describes the usual process adopted for this purpose—taking a small quantity of starch in the form of mucilage, and noting the time required for its complete conversion into sugar by a known quantity of malt-extract at the body-temperature. The enormous difference in quality between the various malt-extracts now being offered to the medical profession may be seen, he continues, in the following table, which is a record of some experiments recently carried out in the dispensary of the Hospital:—

Sample	Quantity of extract taken	Quantity of starch taken	Time required for complete conversion
A	1.5 gramme	1 gramme	3 minutes
B	"	"	10 "
C	"	"	35 "
D	"	"	$3\frac{1}{2}$ hours

These are all well-known brands, having a considerable sale, and in some cases very largely advertised. The sample D is the most expensive, but may be regarded as practically useless as a digestive agent, notwithstanding the great merit claimed for it in the advertising columns of the medical journals.

From a physiological point of view, it would be more satisfactory to determine the total quantity of starch capable of being converted into sugar by a medicinal dose of malt-extract in the time during which it may be estimated that amylolytic digestion proceeds in the stomach after a full meal, and before it is suspended by the acidity of the gastric juice. This is practically an unknown time, but 20 to 30 minutes may be taken as a fair estimate. This would indicate at once to the physician the real value of extract of malt as an aid to digestion; but up to the present no process based upon these suggestions has been published. The author is, however, engaged upon an investigation of this subject, and hopes to elucidate some of these obscure points in a future communication to the "Reports."

CURES FOR CHOLERA are floating about just now, the latest being harmless—viz., citric acid. A Parisian pathologist says that $9\frac{1}{2}$ grains of the acid in about a quart of water kills the cholera bacillus, while a strength of 14 grains to the same amount of water assures absolute protection against typhoid fever. We are not convinced of that, but the result of the statement is a demand for citric acid to make lemonade. Chemists may advantageously improve the opportunity. De Carle is sure to.

THE MEDICAL STAFF CORPS.

THE article published in the Summer issue of THE CHEMIST AND DRUGGIST is a fair statement of facts as far as it goes, but I am sure if young pharmacists knew more of the actual life in the Medical Staff Corps very few of them would ever join it. I once had some experience of the Medical Staff Corps. It was short, but sufficient. I went to Aldershot. I saw, but I did not stay to conquer. I quit, as the Yankees say.

It was two years ago that I determined to change the toiling, uneventful life of a chemist's assistant for the active, stirring and manly career of a soldier. The Medical Staff Corps seemed by far the best in my case, and in that corps I enlisted. I went to Canterbury, and, as I arrived at the barracks in the afternoon too late for medical examination, I was held over till the next morning. Then

MY EXPERIENCE COMMENCED.

However, as I was lodged for the night in the *depôt* of the Buffs, a Line regiment, I will say nothing of my first impressions, only one word to warn an intending recruit that in a similar case he will sleep in what is known as the receiving-room, and that if he has the same company as I had he will enjoy the conversation and pleasantries of two ploughboys, a pardoned deserter, and a young fisherman.

In the morning, with these companions, I was taken by a non-com. to the hospital for medical examination. We were marched into a small room where there were already a dozen others. Two or three were ordered to strip to their shirts and be in readiness. When their turn came they flung off their shirts and passed into an adjoining room. My turn came at last, and stark naked in a large room I had to run, hop, stand on both legs singly, turn my toes up and down, shake my leg, and show the flexibility of my arms.

Then my chest was sounded, my sight tested, my weight taken, and certain other examinations made. All this time I was in a state of unadorned nature. It took about twelve minutes, and at the end of all I was found to be

AN INCH TOO TALL.

Now, that is my first point. The Medical Staff Corps is not a corps of fine physique; 5 ft. 4 in. is the maximum height, and though, as in my case, a "special" order may be obtained for enlistment, still the tendency is to secure the best material for the combatant portions of the army, leaving the more stunted men to join the Medical Staff Corps.

Declared fit I was next enlisted, and on the following morning sent to Aldershot.

V and Z lines, South Camp, Aldershot, are rows of wooden huts. Each hut, I think, accommodates twenty men. It is tarred or painted outside and whitewashed within. They are roughly built and the wind whistles through cracks in a most uncomfortable manner, particularly noticeable when you are in bed. The beds range round the room, which is not divided in any way, and is of such a size as to allow of about 2 feet space between each bed. For the bed itself I will say that once a man gets accustomed to a straw shock there is nothing so comfortable.

It would not be interesting to trace the various regular duties of the day. It is quite fair to say that they are not in any great degree laborious, and that, compared with the ordinary working hours of a civilian, a soldier has

MUCH SPARE TIME.

But that advantage, which is the great inducement to hard-worked assistants, must not be over-rated, for it is counterbalanced by many drawbacks.

To begin with the men. It is a mistake to suppose that those of the Medical Staff Corps are superior to those of other departments. There are some, indeed, who keep fairly free from the prevailing blackguardism, but not nearly enough to leaven the whole. Many, on the other hand, are the lowest of the low, and with these you *must* associate. Moreover, by your profession you are their equal, and they will treat you as such. Their whole life and conversation is vicious, and though this may not sound so distasteful to many young fellows, yet they will soon discover that there

is nothing alluring in the brutal vulgarity of the barrack-room, but that, on the contrary, it is

REVOLTING AND DISGUSTING.

One of two things—you either live in an atmosphere which is unsuited to you, or you settle down to an extremely low level. In justice I must say that this habitual coarseness of expression is not usually due to any premeditation, but to ignorance. Again, there is a general *esprit de corps* which is worthy of imitation in civilian life, and would be pleasing if it united one to more congenial companions.

Honesty is not a strong point with the average soldier. There are no cupboards in a barrack-room; all your outfit is placed on a shelf above your bed. If a soldier loses his brush or what not, he takes yours, and you have to replace it or steal one from somebody else.

Then with regard to the food. It is coarse, coarsely cooked, and coarsely served. You can get enough if you like to eat a large quantity of dry bread. Of course, everyone knows that a soldier has to rough it in the matter of food. Still, it is generally necessary to supplement the rations by private expenditure, and this takes a fair share of the boasted "clear pay."

As to duties, there is much which no recruiting officer would ever tell an "aspirant to medico-martial honours." Cleaning is a very large item with a soldier, and occupies much of what is known as his "spare time." Whilst training in the *depôt* you have to scrub floors and tables, clean windows, wash up, and empty slops; or you may do "pioneer duty," which is a fine name for

SCAVENGING IN THE BARRACKS.

In addition to all this, the cleaning of arms and accoutrements is a tedious job, and one that must be done with the greatest care. Usually after three months in the *depôt* hospital work commences. As a ward orderly the cleaning business goes on. If you can bully well, you can get it all done by the patients, but otherwise you must scrub, dry scrub, and polish with all your might, for you are mainly responsible for the cleanliness of the ward. Again, the great majority of patients in military hospitals are suffering from venereal complaints, and what little bandaging you may have to do is by no means bad work.

Lastly, as to the treatment of soldiers by civilians: there is much that will hurt any decent fellow. If you get into a railway carriage where there are ladies, they will probably get out. On the other hand, the filthiest blackguards in the land will be most familiar, and ask or offer matches and tobacco in the tone or manner of strict equality. And for the matter of promotion it is better for a respectable and well-informed young fellow to join a Line regiment, where, by good conduct and superior bearing, he may rise to be sergeant-major or even quartermaster before he could get three stripes in the Medical Staff Corps.

However, I know how difficult it is to try and stop a young man from enlisting when once he has taken military fever. If he is determined, I will give him one final word of advice. Go to enlist on pay-day or the day after. At other times of the week Thomas Atkins is prowling about, longing for beer and tobacco, and absolutely innocent of money. A recruit is generally for a day or so left *en civile*, and is hence surrounded by a thirsty and by no means bashful company, who insist on his "standing his footing." I was.

MILES QUONDAM.

SUICIDE OF A CHEMIST AT HULL.—On Wednesday evening a man named Bruno Behrandt, a chemist belonging to Southampton, staying at the London Hotel, Hull, was about to be arrested for fraud and debt, when he asked the detective to allow him to go to his bedroom to get his bag to pay his bill. This he was allowed to do, the officer accompanying him. Behrandt then went to a closet, the detective remaining outside. The door was kept partly open. Behrandt suddenly shut the door and bolted it. The detective immediately burst it open, and found Behrandt on the floor, bleeding from the mouth. A doctor was sent for; but the man was dead before he could arrive, death having evidently been caused by some powerful poison.

Practical Notes and Formulae.

PHOSPHORUS PASTE.

The following curious method of making phosphorus paste for mice and rats is given in *Pharmac. Tidsskr.* Five drachms of phosphorus and 75 grains of sulphur in coarse powder are put in a mortar under water, and combination into P₄S is promoted by rubbing together for fully an hour. Then the mortar is filled up with cold water so as to cool the product. When this is done most of the water is poured off, and a paste made by adding 10 fl. oz. of treacle, 10 fl. oz. of glycerine, and 16 oz. of rye-flour.

PRESERVATION OF HYPODERMIC INJECTIONS.

MR. THOMAS J. KEENAN communicates the fact to the *American Druggist* that of the various chemical bodies known to exert an inhibitory action on the development of the fermentative and fungoid growths which occur in simple solutions of the alkaloids prepared for hypodermic use, and in solutions of organic chemicals generally, acetanilide, from the consideration of its non-irritating properties and its efficiency in weak solution, easily takes first place. But Mr. Keenan does not say how much. We should think that a grain to 1 oz. is sufficient.

CHILDREN'S DUSTING-POWDER.

The following is recommended by a Swiss journal:—

	Parts
Burnt alum	15
Boric acid	15
Precipitated chalk	150
Starch	250
Carbolic acid	3
Oil of lemon	a sufficiency to perfume.

Mix well.

GUTTA-PERCHA TOOTH-STOPPINGS.

IT is the opinion of Dr. R. Ottolougin that as a permanent filling gutta-percha may frequently be depended upon. Either the white or the pink may be used, but the pink is more durable, and in conspicuous places it is to be preferred. Much of the reported failure of gutta-percha as a permanent filling may be referred to faulty manipulation or injudicious choice of the cavity in which to place it. So far as manipulation is concerned, the common practice of heating the material in the flame is ruinous to all hope of permanency. It should be heated on a porcelain disc held over the lamp, or preferably over warm water on a glass tray. In placing gutta-percha in a large cavity, it may be packed piece by piece, thus insuring adaptation to the walls, until two-thirds of the cavity is filled. Then a single piece large enough to complete it should be used. In smaller cavities a single piece should be chosen large enough to slightly more than fill the cavity. After the filling has cooled and is hardened, the surplus should be trimmed off with a thin smooth burnisher, or spatula, slightly warmed, care being used not to drag the material away from the walls.

BISMUTHI CARBONAS.

IN a recent issue of *Guy's Hospital Gazette* Mr. H. Collier says that carbonate of bismuth is now employed instead of the subnitrate in the preparation of mist. bismuthi sedativa and mist. bismuthi of the new *Guy's Hospital Pharmacopoeia*. The chief advantage possessed by the carbonate is that it is compatible with alkaline carbonates, whereas with the subnitrate a slow decomposition with evolution of CO₂ occurs. The old mist. bismuthi sed. was open to the objection that unless it were allowed to remain some hours after being mixed, in an open vessel, so as to allow the decomposition to be entirely completed, and the CO₂ to escape, it was not safe to put it into a bottle. The carbonate is not quite so heavy as the subnitrate. It can be easily diffused in a mixture, and even after long standing can be readily shaken up. Authorities are divided in their opinions as to the rôle played by insoluble bismuth preparations in dyspepsia. If absorption is desired, there can be no doubt but that the carbonate is better than the subnitrate; at any rate in a test tube it is much easier to dissolve in dilute HCl the former than the latter.

SOLUBLE ESSENCE OF GINGER.

The *Druggists' Circular* gives the following formula devised by Mr. A. C. McBride:—

Ground Jamaica ginger	2 lbs.
Powdered pumice stone	2 ozs.
Slaked lime	2 "
Proof spirit sufficient to make	64 "

Rub the ginger with the pumice stone and lime until thoroughly mixed, then moisten with proof spirit until perfectly saturated; afterwards place this mixture in a narrow percolator, being careful not to use any force in packing; simply place it to obtain the position of a powder required to be percolated so that the menstruum will go through uniformly. Lastly add proof spirit, and proceed until 4 pints of the fluid are obtained. Allow the percolate to stand for twenty-four hours, and filter if necessary.

LIQUEFACTION OF SOLIDS.

At a recent meeting of the Indiana Pharmaceutical Association Mr. Moffitt submitted the following prescription for criticism:—

	Grains
Cocaine hydrochlorate	10
Salicylic acid	30
Phenacetin	30
Exalgin	30

Mix. Make capsules No. 20.

"What causes the above to become liquid when rubbed together?" This was a stunner, and no one present was prepared to give an intelligent answer. Theories were advanced by Remington, Hurty, Eliel, Ebert, and others, but nothing positive was known.—*Indiana Pharmacist*.

GREEN IODIDE OF MERCURY AND SYRUP OF IODIDE OF IRON.

WHEN mercurous iodide, which in itself is insoluble in water, is mixed with a solution of potassium iodide, the salt undergoes decomposition, mercuric iodide being formed, which is dissolved by the excess of potassium iodide, while metallic mercury in finely-divided form is deposited; this same reaction occurs when mercurous iodide is mixed with the syrup of ferrous iodide, and the finished product may then be considered as a syrup of the iodohydrargyrate of iron with metallic mercury. Mercurous iodide yields practically two-thirds of its weight of mercuric iodide, which, in view of the dosage, is a very serious matter.—*Pharmaceutical Review*.

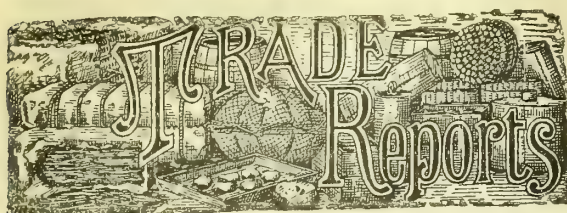
FLAVOURS FOR TOBACCO.

1. Tincture of valerian, 11 parts; rectified spirit and tincture of Tonka bean (1 in 8), of each 2 parts.
2. Tincture of valerian, 2 oz.; butyric ether, 2 oz.; essence of vanilla (1 in 10), 1½ oz.; rectified spirit, 20 oz.; water, 40 oz.
3. Cascarilla, 6 oz.; valerian-root, 3 oz.; and Tonka bean, 1 oz.—macerated in 2 pints of rum for a week, and filtered.
4. Valerianic acid, Sijj.; acetic ether, 40 drops; butyric ether, 10 drops; rectified spirit, 60 oz.

We reproduce these formulæ, with slight modification, from an American contemporary. We are not sure, however, how far it would be legal to use these in this country.

MEDICATED LOZENGES.

IN the manufacture of medicated lozenges it is customary for the ingredients to be mixed by one who is skilled in compounding, and he passes on the mixture to those who roll and cut the lozenges. The men who do that are paid according to the number they make. Each man is supplied with a quantity of the mass which he is to make into lozenges. The bulk of this he keeps in an earthenware jar, covering it with a damp cloth; the rest is placed upon his bench, in which a slab of slate is embedded. A portion of the mass is rolled out with a heavy brass roller, each end having a ridge, which gives the proper thickness to the sheet. When this is obtained, the man takes his cutter (made of tin, but faced with a steel edge), and dexterously cuts out the lozenges in a row, wiping the cutter at the end of each row. Each lozenge is then stamped with the lettering desired, and after a trayful is made the tray is placed in a drying-rack, the final drying being done in a hot-air chamber.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 17

The London Markets.

The Californian Quicksilver Trade.

The American quicksilver mines, as might be expected, are controlled by a "combine," which appears to carry on its business in as vicious a manner as these detestable organisations are wont. Formerly the States exported their quicksilver to many of the Spanish American republics, but under the "combine" these neutral markets have been all but lost to the Europeans. But at home, where the monopolists are well protected by duties from foreign competition, they fleece consumers to their hearts' content. The Pacific Coast miner must pay \$44 per bottle for the same mercury which is offered for export at \$36.50. "It looks," says a Californian correspondent of the *Cil, Paint, and Drug Reporter*, "as though under the present condition of affairs our quicksilver producers should have soon to abandon most of the trade with the outer world. Our home market cannot be advanced above a certain figure, or we shall, as we have been even this year, be faced by Spanish quicksilver in our own market. The production of American quicksilver for the half-year ending July 1, 1892, has been 17,800 flasks; for the same time in 1891, 13,300 flasks."

Fiji Vanilla.

We have more than once called attention to the increasing cultivation of vanilla in Fiji. The *Chemist and Druggist of Australasia* now reports that not long ago Mr. Leslie E. Brown, of Fiji, sent to Messrs. Langton, Hicks & Brothers, of London, a consignment of vanilla. The following letter has since been received by Mr. Brown from the consignees:—

DEAR SIR,—In sending you account sales of your first consignment of Fijian vanillas, we must congratulate you on price realised, viz., 22s. 6d. per lb., for three-fourths of consignment, and 21s. 6d. for remaining one-fourth. Unless quality had been very satisfactory, no such price could have been obtained, and if further consignments are up to quality now sent in, we can say that Fijian vanillas will command a good price and a great sale. Speaking from an experience of nearly forty years, during which we have handled a considerable quantity of vanillas, we can unhesitatingly say that the quality of that sent here is equal to any vanilla grown in the Mauritius or elsewhere. . . . The beans are plump and well cured, and are beginning to throw out splendid crystals. In future consignments it will be necessary to sort the vanillas, and tin them according to lengths, and take care not to pack the tins too closely.

According to reports from Fiji, we may expect a further considerable growth in this article of export from the islands.

Anise in Cyprus.

The cultivation of anise has of late been taken up with activity in the island of Cyprus. It was one of the products of the country which, after the British occupation, was exempted until further notice from the payment of tithe. The tithe received at that time (1831) amounted to less than 2l. a year. Since 1837, however, the plant has been cultivated largely in the Nicosia district, nearly 5,000 donums of land

being brought under anise-cultivation. The Commissioner of the Nicosia district now reports that upon ordinary land anise yields a crop of from 30 to 80 okes the donum, and where the land is irrigated and manured as much as 300 okes the donum. He states that it is a most profitable cultivation, giving a far greater profit than cereals. The yield in 1890 was about 194,000 okes. It is exported to France, Italy, and Syria, where it is used for distilling purposes, for flavouring liqueurs, &c. What is consumed in the island is used for flavouring mastic. The quantity exported in 1890-91 amounted to 91,158 okes, valued at 2,039l.

The cultivation having thus increased, and anise beginning to take the place of other cultivations, the Government reimposed the tithe, the taking of which, however, was subsequently limited to exported anise.

Lead-free Citric and Tartaric Acids.

With regard to the statement in our Editorial note of last week that it was the intention of the wholesale druggists to continue to supply such of their customers as wished for it with "ordinary commercial acid," instead of with that standing the B.P. test, we are informed that at a meeting of the "Drug Club" held some days before the committee meeting of the chemical trade section of the London Chamber of Commerce, the following resolution was adopted:—"That this meeting of the club recommends that wholesale druggists should from this day buy only tartaric and citric acid that can or shall be guaranteed to pass the British Pharmacopoeia test, and that in their prices-current, from this date, it is suggested they shall quote such citric and tartaric acid only that will conform to the above test." What we were told before was that the druggists would supply B.P. acids to their customers as a matter of course, unless the latter expressly stated that they wanted the commercial acid, and that they required it for other than pharmaceutical or dietetic purposes. The resolution, it will be seen, admits of no exception at all.

ACID (CITRIC).—According to some dealers, a rather better feeling prevails in the market. The B.P. acid may still be had in small quantities at 1s. 5d. per lb., but the makers are inclined to raise the quotation.

ACID (TARTARIC).—Unsettled, but inclined to slightly more firmness at the close, after declining during the week. English tartaric (B.P.) is offering at 12½d. per lb. on the spot; good commercial, in second hand, at 11½d. per lb.; and foreign 11¼d. per lb.

ALOES.—Twenty-seven cases have come to hand from Mossel Bay by the *Conway Castle*. The reduction in the export of aloes-juice from Curaçao (or rather, the neighbouring islands of Aruba and Bonaire, where the whole of the drug is now produced) has been very considerable. The total value of the exports was 42,320 florins in 1890, and 29,855 florins in 1891.

ARROWROOT.—The market is quiet. Of 360 barrels of St. Vincent offered at auction, 30 barrels sold at 4½d. per lb. for good quality.

ARSENIC is scarce, and firm at 12l. 5s. 6d. per ton for best white powder.

BOLDO LEAVES, of which the supply is small, are offering at 8½d. per lb. c.i.f. terms, for good genuine green quality.

BORAX.—*Crytals* are steady at 29s. to 30s.; powder at 30s. per cwt. *Boracic acid* is firm at 40s. per cwt. for good quality—not 31s., as quoted last week.

CANARY-SEED.—The sudden and rapid rise in the price of this article has not been equalled for over fifteen years. The greater part of the demand on this occasion has been from the United States, and we are at this moment left with a very small stock. The new crop of Dutch seed is said to be a total failure, while with regard to that from Turkey contradictory rumours prevail. The present prices are about 85s. for old *Spanish*, and 60s. for *English and Dutch*. Yesterday 200 bags Turkish seed sold at 72s. 6d., and 200 bags Barbary at 71s. to 72s. 6d. per cwt.

CANTHARIDES.—The new crop of *Russian* flies is now arriving. Fair natural quality is still offering at 2s. 10d. per lb., c.i.f. terms.

CEVADILLA-SEED is very firm. The quotation now is 122s. per cwt., c.i.f. terms, for ordinary, and 10s. more for sifted seed.

CINCHONA.—Up to the present, 1,721 packages of bark have been announced for sale at next Tuesday's auctions. They include 919 packages Ceylon and East Indian, 110 Java, 40 African, 329 South American Calisaya, and 323 Cuprea. The exports from Ceylon between January 1 and July 25 are as follows:—1892, 3,502,272 lbs.; 1891, 3,044,102 lbs.; 1890, 4,757,968 lbs.; 1889, 5,173,737. A large portion of this season's excess over 1891 comes, it is said, from the Badulla district, and is probably bark containing over 3 per cent. of sulphate of quinine. It does not pay to ship the common red bark at the present rate per unit.

CLOVES.—There has been a better demand for *Zanzibar* cloves, of which 700 bales for January-March shipment sold at 2½d. per lb. this week. At auction on Wednesday the price was also about ½d. per lb. higher, and 187 bales medium sold at 2½d. per lb. Two barrels *West Indian* cloves brought 2½d. per lb.

COCA.—There has been an import of 29 bales of coca-leaves from Batavia per *Hector* this week.

COCCULUS INDICUS.—Offering rather plentifully. The value is about 8s. 6d. to 9s. per cwt.

COPPER (SULPHATE).—The market remains quiet. Best Mint is quoted at 14l. 10s. in London, with sellers; good brands in Liverpool at 14l. 15s. to 15l. per ton.

CREAM OF TARTAR again lower, at 84s. per cwt. for best white French crystals.

CROTON-SEED.—There is hardly anything offering at present in this article, which is nominally quoted at 15s. to 17s. per cwt. for fair quality; but as the demand is practically nil the want of supply is not felt.

CUBEBS.—The *Hector* has brought 111 bags cubebs and 170 bags cubeb stalks (the latter in transit) from Samarang (Java) this week.

CUMIN-SEED.—The first arrivals of this season's *Italian* seed have been received, and show a fairly good quality. *Morocco* seed is still cheap.

GAMBIER.—The market remains firm, and about 50 tons old landed, in whole bales, have sold at 18s. per cwt.

GAMBOGE.—In Saigon, on July 16, there was a small stock of first-class, and no supply at all of second-class gamboge.

GINGER.—The market is very flat and tame, and hardly any business is reported. The supply at auction this week was small, and only 25 barrels of *Jamaica* root sold at 47s. to 48s. per cwt. for dull lean scraped, which is rather easier.

GUM ARABIC.—There has been rather more inquiry for sorts in Liverpool, and several packages have changed hands at 90s. per cwt. during the last few days. At last week's London gum sales several packages of newly imported *Ghezirah* gum were shown, but all bought in, owners demanding very high prices.

GUM ASAFCETIDA.—There has been a fair demand privately for common qualities, and sales have been made at 18s. to 20s. per cwt.

GUM GUAIACUM.—In the year ending September 30, 1890, the exports of guaiacum gum from Hayti were 36,671 lbs.; in the year from October 1, 1890, to September 30, 1891, they were 510,600 lbs.

GUM TRAGACANTH.—The demand is good for all qualities except fine druggists', and at last Friday's periodical sales a fair proportion of the 717 packages offered sold at full to rather higher rates—viz., fair firsts, 9l. 10s. to 9l. 15s.; good seconds, 8l. 17s. 6d. to 9l. 2s. 6d.; ordinary ditto, 8l. to 8l. 15s.; good to fine thirds, 7l. to 7l. 15s.; and fine pink at 7l. 15s. to 7l. 17s. 6d. per cwt. *Hog* gum brought from 47s. 6d. to 62s. 6d. per cwt.

HONEY.—There have been large arrivals of *Chilian* honey.

IPECACUANHA.—The arrivals of *Carthagen* root still

continue. Nineteen packages were received from Colon this week by the *Don*.

KAMALA.—Good quality Bombay kamala is selling at 7d. per lb.

LIME JUICE.—The recent scarcity is likely to be converted into over-supply soon. The *Don* this week brought no less than 138 packages lime-juice from Dominica.

LINSEED shows a very firm tone. The present quotations are 54s. to 56s. for *Sicilian*, 40s. to 42s. for *East Indian*, and 39s. to 42s. for *River Plate* and *Russian*—all per 416 lbs.

LYCOPodium.—Prices are rather lower, and sifted *Russian* is now offering at 1s. 7½d. per lb., c.i.f. terms.

NUX VOMICA is very plentiful at present, and prices are scarcely maintained.

OIL (CASTOR).—Efforts are being made in Cape Colony to introduce the cultivation of the castor-oil plant, but thus far the response of agriculturists to the promoters' appeal has been but slight. "I should say," writes the Port Elizabeth man, who is interesting himself for this culture, "that at least 500,000 gallons of 'castor-oil' are annually imported into this colony for machinery and medicinal purposes, the cost of which goes into the pockets of foreign producers, while, providing the proper seed is produced, the demand would be found practically unlimited."

OILS (ESSENTIAL).—Fair native brands of *Lemongrass* oil may be had at 1½d. per oz., while *Citronella* remains neglected at 1½d. per oz. on the spot. Japanese *peppermint* oil has been in strong demand, and sales here have been made at 6s. per lb. on the spot for ordinary commercial brands.

OPium.—Our Smyrna correspondent writes, under date of August 6:—"The party who bought the opium mentioned in my telegram of August 3 for America, was unable to complete the total quantity required by his principals, and since the date of the message 20 cases of current *Talequale* have been sold at the equivalent of 6s. 4½d. per lb. f.o.b., and 3 old selected *manufacturing* from 6s. 6d. to 6s. 8d., and there are still several buyers at these quotations who as yet have not been able to induce holders to sell. It now remains to be seen whether the consuming markets will respond to the advance on this side; but whether they do or not, there is no chance of our sellers lowering their pretensions for some time to come.

ORRIS.—Sales are reported to have been made here since our last report at prices higher than those quoted there—viz., 112s. 6d. per cwt. for fine selected *Florentine* root. Good *Verona* orris is held for 60s. to 65s. per cwt. It is stated that the coming crop is again likely to be small.

PEPPER.—*White pepper* has been a good deal more active lately, and prices are higher on the spot. Singapore sold privately before the auctions at 4½d. to 4¾d. per lb. At auction 192 bags Singapore were all disposed of, with competition, at 4¾d. to 4½d. per lb. for good to fine bold, and 6¾d. per lb. for superior bold bright. Penang pepper was not offered. For delivery a good deal of business has been done at rising prices, but the market closes easier. *Black pepper* is quiet on the spot, and nearly the whole of the supply at auction was bought in, only 39 bags Singapore selling at 2½d. to 2½d. for ordinary grey to fair. *Long pepper* (36 baskets Singapore) sold at 13s. 6d. per cwt.

PIMENTO is rather firmer, and holders do not care to sell at the present rates. Ordinary to fair clean realised 2½d. to 2¾d. per lb. at auction.

POTASH SALTS.—*Chlorate* is dull of sale, and may now be had at 6½d. per lb. on the spot, or at the same price, f.o.b. Liverpool, for forward delivery. *Prussiate*, yellow foreign, is held for 10½d.; English for 10¾d. per lb. *Bichromate* firm at 4½d. per lb. English refined *Saltpetre* is held for 20s. 9d. to 21s. 9d., according to packing; German for 20s. 6d. to 21s. 3d. per cwt.

QUICKSILVER.—On Monday, after selling a considerable quantity, the chief importers reduced their price to 6l. 15s., which is still their quotation. Second-hand holders are more or less nominal to-day at 6l. 14s.

QUININE.—Market firm. There is not much business doing, but there are no sellers of second-hand German bulk

below 9d. per oz. We understand that several thousand ounces changed hands at that figure early this week, but the details of the business are kept very quiet.

SANTONIN.—The price has been advanced to 5s. 9d. per lb. for good Russian crystals.

SENNA.—The new crop is beginning to arrive. The *Carthage* has brought 278 bales from Bombay.

SHELLAC.—The market opened quietly at 83s. for orange TN, October delivery. At auction 703 cases shellac were offered, of which 517 sold, with good competition, at an advance of 2s. to 3s. on *Button* lac and about 1s. per cwt. on *Orange* lac. The prices paid were as follow:—First *Orange*, worked, rather cakey, 91s.; fine unworked second orange, 83s. to 86s.; good fair to good ditto, 79s. to 82s.; cakey and livery to fair ditto, 76s. to 79s. per cwt. *Button* lac, good first, 91s. to 92s.; fair to good second, 81s. to 85s.; thirds, 78s. per cwt. For AC garnet lac an offer of 75s. was refused. Since the auctions higher prices have been paid for delivery—viz. 84s. for September, and 84s. 6d. for October, November, and December orange TN. About 800 cases sold at these prices.

SODA SALTS.—*Nitrate* is steady, at 9s. to 9s. 1½d. per cwt. for refined, and 8s. 6d. to 8s. 7½d. per cwt. for ordinary qualities on the spot. *Caustic* remains steady: 70-per-cent. white on the spot costs 10l. 10s. to 10l. 12s. 6d. in London, and 10l. 5s. in Liverpool or on the Tyne; 60-per-cent. spot, 9l. 2s. 6d.; and 76-77-per-cent., on the Tyne, 11l. 10s. per ton. The London manufacturers of *Soda Crystals* want 68s. 6d. Other brands are offering here at 70s., landed terms, or at 67s. 6d. ex ship. The Tyne price is 60s. per ton. *Bicarbonate* is held for 6l. 15s. to 7l. 5s., ex warehouse, according to packing. *Bichromate* steady, at 3¾d. per lb.

TURMERIC.—The market keeps firm, and of *Madras* root there is hardly anything to be had at present. Holders of split *Cochin* bulbs will not sell for less than 9s., while for fair *Bengal* finger 20s. per cwt. must be paid. It is said that a considerable amount of business has lately been done in *Bengal* root for arrival, but no prices have been divulged. At auction 290 bags split *Cochin* bulbs were offered, but, failing suitable bids, bought in.

Thursday's Market News.

42 CANNON STREET, E.C., August 18.

ALOES.—*Curaçao* aloes was in somewhat larger supply at to-day's auctions than it has been for several weeks. Of 186 packages, 51 sold at from 8s. 6d. to 14s. 6d. for common overheated to fair capey. There was also a lot of good brown picked liver aloes, which was bought in at 55s. The demand remains very slack. *Cape aloes*: A parcel of recent arrival, including some very fine aloes, was to be offered to-day, but was not reached until the end of the sales. Privately fine bright *Cape* aloes has been selling, it is said, at 25s. to 25s. 6d. per cwt. recently, but the holder stated that he would now take 24s. for the same description. Some fine, rather soft *Socotrino*, of good colour and flavour, was also to be sold to-day. The same kind realised from 5l. to 5l. 10s. privately lately.

ANISE.—China star-anise still remains very scarce. At the auctions to-day 3 cases, rather mixed and somewhat deficient in flavour, were bought in at 120s. per cwt.

ANNATTO.—This drug is quite neglected. For some seeds of rather dull appearance 1½d. per lb. would be accepted, but that was not obtainable.

ARECA-NUTS.—Seventeen bags from Colombo were bought in at to-day's sales at 35s. per cwt.

BALSAM COPAIBA.—Holders here are very firm, as already reported last week, and will not sell good *Maranham* balsam below 2s. per lb. At auction 3 casks *Pará* balsam, pale and watery, were bought in at 1s. 10d. per lb. Four casks of good appearance, by "land carriage," were bought in at 2s. per lb.

BALSAM TOLU.—Six cases were bought in to-day at 1s. 3d. per lb.

BUCHU.—Slightly dearer to-day, and in continued demand. Fourteen bales were offered, and sold at 4½d. to 5d. per lb. for

rather yellowish to fair green round short leaves. This is an advance of about ½d. per lb.

CANELLA ALBA.—This article has been rather scarce lately. At to-day's auctions 10 bales, just received *via* New York, fair bright pale, but somewhat broken quill, were bought in at 30s. per cwt.

CANNABIS INDICA.—Dull and difficult of sale, even at low prices. Very dusty but fairly greenish tops were bought in to-day at 3½d. per lb. Seventy-four robbins of fair greenish tops were bought in at 5d. per lb.; ordinary brown ditto at 3½d. The demand is slack.

CARAWAY.—It now turns out that the Dutch crop generally is of good quality, but rather small as regards output. The lowest price at which seed (old crop) has been sold lately was 18s. 6d., but new is now held for 19s. per cwt., with a rising tendency.

CARDAMOMS.—In large supply, about 220 packages being offered at the auctions. At the time when our report left, forty-nine cases had been sold at very full prices for fine grades, but at rather easier rates for ordinary and medium kinds. *Mangalore*—small to medium fair round yellowish were bought in at 2s. 4d. *Ceylon Mysore*—fine bold pale sold at 3s. 10d.; medium to bold ditto, partly split, at 3s. 3d. to 3s. 2d.; small to medium rather yellowish, at 2s. 5d. to 2s. 6d.; medium yellow, 1s. 11d.; small fair round palish, 1s. 7d. to 1s. 9d.; very small pale, 1s. 1d.; mixed sizes, rather brown and partly mouldy, 1s. 3d. to 1s. 1d. per lb. *Ceylon Malabar*—pale, medium to bold round rather greyish, 2s. 3d.; small to medium pale, partly specky, 2s.; small to medium rather brownish, from 1s. 7d. to 1s. 5d.; very small brown, 1s. 1d. per lb. *Seeds* were slightly easier, selling at from 1s. 4d. to 1s. 5d. per lb.

CASCARA SAGRADA.—Forty bales were bought in to-day. The quality is good, but rather small. It appeared that a bid of 24s. per cwt. was made, and refused.

CASCARILLA.—There is no change in values to report. Of 47 packages offered to-day, 34 sold at 32s. 6d. to 33s. for fair bright quilly, and from 29s. 6d. down to 20s. for fair bold grey mixed to ordinary brown and dusty.

CHAMOMILES.—New Belgian flowers have now declined to from 76s. to 77s. 6d. per cwt. for good quality of the first picking; they are now at that price, and in some quarters an advance is looked for. Second pickings are not yet collected, but will shortly be, and are expected to begin at 65s. to 70s. per cwt. At auction 10 bales chamomiles, ordinary brown flowers, sold cheaply without reserve at 15s. per cwt.

CINCHONA.—A new consignment of about 180 packages Crown bark from South America has been landed this week. There have been no arrivals for a considerable time. At to-day's auctions only a few lots of quill and flat Bolivian Calisaya were offered, and bought in at more or less nominal prices. A few bales of so-called South American red bark in quills, all damaged and of dull colour, were bought in at from 2s. 6d. down to 1s. 3d. per lb.

CIVET is quite neglected. Several parcels shown to-day were all bought in at 7s. 6d. to 8s. per oz. nominally.

COCAINE.—Crude is stated to be 6d. per oz. dearer, sales being reported this week at 11s. 6d.

COCCULUS INDICUS.—Dull and neglected. A parcel of 41 bags was bought in to-day at 9s.; the price would probably be 8s. 9d.

COWHAGE remains almost unsaleable. At to-day's auctions the usual large quantity of stony stuff was shown, and bought in at nominal prices—about 2d. per oz. mostly—but the value is nearer ½d. per oz.

CUBEBS.—The market is tending lower. At to-day's auctions 15 bags from Batavia were bought in, but an offer of 6l. 7s. 6d. per cwt. is to be submitted for small brown very stalky berries.

CUTTLE-FISH.—An offer of 2½d. was accepted for five cases fair pale bold from Bombay.

DILL-SEED.—Twenty bags good East Indian sold to-day at 11s. to 11s. 6d. per cwt.

DRAGONS'-BLOOD.—Ordinary lump is rather scarce, and has been inquired for. Very fine qualities also are difficult

to procure, and sell at extreme rates. At to-day's auctions an offer of 10*l.* 10*s.* per cwt. was refused for one case of very fine fiery saucer. A case of dull finger in reed sold, subject to approval, at 97*s.* 6*d.* per cwt.

ERGOT OF RYE is decidedly firmer, holders being much less disposed to sell. New Spanish on the spot was quoted previous to the sales at 2*s.* 2*d.* per lb., transactions having been concluded privately at 2*s.* 1*d.* At auction, however, 2*s.* 2*d.* was refused for the best lots, the owners standing out for 2*s.* 3*d.* Twelve cases old and wormy ergot sold at from 1*s.* 6*d.* to 1*s.* 11*d.* per lb.; new German is offering at 1*s.* 11½*d.* per lb. c.i.f. terms, or 2*s.* 1½*d.* on the spot.

GALLS.—Fair *China* galls on the spot are held at 50*s.* per cwt. nominally, but there is no business worth speaking of. *Turkey* galls are rather dull of sale, blue Bassorah being quoted at 60*s.*, green at 55*s.*, and white at 50*s.* per cwt.

GAMBOGE.—A parcel of 13 cases, newly arrived, sold to-day at a reduction in value of from 25*s.* to 30*s.* per cwt.; good bright Singapore pipe, rather broken, bright fracture, slightly drossy, at 11*l.* 10*s.* to 11*l.* 12*s.* 6*d.* per cwt. Fifteen cases good pickings brought 11*s.* per cwt. Altogether 72 cases were offered, 28 of which found buyers.

GUARANA.—One case fair ordinary sausage was bought in at 4*s.* to-day; an offer of 3*s.* 6*d.* would probably not be refused.

GUM AMMONIACUM.—Utterly neglected and almost unsaleable. The only lot sold to-day consisted of 2 cases drossy seedy grey block, for which 20*s.* was accepted.

GUM ARABIC.—For 5 cases Kurrachee Amrad good amber coarse siftings a bid of 56*s.* was refused. Nine bales old Turkey sorts, from Alexandria, fair yellow to amber drop, were bought in at 95*s.* per cwt.

GUM ASAFOETIDA.—Two cases fine almondy gum, *viâ* Bussorah, were bought in at 70*s.* per cwt. to-day.

GUM BENZOIN.—*Siam* gum is decidedly cheaper, a parcel of 12 cases small to medium almonds in block, fairly good bright colour, selling at 8*l.* 17*s.* 6*d.* (a reduction of about 15*s.* per cwt.); and small ditto, rather more broken, at 8*l.* to 8*l.* 7*s.* 6*d.* per cwt. Thirty-five cases rather dull, streaky siftings, in block, sold at 80*s.* to 89*s.* per cwt. *Palembang* gum is just a trifle easier, medium to fair almondy block realising from 30*s.* to 40*s.* per cwt. Of *Sumatra* gum hardly anything was offered.

GUM ELEMI.—There is rather too much on the market at present, and holders cannot get the prices at which they sold lately. To-day a parcel of 50 cases fair pale Manila, good flavour, slightly dark mixed, was bought in at 45*s.* to 46*s.* per cwt.

GUM GALBANUM.—Fifteen packages of the spurious gum which has been offered on several occasions as "opoponax" were now placed on sale without reserve as gum galbanum. They showed a reddish-orange coloured blocky gum, and were bought in without a bid being made for them.

GUM GUAIAIACUM.—The recent arrival proves to have been of very inferior quality, and of the 40 boxes offered to-day only one was of fine bright quality (block). This sold at 2*s.* 8*d.* per lb.—a very high price—and for fair block, 1*s.* 8*d.* per lb. was paid. The remainder was also disposed of, ordinary drossy block at 7*d.* to 10*d.*, very common and barky ditto at from 5½*d.* down to 3½*d.* per lb.

GUM MYRRH declined from 7*s.* 6*d.* to 10*s.* per cwt. to-day; good Aden sorts selling at from 80*s.* to 82*s.* 6*d.*; coarse chips, 60*s.*; and woody pickings at 25*s.* per cwt.; for fine picked sorts, 8*l.* is now asked.

GUM OPOPONAX.—At to-day's auctions 6 tins of fair small yellow drop were bought in at 5*s.* per lb.

HONEY.—*Jamaica* honey is rather dull of sale, and the greater part of what was offered to-day was bought in. A few lots sold rather cheaply at 28*s.* 6*d.* to 29*s.* per cwt. for good liquid amber, and at 20*s.* to 26*s.* for dark and dull to fair ditto. Fine bright clean amber realised 30*s.* to 32*s.* per cwt. A lot of *Mexican* honey in comb in small boxes was bought in, while 10 half-barrels, partly candied, of disagreeable smoky flavour and rather dirty, sold at 19*s.* 6*d.* to 20*s.* per cwt. A rather large parcel of Australian honey in tins from Melbourne was offered. The quality seemed good,

the honey being liquid and of a brown colour. The parcel was bought in at a nominal price. Another parcel of ordinary dull thick sold at 18*s.* 6*d.* to 20*s.* per cwt.

IPECACUANHA.—There was a large supply of very common woody root, no less than 73 packages of *Rio ipecacuanha* being offered: 49 of these sold at a decline of about 2*d.* per lb. on ordinary woody kinds; a few serons, however, which showed a tolerably quality brought good prices. The following rates were paid: sound rather woody to fair, 5*s.* 6*d.* to 5*s.* 8*d.* per lb.; first-class damages—common and thin to good fair quality from 5*s.* 3*d.* to 5*s.* 10*d.* per lb.; second and third class from 5*s.* 3*d.* to 5*s.* 6*d.* per lb. A parcel of picked root was bought in at 7*s.* per lb. Of *Carthagena* root the large quantity of 30 bags was offered, about 5 of which sold at 4*s.* 2*d.* to 4*s.* 3*d.* per lb. for good stout brown root, and 3*s.* 10*d.* for common. A parcel of 18 bales so-called "ipecacuanha" has just been received from Bombay. It is the same spurious root which was first introduced upon our markets a few years ago.

JABORANDI.—Two bales, imported about eleven years ago, ordinary grey and dull-looking, but bold leaves, were bought in to-day at 1*s.*; the owner would accept 8*d.* per lb. with pleasure, but the demand, as he says, is for samples only.

JALAP.—There is no change in the position, good *Vera Cruz* being still limited at 1*s.* 6*d.* per lb. At the auction to-day 1*s.* 4*d.* was refused for fair quality.

KOUSSO.—One case of this drug, which is now very rarely seen at our auctions, was offered to-day. The parcel showed a good quality, in bundles, and was bought in at the rate of 3*s.* per lb.

LIME-JUICE.—At to-day's auctions no interest whatever was shown for this article, of which several lots were offered. Only 2 puncheons sold cheaply at 1*s.* 1*d.* per gallon, "without reserve," for ordinary dirty juice.

MORPHIA is looking up a little in sympathy with the improved position of opium; the price recently was still 3*s.* to 3*s.* 1*d.* per oz., but we hear that some makers now stand out for 3*s.* 3*d.* per oz.

MUSK.—Rather more demand was shown to-day than has been manifested for some time; it was chiefly for rather ordinary qualities, and these sold at pretty full prices. *Tonquin pods*, first pile, small to bold fine thin blue skin and under-skin, were bought in at 74*s.*; old-fashioned ditto, top and under-skin good dried, brought 49*s.*; very damp, 44*s.* 6*d.*; and 1 tin sold without reserve of common and wormy thin-skinned pods, 38*s.* per oz. Fourteen packages third pile were all sold—at 24*s.* to 25*s.* 6*d.* for fair old-fashioned, 20*s.* 6*d.* for damp ditto, and 22*s.* to 22*s.* 6*d.* for thin blue skin but very wormy. One tin of bold *Assam* pods, very hairy and skinny, and unworked, sold at 16*s.* 6*d.* per oz. to-day. Twelve tins *China Cabardine*, very dry, partly skinny, were bought in at 18*s.* per oz.

MUSK-SEED.—At to-day's auctions 7 bags of good quality, imported *viâ* Amsterdam, were shown. They are held for 7*d.* per lb., but that price is not obtainable.

NUX VOMICA.—Owners are firm, but they cannot obtain the limits for which they hold. At to-day's auctions a parcel of 285 bags dark grey, partly perished seeds, from Calcutta, was bought in at 11*s.* per cwt., an offer of 8*s.* 6*d.* being declined.

OIL (CASTOR).—No demand. At auction to-day good pale first Calcutta was bought in at 3½*d.* per lb., and fair seconds at 2½*d.* per lb.

OILS (ESSENTIAL).—*Clove-oil* is now exceedingly cheap English drawn being offered at 2*s.* 2*d.* to 2*s.* 3*d.* per lb.—the lowest prices on record. These figures can hardly pay the distillers. Ten cases of fair *Cajuput* oil were bought in to-day, at 3*s.* per bottle. Fisher's *Patchouly* oil was also bought in at 1*s.* 1*d.* per oz., and good white *Nutmeg* oil from Batavia at 4*d.* per oz. Forty-one packages (drums, coppers, and bottles) of so-called Bombay *Rose* oil were offered for sale to-day. The quality was very inferior, and only the settlings sold at from 1*d.* to 2½*d.* per oz., the "oil" being bought in at from 3*d.* to 6*d.* per oz. Of 30 bottles West Indian essential oils, all newly imported from Dominica, the bulk, containing *Lemongrass* and *Bay* oil of fine quality, was bought in. Four bottles of good *Patchouly* oil sold at 1*s.*

per oz., and *Cuscuta* at the same price. *Caraway* oil is likely to advance with the improvement in the seed; 4s. 9d. per lb. has been the lowest price this article has touched, but the oil from the new seed will probably cost 5s. 3d. to 5s. 6d. per lb. Oil of cinnamon, of fair appearance, was bought in to-day at 1s. 3d. per oz. *Cassia* oil is dull of sale; 10 cases shown to-day were bought in at 3s. 4d. per lb., while another lot, also of 10 cases, sold cheaply at 3s. 3d. per lb. *Star-anise* is again 1d. per lb. lower, one case of good quality selling to-day at 5s. 11d. per lb.

OILS (ESSENTIAL).—THE MITCHAM CROPS.—The crops this year, on the whole, look well; the old peppermint, which is the main crop, has suffered from "snuffblight," but not to any serious extent. The young (of which there is an unusually large plant this year) looks strong and well; this takes the place this season of a large portion of the old killed by the frosts last year. However, it should be remembered that it yields about 25 per cent. less oil than the old plant. Distilling is in active operation, and the returns so far per ton still (about 6 to 7 lbs.) are disappointing, and below expectation. Prices are expected to open about 31s. to 32s. per lb., but it seems doubtful if this figure will be maintained by the growers. Inquiries remain remarkably quiet, though it is certain that a great many large consumers are short of stock, and a good demand is presently expected. *Lavender* is this year perhaps one of the smallest crops on record, and the oil will be very dear; 60s. per lb. is now being asked. Even at this figure the bunch bloom sold at Covent Garden pays better, and as much as 7s. to 8s. per dozen bunches is obtained, which is more than double the price paid last year. Chamomile will this season also be a small crop—none has been distilled yet.

OPIUM.—The London market is active, and a considerable amount of business has been done this week at higher prices.

PERMANGANATE OF POTASH.—The prices given in our report of last week were incorrect. No further rise has been made than that announced by us a fortnight ago—namely, 82s. 6d. for large, and 72s. 6d. for small crystals.

QUASSIA.—A parcel of 21 tons dry old wood, last year's import, sold at 7l. per ton.

QUICKSILVER may be had now in second-hand at 6l. 13s. 6d. per bottle.

RHUBARB.—Over 200 cases were offered to-day, of which only a small proportion sold at rather easier prices—namely, from 1d. to 2d. lower. *Shensi*: Druggists' root, even pinky grey fracture, brought 1s. 9d.; medium to bold fair fracture, flat, from 1s. 7d. to 1s. 9d.; small to medium rather dull coat, three-fourths pinky grey, one-fourth dark, round, 1s. 5d.; fair bold pickings, 11½d. per lb. *High-dried* sold at 1s. 3d. for small fair fracture, flat; 9d. to 9½d. for round fair coat and fracture; and 1s. 4d. for medium to bold flat, three-fourths pinky fracture. *Canton*, small to medium flat, good coat and fair fracture, brought 1s. 2d.; and fair round and flat mixed pickings, 1s. 1d. per lb.

SAFFRON.—A fresh rise of 1s. per lb. is reported to-day.

SARSAPARILLA.—Fair native *Jamaica* sold at 1s. 2½d. to 1s. 3d.; ordinary dull ditto at 1s. per lb. For rather lean *Honduras* (which has recently been selling at 1s. 4d. per lb.) an offer of 1s. 2d. per lb. was to-day refused. Rather damaged and dark genuine *Jamaica* brought 1s. 2d. to 1s. 4d. per lb.

SENNA.—The first arrival of new-crop *Senna* was offered to-day; the quality was not particularly fine, and the consignment had not been reached when we went to press. Old leaves were rather neglected, though for anything of good appearance high prices are paid. Fair medium to good greenish brought 4½d. to 6½d.; common dull to medium yellowish, 1½d. to 3½d.

SHELLAC.—The market closes flat, with sellers of orange TN for August at 82s. 6d. per cwt.

TEA.—Congous are a quiet market, though the heavy sale on Wednesday went at better prices than were anticipated. N.S. Monings for price look cheap enough, and clean sweet teas of Ningchow sort at 5d. to 5½d. ought to go into consumption, and only want a little export demand to send the

quotation up ½d. per lb. Retailers seem to prefer low-priced Assams and Ceylons, and to ignore the improvement that these Monings give to a blend. Assams went rather easier on Monday, especially for fine broken, and as Irish buyers are badly wanting these grades a fair trade has resulted. On Tuesday a heavy Ceylon sale went steadily, especially for lower grades.

TONQUIN BEANS.—About 14 packages *Pará* beans were forced off to-day at an irregular decline of 2d. to 4d. per lb., fair frosted *Pará* selling at 2s. 1d.; black, slightly frosted ditto, 1s. 10d. to 1s. 11d.; somewhat foxy mixed, 1s. 4d. to 1s. 6d.; ordinary foxy and mouldy, 1s. 1d. to 7d. per lb.

VANILLA.—About 250 tins were offered at auction to-day, the whole of which sold at an advance of 1s. to 1s. 6d. per lb. on good qualities. The following prices were paid:—Fine chocolate, crystallised, 8½–9 inches 19s., 7–8 inches 14s. to 17s.; fair chocolate, 6–7 inches, 10s. to 13s.; smaller and brown pods, 7s. 3d. to 10s. 6d.; common foxy, 4s. to 5s. per lb.

WAX (BEES').—*Jamaica* wax is firmly held and sells at full prices: good orange and red, 7l. to 7l. 5s.; mixed brown, at 6l. 15s. to 6l. 17s. 6d. per cwt. For fair mixed Australian 6l. 12s. 6d. was paid. *Madagascar* wax remains flat, and only a few lots out of the 1,113 packages offered were sold; ordinary grey brown at 5l. 2s. 6d., to fair yellow, 5l. 10s.

THE LIVERPOOL MARKET.

BALSAM (COPAIBA).—Large business has been done, at prices ranging up to 1s. 10d. for *Maranham* bright, and now holders are asking more money.

CANARY SEED.—The chief feature of the week has been the continued and important advance in this article: 1,800 bags have changed hands, during the past three days, at 70s. to 72s. 6d., and now 75s. is asked. The failure of the Dutch crop is confirmed.

GINGER.—*African* has recovered, and sales of good root have been made at 31s. per cwt.

GUINEA GRAINS.—A recent arrival of 50 bags good seed sold at 22s. 6d. per cwt.

OIL (CASTOR) continues in the same stagnant condition. Good second Calcutta is quoted at 2½d. per lb. ex quay, and 2½d. per lb. ex store. First-pressure French is steadily held at 2½d., and second 2½d.

QUILLATA.—This bark is firmer, and 16l. has been paid for a recent arrival ex quay. Price now, 16l. 10s. to 17l.

TURPENTINE seems to have taken a turn for the better, and now 22s. 6d. is asked.

THE DUTCH MARKET.

AMSTERDAM, August 12.

ALL the analyses for the cinchona-bark sales on August 25 have now been published. The manufacturing bark contains about 18½ tons sulphate of quinine, or 4.63 per cent. on the average. About 1 ton contains 0–1, 2 tons 1–2, 41 tons 2–3, 117 tons 3–4, 127 tons 4–5, 60 tons 5–6, 17 tons 6–7, 20 tons 7–8, 4 tons 9–10, 1 ton 11–12, 9 tons 12–13 per cent. sulphate of quinine.

THE SMYRNA OPIUM MARKET.

SMYRNA, Wednesday night.

SALES of 65 cases opium were made here this week, at the parity of 6s. 8d. per lb. f.o.b. for usual kind of manufacturing opium, and of 7s. per lb. f.o.b. for good Yerli opium for manufacturing purposes. The market closes dearer.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of drugs in the port of London on July 31, 1892 and 1891, and to the imports and deliveries during the first seven months of the years 1892 and 1891.

Article	Stocks		Imported		Delivered	
	1892	1891	1892	1891	1892	1891
Aloes ..os & pks	6,440	7,607	1,877	1,276	2,539	3,404
" ..gourds	1,077	1,243	—	315	28	241
Anise, star ..chts	187	44	220	425	75	323
Arrowroot ..cks	6,497	6,998	11,738	10,164	8,169	10,050
" bxs & tins	685	1,704	1,350	618	1,628	1,109
Balsam ..cks, &c.	1,844	2,345	1,023	1,026	733	849
Bark (Quinchona),						
S.American cases	58	388	27	18	341	38
" ..bis, &c.	25,215	25,470	7,659	6,683	8,935	7,384
B.I., Ceylon, and						
Java ..cks, &c.	215	3 4	205	448	238	417
Borax ..cks	18,124	24,907	21,721	28,025	25,608	27,392
Calamba ..cks	261	261	—	25	—	25
Camphor ..cks	552	840	324	121	419	591
Cardamoms ..chts	3,503	6,071	4,142	6,347	4,968	5,878
Coco, Ind. bgs, &c.	680	477	2,019	1,164	1,783	1,308
Cream of Tartar ..cks	1,181	572	1,098	483	4 5	136
Cubeb ..cks	14	10	5	5	1	19
Cutch ..cks	115	91	241	95	210	243
Dragon's Blood ..chts	2,970	3,082	2,215	1,661	1,863	1,495
Galls, China ..cks	114	1 3	172	117	157	108
Gambier ..cks	1,977	2,269	1,994	1,191	1,623	1,543
Gambier ..cks	3,474	3,942	2,853	6 61	1,572	6 513
Gambier ..cks	1,615	893	6,751	5,873	6,611	5,891
Gums—						
Ammoniac pags	232	55	2 8	15	123	23
Animi & Copal						
" ..pks	10,762	5,119	14,503	6,853	9,723	10,233
Arabic ..cks	12,254	14,946	10,923	13,579	15,997	15,068
Asafetida ..cks	414	719	2 6	38	382	149
Benzoin ..cks	2,379	3,217	1,417	2,355	2,065	2,038
Damar ..cks	4,035	5,586	2,784	2,673	3,014	3,634
Galbanum ..cks	31	40	—	37	6	27
Gamboge ..cks	81	57	209	151	163	124
Guaiaac ..cks	185	122	98	253	40	172
Kino ..cks	9	10	10	14	18	37
Kowrie ..cks	1,426	957	2,173	1,966	1,791	1,746
Mastic ..cks	19	28	—	36	12	26
Myrrh ..cks	214	450	132	512	278	484
Olibanum ..cks	5,621	5,952	6,759	5,858	5,336	4 98
Sandarac ..cks	974	544	1,277	1,025	737	684
Tragacanth ..cks	2,687	5,241	3,715	4,330	4,713	4,523
Guttapercha ..cks	2,806	2,498	1,358	1,692	1,150	1,231
Indiarubber, B.I.,	215	338	479	710	643	558
Madagascar ..cks	86	121	165	186	192	156
S. American ..cks	88	63	174	130	142	120
African, &c. ..cks	200	234	231	252	265	264
Ipecac ..cks & bgs	458	141	978	608	925	718
Jalap ..cks	35	64	285	140	297	185
Lac Dye ..cks	4,946	5,033	—	—	24	61
Nux Vomica ..cks	1,573	604	2,904	1,031	1,796	1,135
Oils—						
Castor ..cks	128	117	368	460	315	499
" ..cks	2,312	3,061	2,178	4,778	3,253	3,575
Cocoa-nut ..cks	1,391	2,148	1,743	3,635	2,342	2,648
Olive ..cks, &c.	1,225	1,218	1,966	3,056	1,505	2,454
Palm ..cks	21	11	56	34	53	30
Rhubarb ..cks	444	543	801	540	764	877
Safflower ..bis, &c.	142	233	26	—	129	91
Sarsaparilla ..bis	378	253	707	587	688	641
Senna ..bis, &c.	1,679	2,907	889	1,358	2,057	2,362
Shellac, Orange						
chts, &c.	27,165	25,415	18,495	15,433	18,091	26,066
Garnet ..cks	7,909	3,471	11,623	5,381	5,647	5,951
Butt-on ..cks	6,006	6,351	5,412	7,669	5,893	6,714
Total ..cks, &c.	41,080	35,237	35,530	28,413	29,631	38,731
Sticklac ..cks, &c.	209	735	180	200	322	1,734
Turneric, Beng. tns	96	768	18	—	367	385
Madras, &c. ..cks	307	178	438	41	316	358
Total ..cks, &c.	403	546	616	41	683	743
Vermilion, chts, &c.	53	26	53	93	26	102
Wax, bees' ..bis & srs	1,474	902	2,767	1,676	2,145	1,618
" ..cks & os	1,437	781	1,686	992	1,210	1,078
" ..cks	42	14	28	6	—	16
" Japan ..pks	391	522	625	75	618	733

* Liverpool stock: Para 817 tons, other sorts 937 tons; total 1,754 tons, against 2,529 tons last year and 1,299 tons in 1893.

THE CUSTOMS DUTIES.

THERE is a growing movement, particularly among nations claiming to lead the van of civilisation, towards a revival of some of the most distinctive features of the Middle Ages. Thus we hear many voices advocating the re-establishment of the mediæval system of guilds; "Companies of Adventurers" for transmarine exploitation arise at every town, and everywhere we meet with increasing numbers of those who, with Heine's Philistine fellow-traveller in the "Journey to Germany," regard the Custom House as the highest conception of creative genius, and would measure a nation's enlightenment by the ingenuity it has shown in the creation of those relics of a barbarous feudalism. Nothing is more certain than that Custom Houses must be ultimately swept away; but in the meantime the best we can hope for is that they shall be as inobtrusive as possible. And in this country, at any rate, we have the satisfaction of collecting a comparatively larger revenue upon fewer articles, and in a less cumbersome manner, than is done by any other nation. To these facts, the thirty-sixth report of the Commissioners of Customs, which has just been issued, bears witness. The vastness of John Bull's powers of absorption is demonstrated by the fact that the inhabitants of these happy isles paid away 21½ millions sterling in spirit-duties last year, against 20½ millions the year before. Bare figures such as these hardly impress the imagination of the ordinary man, and it requires the aid of such devices as are put forth by the excellent organisations we are all familiar with, and by which we are shown at a glance, on a coloured plate, how many churches and Sunday-schools might have been built, how many missionaries sustained, and what numbers of the deserving poor pensioned off with the money, to give us an approximate idea of the magnitude of the sum. It is said by our usual political instructors that the next Budget is to establish what is known as a "Free Breakfast-table," an expression which should not be taken in sense more literal than what it is meant convey—viz, the abolition of the Customs duties upon tea, cocoa, coffee, chicory, and dried fruit. If that reform should be carried out it will diminish the Customs revenue (on last year's basis) by 4,125,337½, of which the fourpenny tea-duty alone counts for 3,424,830. The consumption of tea, by the way, increases by from 3 to 4 per cent. a year. The "free breakfast-table" will knock off at a swoop eleven of the forty-one classes of dutiable commodities known to British law, leaving only tobacco, wine, beer, alcohol and alcoholic preparations, and playing-cards in the tariff.

The receipts of duty upon chicory and coffee have diminished, while those on cocoa show the largest increase in any department of the Customs—viz, 6 6 per cent.—the gross revenue from that article having reached 91,459½, while the consumption of cocoa has increased 34 per cent. within the last five years. The increasing supply of green fruit, and the extension of orchards in this country, operate adversely upon the revenue from raisins and currants, although the former head, nevertheless, shows a large increase upon the previous year, when the failure of the sultana-crop seriously affected the receipts.

The quantity of foreign spirits delivered for methylation was only 656,000 gallons, against 1,306,000 gallons in 1890. This diminution arose from the fact that, mainly in consequence of the scarcity of grain and potatoes in Eastern Europe, the price of foreign plain spirit had risen to such a level that it became more profitable in many cases to use British distilled spirit for methylating. Of perfumed spirits 32,027 gallons were imported last year, upon which a duty of 26,401½ was levied. Customs duties are collected also upon a number of minor articles containing alcohol. As spirit is liable to a very heavy duty, the inclusion of all its preparations is, of course, unavoidable; but the collection costs the country more than it is worth. Thus, the total receipts of duty upon chloroform were 13½, upon collodion 44½, and upon acetic ether 23½. Butyric ether brought in 129½, sulphuric ether 19½, iodide of ethyl 6½, and varnish containing alcohol 54½.

SOLOIDS is the name which Messrs. Burroughs, Wellcome & Co. have given to tabloids for making antiseptic solutions.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

Laudanum Prosecutions.

SIR,—Your Legal Report for last week contains an account of the prosecution of three Nottingham druggists for selling laudanum of deficient strength.

In two of the cases this proceeding appears to have been fully warranted by the certificate of the analyst; but in the third—viz., that of Mr. A. E. Beilby, of Ilkeston Road—the prosecution (which was, fortunately, unsuccessful in its object) was perfectly unwarranted by the facts of the case. According to the certificate of the analyst, the laudanum in question contained .51 per cent. of morphia; and the case of the prosecution was that it should, as stated in the British Pharmacopœia, contain “about .75 per cent. morphia.”

The latter statement is incorrect. We have recently estimated a number of samples of this tincture, prepared with great care from opium of standard quality, and the highest yield of morphia we have been able to get from the tincture is .68 per cent. On the contrary, one of the tinctures contained as little as .51 per cent., and the average of a number of samples is only .57 per cent. The pharmacopœial statement evidently proceeds upon the assumption that the opium employed in making the tincture is perfectly exhausted of its alkaloids, but this is not the case.

As it is quite possible that similar prosecutions, involving both character and reputation, and sometimes, perhaps, even more than this, may be instituted in other parts of the country, we think it best to take the earliest possible opportunity of placing the above facts on record.

We are, Sir, yours faithfully,

E. H. FARE.
R. WRIGHT.

Indian Opium in Pharmacy.

SIR,—The Financial Commissioner of Burma has by a recent enactment compelled chemists and druggists in this part of Her Majesty's dominions not only to contribute to the opium revenue by taking out a licence, but, what is far more serious, they are obliged by the terms of their licences to draw their supplies of this important drug from the Government, or, in other words, they must ignore the B.P. and use the inferior Indian opium, a prohibitory duty being placed on that imported from Europe. This ignorant and ill-advised measure has aptly been denounced as “an audacious attempt to alter the British Pharmacopœia,” and we think the subject is a fit one for criticism in your widely-read journal.

Rangoon, July 15.

Yours very respectfully,

HOSIE & Co.

Anglo-Indian writes:—In looking up the papers read before the last British Pharmaceutical Conference published in the “Year-book,” I find Mr. E. M. Holmes writing, “It is a startling fact that India, which produces an immense quantity of opium, does not supply this country with the drug used in medicine,” and “even the Malwa opium, which simply pays duty, never enters the retail drug-trade. Yet there is no reason why India instead of Turkey

should not supply the whole world with medicinal opium.” In the discussion that followed this paper Mr. Dott said that this opium “was unsuitable for making morphine,” and Mr. Conroy that “he thought that the Indian opium would make a very nauseous tincture, and that it would not be suitable for galenical preparations.”

Truly “a little knowledge is a dangerous thing”! What a pity no Anglo-Indian pharmacist was present at the Conference to explain to these gentlemen the position of opium in India! I think most Anglo-Indian pharmacists will agree with me that it is “not at all startling” that Indian opium is not found on the London market when considering the all-important question of price. The present market value of Indian opium, duty paid, is 13s. per lb., comparing with Turkey opium of admitted pharmaceutical superiority at 7s. per lb. And it is certain that the Indian opium will not be improved or altered one jot until the Chinese have altogether ceased from taking it, or until an English Government abolishes the duty, and probably makes India bankrupt.

The Chinese are taking less opium from India every year for three reasons. First, because they now grow the poppy, and make opium themselves; second, because they now import Persian opium, which, not paying a very heavy revenue, is cheaper than Indian opium; and, thirdly, because the Indian opium has had any amount of “cold water” thrown on it of late years, and the acreage under poppy-cultivation is constantly decreasing, to meet the wishes of politicians at home. If India should cease exporting opium altogether, the Chinese would buy it somewhere else, and then Persia and Turkey would reap the benefit. Your druggists' opium would rise enormously in value, for neither of the two mentioned countries would be able to meet the demand of the Chinese.

If the English Parliament should abolish the opium revenue, but not prohibit the export of the drug, then an immense incentive would be given to the growth of the poppy, and we should probably find China taking more than ever and in increasing quantities, and perhaps then the members of the British Pharmaceutical Conference would see the Indian opium replace very quickly both Turkey and Egyptian opium. Mr. Dott says Indian opium is unsuitable for making morphine; this is not quite correct. Morphine is actually made in India in small quantities, from the waste of the opium-factories, together with other alkaloids, as codeia, which alkaloids have actually been sold in London on the market.

Mr. Conroy is quite wrong in his ideas that the Indian opium is not suitable for galenical preparations, and that it makes a nauseous tincture. There are probably not one dozen pharmacists in India who use B.P. opium in their preparations. Malwa opium, which is universally used, makes a bright and by no means nauseous tincture, dries and powders into a fine light-brown powder, with a loss of 23 per cent. by evaporation, and yields high-class solid and liquid extracts. It is really pitiful to think that so much time was wasted discussing that one poor dried Bloomsbury Square Museum specimen exhibited at the Conference of 1891.

The Sale of Poisonous Medicines.

SIR,—I have just read your remarks *re* the sale of poisonous proprietary medicines in your issue of this date, and would like to state that I find your opinions fully endorsed by all qualified chemists to whom I have spoken concerning this question of illegal sale of poisons.

They are surprised at the reticence displayed by the Council in this matter. We heard a deal about prosecutions to be, but how little has been done, and how absurd appears the notion to send a circular to registered chemists! I hope the Council will not continue this half-hearted attitude towards such an important matter, but at least attempt—if not accomplish—something that will be to their credit and for the good of duly qualified chemists.

Yours very truly,

Fraserburgh, N.B., August 13.

A.P.S. (94/12.)

SIR,—The important notice issued by the Pharmaceutical Society on August 13 must cause surprise, perhaps consternation, right through the trade,

Looking over a list of sugar-coated pills issued by a firm of wholesale druggists, I find that out of ninety forms thirty contain a scheduled poison—all, be it remarked, medicinal doses not nearly the maximum, and to which it seems a practical absurdity to apply the word "poison." Yet the notice says all proprietary preparations, whether bearing a medicine-stamp or not. Possibly it may be argued that sugar-coated pills, made by any firm, and largely advertised with name and address, are not proprietary medicines.

Admit it to be an open or undecided question, it still hangs over the heads of pharmacists. If the word "poison" is to be applied everywhere to two pills that contain a small medicinal dose of any scheduled poison, surely the too common use emasculates it, and renders a potent danger-significant impotent.

The Council of the Pharmaceutical Society say the law is interpreted in the interests of the public, and warn all pharmaceutical chemists and chemists and druggists. Do they, or any other medical corporation, also intend to warn that large body of general practitioners who, for the most part, dispense their own medicines, and are not amongst the smallest distributors of coated pills? I trow not. Probably a worse case to defend than the Davenport could hardly have been found, because the very potency of chlorodyne certainly requires great caution, and the word "poison" might be well and legitimately applied; but there are dozens—probably hundreds—of good patent or proprietary medicines, containing only small doses of scheduled poisons, that have been taken to the public interest and benefit; and now, apparently, the time is approaching when that awkward Act of Parliament is to be enforced—I say awkward, because Acts of Parliament are not elastic, and often fail because of their inelasticity.

Whether the Council of the Pharmaceutical Society are supine on trade matters, or acting with determination to put down what has been allowed to go on nearly unchecked since the Pharmacy Act was first called into existence, the weapon with which they kill their foes should not also slay friends. I am, Sir,

A PHARMACEUTICAL CHEMIST. (95/15.)

August 15.

Samples from a Grievance³ Factory.

SIR,—Would it not be well if we could have a definite expression of opinion from one set in authority on several important and interesting matters, such as the following?—

1. Is it not fair to give notice to grocers, stores, &c., at the time of renewing their licences, that it is the intention of the Pharmaceutical Society to carry out the Poisons Act in reference to patents containing such poisons? As the Pharmaceutical Society has been asleep for at least ten years, they ought to apprise their victims that they are now awake.

2. Should we not know whether the maker or retailer is liable to fine?—or we shall have a large crop of perfectly innocent persons fined.

3. On what principle, or by what authority, is a person fined for selling a preparation when there is no B.P. form for it? *Vide* castor-oil pills, &c.

4. How to obviate the difficulty of a variety of judgments from Somerset House relative to labels liable to stamp-duty.

5. How to avoid being dragged into court for selling an article of rapid evaporation, and listening to an inexperienced analyst lecture on the diagnosis of some intricate disease, and finish by the presiding J.P. fining an innocent chemist for what neither he nor the analyst could avoid.

6. In case of mixing a bottle of liniment containing lin. aconiti meth., for instance, is it needful to state on the label "aconite—poison"; or is it needful to register or label "poison" a mixture containing spt. chlorof. or aqua chlorof.?

Yours very respectfully,

August 15.

TERPIDUS. (95/1.)

Water-analysis.

As a supplement to a reply to a correspondent in our issue of August 13, Mr. J. Alfred Wanklyn sends us the following historical note:—

A quarter of a century ago, when modern water-analysis

took its rise, the authors of new processes had exceptional opportunities, and it was just then that the now well-known ammonia process was started by myself with the co-operation of my colleagues the late Mr. Chapman and Mr. Miles H. Smith. Our first publication took place on June 20, 1867. Early on that day I was called before the Duke of Richmond's Water Commission, and later in the day I appeared at the meeting of the Chemical Society and read out the paper on our new process of water-analysis.

At that time the leading authorities were on the look-out for any method promising to throw light on a very obscure subject, and within a few weeks an opportunity of giving a practical demonstration of the new method was afforded me by Dr. William Allen Miller in the laboratory of King's College, and another opportunity was given to my colleague Mr. Chapman by Mr. Way in the laboratory of the Rivers Pollution Commission. And out of London our process was investigated by Dr. Parkes at Netley and by Dr. Angus Smith in Manchester.

The gentlemen just named were representative men. They were in positions of great trust, and they had the confidence of their professional brethren in a high degree. They were, moreover, Government officials—Mr. Way being, indeed, at that time the chemical member of the Royal Commission on the Pollution of Rivers. They all of them adopted our process of water-analysis, and conspicuously abstained from the employment of Dr. Frankland's, in the very important official investigations they were called upon to undertake. Mr. Way's analyses of waters for the Rivers Pollution Commission were shown to me by himself. Dr. Angus Smith's verdict on our water-analysis is to be found in his classical treatise on "Air and Rain." It is most generous and typical of the man. And no less favourable is Dr. Parke's account of our process in his celebrated book on "Hygiene." Dr. Miller's appreciation of the ammonia process was well known to his contemporaries.

The same causes which had led the eminent chemists just named to adopt our process and to abstain from the adoption of Frankland's process have operated in a similar manner upon other chemists; and in later years, when Sir Henry Roscoe was called on to analyse Thirlmere water, he used the ammonia process and avoided Frankland's combustion process, as I had the satisfaction of hearing with my own ears in the parliamentary committee-room when the Manchester Water Bill was before Parliament. In point of fact, the ammonia process of Wanklyn, Chapman, and Smith is all but universally adopted, and has proved itself to be especially adapted for official employment.

New Malden, Surrey, August 15.

The British Pharmaceutical Conference.

SIR,—The departure from the usual course of having the British Association and the Conference meetings concurrently may have some advantages; but I have my doubts about its success generally, for the British Association offers many inducements, by the facilities to inspect public buildings and factories, not so readily obtained by the Conference. The fact of a fortnight intervening between the British Association and Conference meetings prevented me—as it would probably others—from going to Edinburgh. I was with the Conference in 1871, and it may not be altogether out of place if I record an incident of the visit, which was strongly impressed on my mind at the time, and it would be well to avoid next week. By the Committee of Management a public dinner was given at the Royal Hotel—6s. 6d. each: not too much, although it was quite enough for the spread. The great cause of complaint was the mistake of making a select table for the local men and some few others, whilst the lower end of the table was very much neglected. A well-known member of the Council sat next to me, and a medical man on the opposite side of the table; both complained of the want of courtesy, which was evidently so different in every respect at the upper end of the room. Let the local men be distributed amongst the visitors, and show that there is no partiality manifested. My only motive in writing is to guard against such a complaint as was then made by the medical man, who said, "Had I known that I should be thus treated I would not have come."

A MEMBER OF THE CONFERENCE. (95/66)

Some Rough on Rats, for Pity's Sake!

SIR,—The subject of poisons, engrossing and interesting as it is just now, has its ludicrous side, as the enclosed charitable appeal will show. Our correspondent is unknown to us, but a "charitable" discretion would exclude his name or neighbourhood from any quotation you may care to make from his pathetic appeal.

Yours faithfully,

1 & 3 King Edward Street, F. NEWBERRY & SONS.
August 16.

[COPY.]

August 12.

GENTLEMEN,—Will you kindly give us a small quantity of your noted "Rough on Rats" for our American sale?

I am curate-in-charge of —, a district situated on the unhealthy marsh-land near —.

We have 7,000 people in the district, all poor working-class people, many of whom are half-starved and ill-clad during the whole of the winter, owing to the scarcity of work at the —, and in the building-trade.

I have a "Parochial Magazine," of 600 monthly circulation, and I will gladly put 600 of your loose advertisement slips in the September issue.

The Bishop of —, the Ven. Archdeacon —, and the Rev. Canon — are well acquainted with our work here, and would, I am sure, give you a favourable account of our endeavours on behalf of the people of this district, until recently known as "—," and certainly one of the poorest districts in the whole of —.

I know you must have many of these appeals; but do, please, give a favourable answer to this one, and

Believe me,

Yours faithfully,

Druggists' Troubles in British Guiana.

We receive the following from a druggist in Georgetown. This confirms an article which we published last week:—

SIR,—Allow me to bring before the public the action of the British Guiana branch of the Medical Board. Some time back the Governor, with the consent of the Court of Policy, passed a Bill, or ordinance, enacting that, after paying the licence to keep a drug-store, the licensee should be further required to pay the sum of \$25 (5*l.* 4*s.* 2*d.*) for a licence to practise as a druggist—that is, to compound doctors' prescriptions. The latter end of section 17 reads thus: "Provided that a licence to sell drugs under this or the preceding section shall not entitle a person to practise as a druggist in the dispensing or compounding of drugs." In British Guiana are many druggists of long standing, some of whom hold certificates from the Medical Board of England, the Westminster College, &c. One, I believe, claims to hold one from the Medical Board of Trinidad. This gentleman, having served seven years as chief dispenser at the Colonial Hospital, Trinidad, the same in Grenada, two years as dispenser on board one of Her Majesty's ships, and having had a drug-store about twenty years, claimed exemption from the required examination (which was required by the surgeon-general of the Medical Board, or branch of the Medical Board), and showed his certificates and diplomas from his College in America, where he had studied. After a lot of official discussion the Board refused to recognise any certificate from the Trinidad Board, which is one of the oldest in the West Indies. I think the Trinidad Board should take up the matter, and put it before Her Majesty's Secretary of State, and let us know if a branch, which must necessarily spring from one root, should not recognise the fruits of a greater branch of the same tree. This is an isolated case, which has come direct under my notice. A gentleman, holding a certificate from some college in England, was foolish enough to submit himself for re-examination, and thus the druggists, who were holding out against this action of the Government, nearly got squashed; but most, if not all, are pretty determined to hold out. The Chemists' and Druggists' Association have held different meetings, and the only thing arrived at is that we await "dormant" the action of the Government or Medical Board. I am unacquainted with the meaning of the word "dormant" as used here; but I suppose it means to lie still, and let the Board or governors do as they please. If so, I must say

that the Chemists' and Druggists' Society is not doing all it should do.

If you agree with me, Mr. Editor, that this matter requires the intervention of the Secretary of State, you, as advocate for "justice," should make endeavours to bring to the notice of the proper authorities the action of the Medical Board.

Yours very truly,

SUB ROSA. (91/70)

Joseph Cowen's Voice-mixture.

SIR,—I trust that none of your West-country readers have had to dispense the following prescription which I take from the *Newcastle Weekly Chronicle* of August 6:—

RESTORING THE VOICE.

2*d.* of clarified honey
2*d.* of paregoric
2*d.* of oil of vitriol
2*d.* of oil of almonds
and
2*d.* of syrup of squills.

Mix.

Dose: A table spoonful.

The above being the advice given to "Sufferer, North Devon."

J. BURT.

Worthing.

Against Home-rule in Pharmacy.

SIR—I desire to write you, as you are the official organ of the Irish Pharmaceutical Society, regarding their School of Pharmacy.

Can the Council not arrange to give a series of prizes or medals to encourage students to attend their school, especially those students from the North who, like myself, have no school of pharmacy to go to? I may take a course at Queen's College under Dr. Whitley, but it is not very suitable, as the Queen's College course is more for medicals.

I envy those pharmacy students attending Bloomsbury Square School, and am thinking that it is not at all a good thing for Ireland to have Home-rule in pharmaceutical matters.

I trust you will use your influence in a leading article, and as best you can stimulate the Irish Pharmaceutical Councils. A STUDENT OF THE IRISH SOCIETY. (92/21.)

August 10.

The Half-price Closed Letter Company (Limited).

Mr. John Brothers, of Ashford, informs us that he has been summoned by the Half-price Closed Letter Company (Limited) to show cause why he should not be required to complete the purchase of one of the debentures of the plaintiff company. He asks that others who are or may be similarly threatened will communicate with him in order that a joint defence may be organised.

LEGAL QUERIES

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1882, pp. 151-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

94/16. A. C.—The Pharmacy Act applies to the sale of veterinary medicines if they contain scheduled poisons.

94/66. Chlorof. asks: "Is it necessary, in accordance with the Pharmaceutical Society's circular, to label quinine and iron tonic made with *aq. chloroformi* 'Poison'?" "A. C." (96/1) and "J. H." (96/22) ask similar questions. [Certainly it is, if that document be read literally; but the circular is not an Act of Parliament, and we could not compliment the chemist who would so label such a preparation.]

95/11. *H. X.*—An unregistered person may describe his shop as "drug-stores," and may (in Great Britain, but not in Ireland) compound prescriptions which do not contain any scheduled poison.

94/72. *Amicus.*—See answer to "H. X." No substance is legally a poison if it is not scheduled in, or in accordance with, the Pharmacy Act.

94/56. *Hydrometer* asks: "If a customer enters a so-called drug-store and asks for paregoric elixir or paregoric, and is supplied with an article labelled 'Paregoric Substitute,' is not the seller liable under the Food and Drugs Act?" [The label would probably ensure the dismissal of the summons. It certainly would if the magistrate thought it sufficiently explicit.]

93/19. *Radix.*—(3) The possessive case would probably render the preparation liable. (4) The title "soothing-syrup" by itself is not registrable.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

83/40. *W. T. C.*—See our issue of June 4, page 819, for a recipe for liq. santal. flav. co., which, we presume, is what you want.

89/14. *Bloxwich.*—You can improve the weed-killer by adding more arsenic. Some of the popular kinds contain an excess of that, whereas we have aimed to give a perfect solution.

89/13. *Nemo.*—The Improved Formula for Pulv. Glycyrrh. Co. which Professor Attfield has commented upon in his Pharmacopœia reports is as follows:—

	Parts
Senna	2
Liquorice	2
Fennel	1
Sublimed sulphur	1
Sugar	2
Cream of tartar	4

Mix.

90/29. *Statim.*—You will get the information regarding the apothecaries' assistants' examination from the Secretary, Apothecaries' Company, Blackfriars, London, E.C.

90/23. *Eucalyptus.*—Dugong Oil is an oil made from the blubber of a large fish (strictly speaking, a mammal, *Helicore Dugong*, Cuvier), which inhabits the Australian and East Indian waters. At one time the oil was much spoken of as a substitute for cod-liver oil, but the price (from 10s. to 20s. a gallon) is prohibitive.

91/22. *Cuprum.*—Verdigris Ointment for veterinary purposes is made 1 drachm to 1 oz. of lard. This is suitable for castrations.

91/60. *Lancashire.*—As good a Plate-powder as any you can have is plain precipitated chalk. It should be used with

a mixture of equal parts of solution of ammonia, methylated spirit, and water.

91/39. *B. Cunningham.*—(1) The quickest method of filtering or clearing Essence of Rennet is to shake the strained liquor up with fuller's earth, 1 oz. to the quart, and set aside for several days to clear. Decant the clear portion and filter the rest. (2) Why do you ask?

91/20. *Kinarastader.*—Thanks. We have seen it before

92/19. *Radix.*—(1) White Liniment.—February 13, page 249, and April 2 page 499. (2) Corn Paint.—February 23, 1891, page 321.

93/29. *G. D. Coy.*—(1) See our issue of May 23, page 783. (2) Rat-paste without Phosphorus.—Try this:—

Tartar emetic	5i.
Powdered squill	5i.
Carbonate of barium	5ii.
Beef dripping	3iss.

Mix well.

93/27. *Nux Vom.* asks: "In a prescription of recent date what should be dispensed for 'Liq. Tarax'?" [See April 3, 1892, page 613.]

93/74. *Subscriber.*—We have not a working formula for jelly squares. The finest gelatine (1), sugar (6), and water (20) are the principal ingredients, with flavouring and colour. The figures in parentheses are quantities you may begin experimenting with. Add 20 grains of boric acid to the lb. for preservation.

95/17. *Eddie.*—You can easily make a cheaper cud-ball if you wish it from the formula published August 13, 1888, by substituting pulv. lini for the gran. parad. The balls should not be wrapped.

123/92. *Dens.*—Silver Marking-ink.—See THE CHEMIST AND DRUGGIST, November 15, 1890, page 697.

93/53. *H. D. K.*—Tincture of Coca.—We do not know any recognised formula for this, but it may be made 2½ oz. to the pint of proof spirit.

93/61. *Nur.*—(1) We have seen the caramels advertised in American papers, and that is all we know of them. They are of the nature of chewing-gum, we think. (2) "Nux" also asks: "Would bicarbonate of potash put in flour-paste give the latter the property of resisting the action of wet and rough weather, and so be advantageously used for outdoor bill-posting?" Has anyone practical experience of this?

94/47. *H. G. H.*—(1) Try Messrs. T. Christy & Co. for margosa oil. (2) Women who wish to become dispensers should pass either the Apothecaries' Assistants' examination or the Minor. There is no sex-distinction in either of them.

94/23. *C & D.*—We have never heard of any firm which supplies pharmaceutical apparatus on the "instalment system," but most firms in that trade give credit to trustworthy people.

95/40. *W. H. H.*—Turpentine is so cheap now that when it becomes coloured by keeping in iron vessels it is scarcely worth the trouble decolorising with chemicals; but you may try shaking up with 2 or 3 oz. of fuller's earth to the gallon. Shake now and then for a few days, set aside to clear, and decant.

94/53. *Heliotrope*.—You should read the medical information given in our last Educational number (September 19, 1891), or in the one which we shall publish next month, where you will get all the particulars you require.

95/18. *Rusticus*.—It is the polish that has been taken off the marble. Use putty-powder and water for repolishing it, finishing off with putty-powder and olive oil.

94/63. *Frost*.—The Depreciation of the Freezing-point of Water by the addition of the mineral acids is so small that we question the utility of adopting the principle in filling show-carboys. Glycerine and methylated spirit are much better.

59/37. *Enquirer* (Sydney) sends a sample of a Cerate for Selfasts and Fistula in Horses, made by a vet. now dead. The custom was to apply a plaster of the cerate six or seven days, and at the end of that time, when the plaster was taken away, the growth came with it. We make the cerate out to be:—

Chalk	3j.
White arsenic	3j.
Linseed oil, enough to make a stiff paste.	

94/65. *Ext Bellad.*—You will find Dunstan and Ransom's Belladonna-assay Process described in THE CHEMIST AND DRUGGIST, 1885, page 509, and in the "Year-Book" for 1885. Briefly it is this: Take 2 grammes [better, five; small quantities mean very delicate balances], treat with dilute hydrochloric acid until as much as possible is dissolved, filter through glass wool, and wash the wool with dilute acid. Treat the acid liquor with chloroform until the latter ceases to dissolve anything. Reject the chloroform washings. Add ammonia in excess to the acid liquor, and extract the alkaloids with chloroform, which evaporate and dry at 100° C.

95/27. *Gympie*.—You will find suitable books mentioned in the DIARY book-list. We should think that they would not be obtainable in Queensland.

95/63. *R. W.*—You express yourself so carelessly that your letter is almost unintelligible. Please give us your views more clearly.

95/62. *Herbalist*.—Mr. A. R. Fox, of Snig Hill, Sheffield, the President, or Messrs. Potter & Clarke, the wholesale herbalists, of Raven Row, E.C., will probably be able to give you all particulars of the Herbalists' Association. Membership does not entitle anyone to sell scheduled poisons.

95/68. *N. Clarkson*.—See reply to "Amina," on August 6, and, for marking-ink, reply to "Dens" in this issue.

95/56. *Indian Ink*.—Please refer to page 829 of THE CHEMIST AND DRUGGIST, December 13, 1890, for a reliable method of removing tattoo-marks.

84/2. *Lac*.—Salicylic acid appears to have been used for preserving the milk, which is the cause of the pink colour.

80/7. *Rosa Alba*.—The white Rose Pomade appears to be made with white vaseline and oil of rose-geranium.

90/46. *Cocoonut*.—We do not think that the rancid cocoonut can be restored to its fresh condition.

70/72. *H. C.*—The Nerve-powder is a dose of anti-febrin.

95/48. *Menthol*.—(1) Most of the preparations For Keeping the Hair in Curl are of the nature of Bando-line, i.e.—

Powdered tragacanth	3vj.
Glycerine	3j.
Perfumed spirit	5i.
Water to	0j.

M.S.A.

This is a popular article, but we question its utility. Still, it is more honest than one expensive hair-curler which we examined some time ago, and which turned out to be plain lime-water. But there was virtue in that even, for it would help to deprive the hair of its natural oil, which is the real preventive of curling. We should be inclined to pin our faith to a resinous dressing, such as—

Tinct. myrrhæ	3j.
Aq. lavandulæ	3ij.

M.

This to be sprayed upon the curls. (2) The secret of keeping the Contents of Smelling-Bottles from becoming liquid is to use translucent pieces of carbonate of ammonia and alcoholic solution of ammonia.

72/56. *Jacobus*.—We cannot detect any active ingredient in the sugar-powder.

76/22. *Harold*.—A Cough-mixture similar to the one you send can be made as follows:—

Syrup of squills	3j.
Syrup of black currant	3i.
Tincture of senega	3i.
Conc. infusion of orange	5ss.
Water to	3viij.

Mix.

Dose: A dessertspoonful.

139/2. *Mineral Water*.—You may make a similar essence for Aërated Stone Ginger beer as follows:—

Tincture of capsicum	3ss.
" " lemon-peel	3vj.
" " orange	3iij.
Strong tincture of ginger to	3viij.

Mix.

An ounce of tartaric acid, and 1½ oz. of the essence to a gallon of syrup. We cannot give a formula for the champagne essence.

91/3. *H. A. G.*—The Solution for Destroying Fungi on Plants is a solution of calcium sulphide. Boil together ½ lb. of lime and 6 oz. of sublimed sulphur in a gallon of water, and decant the clear liquor.

Information Supplied.

95/30. *Tr. Ferri Pyrophos.*—When Dr. J. Kidd orders tinct. ferri pyrophos. he refers to the first decimal attenuation (1 in 10, or 1x), prepared as follows (see Keene & Ashwell's "Companion to the Homœopathic Pharmacopœia") :—Dissolve 60 grains pyrophosphate iron in 8½ fluid drachms of distilled water, and then add 1 fluid drachm of rectified spirit. This causes a precipitate at first, but it is redissolved by shaking. C. S. ASHTON.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

93/48. "Ship" brand of perforated toilet-paper: who makes?

92/6. Sulphur-cakes for fumigating (composed of sulphur and shavings): who makes?

94/15. Carbolineum: what is it, and where obtainable?

93/4. S. asks: "What can be the explanation of the fact that ammon. mur. will make solder run and adhere perfectly to copper, whilst the ammon. chlor. pur. fails utterly?"



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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SUPPLIED regularly to every member of the following Societies, who have adopted *THE CHEMIST AND DRUGGIST* as their official organ.

The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

THE drug markets are fairly active, and the demand for disinfectants especially keeps particularly brisk. Opium and its preparations also are in a condition of mild excitement.

SOME unqualified patent-medicine dealers have met at Manchester and formed a Patent Medicine Defence Association to defend their rights, "countenanced from time immemorial," as they quaintly express themselves.

IN our correspondence will be found letters from Mr. J. C. Umney, of Hull, Mr. Linford, and Mr. Brown, of Dover, carrying forward the discussion on the assay of tincture of opium raised in our last issue by Messrs. Farr and Wright.

WE also print a letter concerning a cream of tartar transaction, which opens the interesting question whether a railway company ought to take the weight declared by the sender of goods for granted, or check it before the merchandise is despatched.

MR. ERNEST HART wishes it to be known that the credit of initiating the poisonous proprietary medicines prosecutions belongs to him and his Parliamentary Committee of the British Medical Association, and not to the Pharmaceutical Council.

WE print the circular concerning poisonous proprietary preparations issued last week by the Pharmaceutical Society, and also a rejoinder to it published by the Association of Owners of Proprietary Medicines, in which the latter practically challenge the Council's interpretation of the law.

THE Council of the Irish Pharmaceutical Society obtained judgment for penalties, at Bangor (co. Down) and at Dublin, against chemists and druggists who had compounded medical prescriptions. In one case at Bangor they were defeated, the magistrates considering that their evidence was not sufficient.

THE report of the twenty-ninth meeting of the British Pharmaceutical Conference at Edinburgh occupies a considerable space in this issue. It was a most successful meeting, and the participants seem to have thoroughly enjoyed it. Mr. Stanford (the President's) address was based on the question whether pharmacy was keeping pace with other arts and industries in progress and development. He gave an interesting survey of many allied fields of labour in dealing with this problem, but did not come to a definite decision. The Conference has decided not in future to follow the British Association. Next year's meeting is fixed for Nottingham, with Mr. Octavius Corder, of Norwich, as President.

AT THE COUNTER.

"BULLROCKS AND HONNEY" is the only etymological novelty in a little parcel sent to us from Hendon.

"INCEK-POWDER," "Hogs iron of zinc," and "Coff mixture for baby 2 yers old he as ouping coff" are the pick of some specimens from Wolverhampton.

A LEOMINSTER correspondent sends us an order for "Three Peneth Cross off Supplement," which came to his shop.

A MADRAS subscriber, who remarks on the notable postal feat of delivering *THE CHEMIST AND DRUGGIST* of June 25 in Madras on July 11, sends us two orders received from army surgeons, which show that they do not all keep up to the level of their examinations. One M.D. writes: "Please send me Salacitate of Soda 3'j.;" another says: "Please make up subscription given to bearer."

THIS WAS NOT A PRESIDENTIAL PUN.—"That's what I call a failing test," said a journalistic colleague of *THE CHEMIST AND DRUGGIST* man, when Mr. Allen and Mr. Naylor succeeded in not getting the bromine caffeine test.

English News.

Boots (Limited).

The first general or statutory meeting of the shareholders in Boots (Limited), manufacturing and retail chemists, of Nottingham, Sheffield, Derby, Lincoln, and other towns, was held at the George Hotel, Nottingham, on August 18. Mr. J. Duckworth (Mayor of Rochdale) was in the chair, and in a lengthy speech narrated the circumstances under which the business had been converted into the present company. The old company comprised eighteen members, and the shares were 100*l.* each. It had been considered, however, wise to induce customers to invest in a concern where there would be a good return and every guarantee for the safety of the money. The shares were issued at 1*l.*, and already over 10,000 shares had been issued, mainly to customers. The shares were now worth 25*s.*, and were likely to be worth more before very long. An important feature of this company was that the trading would be carried on in some nine or ten towns. There were, he thought, twenty-four establishments already in some nine different towns, and they could not conceive of trade being bad in the whole of those towns at one period. In every town where the company thought fit to go, one high-class establishment would be fitted up second to none in the town, and branches would be started if thought desirable. Although the high-class drug-trade had been a kind of close preserve in the past, it was clear to the company and others that it would have to be done on different lines in the future. So long as the trade could be carried on honestly and on business-like principles, and to the evident good of the public, they (the directors) thought that they might be in it, and have a share of the trade as well as anyone else. The rest of the business was purely formal.

Fatal Accident at Godalming.

An inquest was held at Godalming, on August 16, upon the body of Herbert Dawson Norman, the son of Mr. Councillor Norman, of Godalming. It appears that the little boy (he was not quite five years of age) was sent on an errand on the previous morning, and while walking along the street paused a moment to see a lad, standing on a pair of steps, clean the windows at Mr. S. Edwards' drug-stores. Suddenly the lad overbalanced himself and fell to the ground with the steps, the latter knocking down Mr. Norman's little boy and causing severe injury to the child's spinal cord. The poor little fellow was carried into Mr. Edwards' shop and medical aid summoned promptly, but the child expired shortly after. A verdict of accidental death was returned, and the jury expressed their sympathy with the child's parents.

Ernest Hart Claims the Glory.

Mr. Ernest Hart, as chairman of the Parliamentary Committee of the British Medical Association, seems to think his friends of the Pharmaceutical Council are a little too much monopolising the glory of the recent chlorodyne prosecution. He writes to the *Pall Mall Gazette* in reference to a statement which had been published in that paper on August 15, that "it is nowadays well known that care for the public safety, in so far as the sale of poisons by retail is concerned, devolves upon the Pharmaceutical Society of Great Britain," and, referring to the recent circular issued by the Society, complains that the Council does not state what is a fact—namely, that for a long series of years that Society has not put in force its power in respect to this class of poisons contained in medicines, and that the matter has been taken up now only at the urgent instance of the Parliamentary Bills Committee of the British Medical Association. That, as chairman of that committee, he submitted to the Treasury a list of patent medicines which were proved, by special analysis, which he instituted, to contain poisonous substances, but which were sold without the label "Poison." As the result of this action, the Treasury, having previously verified certain of the analyses, undertook a prosecution at the Bow Street Police Court, and obtained a conviction. Mr.

Hart adds that it was he who subsequently requested the Treasury to call the attention of the Council of the Pharmaceutical Society to their statutory duty in this respect, and, further, communicated himself with the President of that Society. He expresses thanks to the Pharmaceutical Council for having "after many years of hesitation and delay," commenced to perform their statutory duty for the protection of the public; but he thinks it ought to be known that the present action is due to the initiation of his committee.

An Error in the "Corner for Students."

In last week's "Corner for Students" a rather important printer's error was allowed to pass. It occurred on line 20 of the second column of page 254. Mr. Moss was commenting on the importance of cultivating the sense of smell in detecting certain gases, and he is made to say, "It must be remembered, too, not to confound mineral gases or vapours with substances in the pure state." For "mineral" in this sentence "mixed" should be substituted.

"Immemorial Rights" in Infringing the Law.

At an influential meeting of grocers and patent-medicine vendors held at the Queen's Hotel, Manchester, on August 18—Mr. W. Green, of Bolton, presiding—the question of the so-called poisonous patent medicines was fully discussed, the meeting being entirely unanimous in the view that vendors should be supported in continuance of their business as countenanced from time immemorial. The organisation of the Patent Medicine Defence Association was completed, the officers being duly elected and a plan of procedure settled upon. Mr. W. J. Leggett, of Liverpool, was elected secretary.

The Chemist's Suicide at Hull.

The "chemist" Behrandt, whose suicide at Hull, when he was about to be arrested, we reported last week, was a German, and had been living in Southampton about six months as assistant with a firm in Oxford Street, Southampton. Before leaving that town he went to several persons he knew and asked them if they had watches to sell. It is alleged that he found six people in that position, and the value of the timekeepers they had to dispose of varied from 20*l.* to 3*l.* He is alleged to have represented that he knew of a captain who wanted to purchase a watch, and if he might show him this particular one, no doubt he would purchase it. The watches were duly handed over, as was also a valuable ring. Behrandt then left Southampton and went to London. From there he was traced to Grimsby, and from Grimsby to Hull.

The Gainsborough Poisoning Case.

At the inquest on the man Morley, who was apparently poisoned in a public-house at Gainsborough by strychnine, evidence as to the purchase of the poison for the man Morgan, who is under arrest, was given. George Bennett, a horsekeeper, said he was in the public-house when Morgan called him and asked him to get some poison to kill two dogs with. He went to Mr. Collitt's drug-shop, but was told he would have to get a witness. He got a man named Scott. Both signed the book. He paid 6*d.* for the poison, which he gave to Morgan. Mr. Wm. Collitt, chemist, said the last witness came to his shop about 7.30 o'clock on Monday night, and asked for some poison to destroy two dogs. He refused to supply it until Bennett got a witness to come known to both of them. Walter Scott, whom he knew, came in with Bennett, and witness gave him sufficient to destroy two dogs. Witness told him to cut some meat up fine, and sprinkle some of the powder upon it. He did not weigh it but guessed it. It was about ten grains of pure strychnine. It was wrapped in blue paper, with the word poison upon it. The sale was duly booked by witness. The mark had been made more distinct by witness. He did not often give as much poison as he had given them. By a Juror: How many human beings would that destroy? Witness: If they got it all, six. In answer to the Coroner, witness said they gave what they thought proper to destroy a dog, it was left to their own discretion. It was usual to guess at the quantity. The amount he would consider sufficient for a dog of the ordinary size was from $\frac{1}{2}$ to 1 grain. There were 10 grains in the powder supplied. He gave more than was necessary because of the waste.

A Chemist Objects to Vaccination.

At Caistor Petty Sessions, Mr. Michael Hill Skuine, chemist, of Keelby, was summoned for disobeying a magistrate's order to have his child vaccinated. Defendant pleaded guilty, and a fine of 1*l.* and 7*s.* costs was imposed.

An Aversion to the County Analyst.

At the last meeting of the Evesham Rural Sanitary Authority the inspector, referring to a house at Badsey, occupied by Mr. Hunt, stated that he had asked Mr. Hunt to have a sample of the water taken in his (the inspector's) presence for analysis. Mr. Hunt, however, said that it had been analysed once, that the sample was taken in the presence of a creditable witness, and he declined going to any further expense. Mr. Hunt appeared before the Board, and said the water was analysed by Mr. Doeg, and the Chairman said that Mr. Doeg was not the authority for the Board. Mr. Hunt said he did not want to have the water analysed by any of the Board's men, as they would be sure to condemn it; but it was stated that only that day they had a case in which the analyst had passed a sample of water. Mr. Hunt remarked that Mr. Doeg's fee was one guinea, and the Chairman told him that he could have had it done by the Board for half that amount. Mr. Hunt then said that as he had to pay, he should think he could do as he liked, and the Chairman warned him of the expense it would entail if they had to take proceedings against him. He could, however, send the water to Mr. Doeg if he liked, but it must be taken in the presence of the inspector and sealed by him.

Cycling, Golf, and Cricket.

On August 18 seven members of the Cycling Club connected with the Midland Counties Chemists' Association wheeled to Coventry, and were entertained by Mr. W. F. Wyley at his mansion, "The Charterhouse," which is full of interesting reminiscences of the Carthusian Friars, whose abode it was in Mediæval times.—The Dick monthly medal, presented to the golf section of the Chemists' Athletic Club of Edinburgh, will be played for on September 2 and 3, on the Braids. Intending competitors are requested to send their names to Mr. J. Blake, of Leith, hon. sec. of the Athletic Club.—The return match between the elevens of Richardson & Co., Leicester, and Wyleys & Co., of Coventry, was played at Leicester on August 13. The Coventry team batted first, and were dismissed for sixty-five runs, Warner taking six wickets for nine runs. The Richardsonians played the Coventry bowling with confidence, and secured an easy victory by four wickets. A substantial repast followed. It is proposed to make the match an annual one.

Poisonous Proprietary Medicines.

It has been suggested to us that for purposes of reference in the future it is desirable that the circular issued last week by the Pharmaceutical Society should be preserved in this journal. It runs as follows:—

Pharmaceutical Society of Great Britain,
17 Bloomsbury Square, London, W.C.,
August 13, 1892.

IMPORTANT NOTICE TO PHARMACEUTICAL CHEMISTS AND CHEMISTS AND DRUGGISTS.

DEAR SIR,—I am instructed by the Council of this Society to inform you that the Public Prosecutor has called the attention of the Council to the decision given by Mr. Lushington, at the Bow Street Police Court, London, on April 30 last, in the case of *Regina v. Davenport*. The effect of that decision is that Proprietary Preparations containing poisons within the meaning of the Pharmacy Act, 1833, although bearing a medicine stamp, are not exempt from the restrictions and conditions, as to sale by retail, imposed by that Act.

The Council has, in consequence, instituted proceedings against several large shopkeepers (not registered as chemists and druggists) for keeping open shop for the sale by retail of poisonous proprietary preparations, which they have been in the habit of selling to the public in addition to other commodities. Penalties have been paid by these shopkeepers and undertakings given to discontinue the practice.

Having regard to the importance of this interpretation of the law as affecting the safety of the public, the Council deems it right to warn all pharmaceutical chemists and chemists and druggists that all proprietary preparations containing poisons in part 2 of Schedule A of the Act, whether bearing a medicine stamp or not, must be labelled "Poison," and the name and address of the seller be affixed thereto. In the sale by retail of pro-

prietary preparations containing a poison within part 1 of the Schedule the further conditions imposed by Section 17 of the Pharmacy Act, 1833, must be complied with.

In the case of proprietary preparations, supposed to contain a scheduled poison not prepared by the retailer himself, it will be necessary for registered persons to protect themselves from incurring penalties by requiring a declaration from the wholesale houses who supply them to the effect that the preparations do or do not contain such poison; and if they contain a scheduled poison, whether such poison is included in part 1 or part 2 of the schedule.

I am, dear Sir, yours faithfully,

RICHARD BREMRIDGE,
(Secretary and Registrar.)

* * * A list of poisons within the meaning of the Pharmacy Act, 1833 and the conditions under which they may be sold by retail, is printed on the other side for your guidance. [This corresponds with the list of poisons published in the Society's Calendar.]

FOR THE DEFENCE.

The following has been issued within the past few days:—

Association of Owners of Proprietary Medicines,
6 Great Winchester Street, Old Broad Street,
London, E.C., August, 1892.

Secretary, Walter Whitaker.

In consequence of various enquiries, the Association of Owners of Proprietary Medicines beg to intimate their opinion on the following points to be:—

1. That the late prosecution of *Reg. v. Davenport* settled nothing beyond the fact that a preparation of morphia and chloroform came within the clauses of the Pharmacy Act, 1833.
2. That the Association entirely disputes the assumption that, because a patent medicine contains a minute quantity of poison, it is thereby a poison within the meaning of the Act, and is prepared to carry each suitable case as it arises to the highest court.
3. That until a proprietor labels his medicine "Poison" it is unjustifiable to assume that it requires a "Poison" label, and such medicines may, in the opinion of the Association, be sold without any reference to the Pharmacy Act.

Fires.

The Mortimer Street Dispensary, Trowbridge, conducted by Mr. Groves, has been totally destroyed by fire.

On Wednesday the Brownhills Chemical-works was totally destroyed by fire—the damage is covered by insurance.

Wine Licences.

At Brighton Brewster Sessions on Tuesday, licences to sell wine were granted to Mr. Stephen Barnabas Hardcastle, chemist, 71 East Street, Brighton; and to Mr. William Else, chemist, 52 King's Road, Brighton; and at the Folkestone Brewster Sessions on Wednesday a wine licence was granted to Mr. Edward James Bishop.

New Postal Orders.

The following notice has been issued to the public:—

General Post Office, August 23, 1892.

On the 1st of September next a new form of postal order will be brought into use in place of the present form of order, which will cease to be issued on the 31st of August. The words "Not negotiable" will be overprinted on the new form, in order to indicate that it is to be used only for the purpose of making a direct remittance.

A new regulation has also been made under which the holder of a postal order may defer payment for any period not exceeding ten days from the date of issue by writing across the face of the order the words "Payable after — days." In such case, however, the name of a money order office at which the order shall be paid must be inserted in the body. This regulation is printed on the face of the new order, and comes into operation on the 1st of September. On and from that date, therefore, an order bearing the words referred to will not be paid until the period specified has expired.

Irish News.

Drug contracts.

The Board of Guardians of the Ennis Union have appointed Mrs. Seymour, of the Medical Hall, Ennis, contractor for the supply of drugs, &c., to the various dispensaries of their districts. Messrs. Harrington, Cork, and Leslie & Co. and Hunt & Co., of Dublin, also sent in tenders.

Owing to the non-supply of drugs and medicines by the holder of the contract, the Board of Guardians of the Lurgan Union have annulled the contract, and appointed Mr. Joseph Calvert, pharmaceutical chemist, Lurgan, contractor for the remaining period of the term of the agreement.

Recovered from 4 oz. Liq. Opii Sed.

The Medical Officer of a Poor-law Dispensary in a Midland town in Ireland, lately swallowed 4 oz. of liq. opii sed., but, being detected at once, his life was saved by the exertions of his medical brethren. A local wag says it must have been "contract" liq. opii sed. which was taken, and that the contractor should get the Royal Humane Society's medal for saving life.

From Chemist to Doctor.

Mr. James A. Walsb, M.P.S.I., proprietor of Graham's Medical Hall, Westmoreland Street, Dublin, has lately passed the final examination of the College of Surgeons and Physicians of Edinburgh, and intends practising in Dublin.

Certificates Wanted.

The certificates to act as assistants to pharmaceutical chemists have not yet been issued to the successful candidates for the qualification, though some of them are four months over-due.

French Pharmaceutical News.

(From our Paris Correspondent.)

TOBACCO-POISONING.—A resident of St. Laurent d'Oingt, named Barthélémy Carré, 74 years of age, met with his death last week in a sad way. Feeling thirsty, he took a drink from a bottle which he thought contained wine, but which really contained tobacco-juice. He expired within an hour in the greatest agony. A pharmacist administered emetics but they had no effect.

THE OPERA DENTIST.—The French Minister of Fine Arts has just had the task of appointing a dentist to the Opera House in Paris, the former titular being recently deceased. It appears that the position is without remuneration, but it gives free access to the theatre and to the side wings, and is much sought after. The *Figaro* takes occasion to remark that the ladies of the ballet probably rather need the services of the chiropodist.

EXPLOSIONS OF ALCOHOL IN PARIS.—Paul Delune, the assistant who was burned by the explosion at M. Billault's Chemical Laboratory, Place de la Sorbonne, last week, died of his injuries at the Hotel Dieu on Friday night. The explosion of another carboy of alcohol caused the commencement of a fire on Monday last at M. Bornet's pharmacy, 20 Rue St. Dominique. The flames spread rapidly in the dispensary, but the firemen were soon able to obtain the mastery. A laboratory assistant had placed the carboy too near a lighted stove.

PHARMACY AT MARSEILLES.—During a recent visit to this southern city, the correspondent of THE CHEMIST AND DRUGGIST had occasion to remark that the pharmacists there are thoroughly abreast of the times, and the profession evidently flourishes in a way that many other towns might envy. But competition is keen, and this has led one enterprising pharmacien to monopolise the tramway-tickets of the town. On one side of the ticket the name and address of the pharmacy is given, and on the other is an abridged price-list of the popular specialities. They are all "cut," but not to a desperate extent.

A NITRO GLYCERINE EXPLOSION.—The manufactory of nitro-glycerine at Cugny, near Fontainebleau, belonging to the Société Française des Explosifs, was completely destroyed by an explosion last Thursday. The premises were built of brick and isolated by a distance of at least fifty yards from other buildings. Three workmen only were employed in the manufactory; they noticed that a tap of a pipe containing glycerine had become heated. They hastened to drown it, and then, fearing an explosion, damped. A minute after they had left the place was blown up; the workmen were not injured. The damage is estimated at 20,000f.

CAN A PHARMACIST REFUSE TO PREPARE A PRESCRIPTION?—This question is raised by the *Union Pharmaceutique*, and advice is given to pharmacists never to refuse to prepare a prescription or the sale of a medicament, unless by so doing their responsibility is unduly engaged, or there is danger to the public health. The pharmacist is naturally within his right if he declines to prepare medicine concerning which a doctor has clearly made a mistake in the recipe. The editor considers it necessary to add that a pharmacist may decline to supply medicine if he considers that there is no chance of being paid for it. French pharmacists are further told that they are legally within their rights in refusing, for a whim, to supply medicaments.

ARTIFICIAL SNUFF.—A man named Bailleul, of whose life and character the French police have an extensive knowledge, appeared before the Rouen Bench last week on a charge of adulteration of snuff. Unlike the many inventors who hide their processes, he frankly gave the President of the tribunal his recipe.—3 parts of tanners' bark to 1 part of baked-potato chips, both reduced to powder. To give piquancy, sprinkle with a little ammonia, diluted with water; perfume with essence of geranium. "But where does the snuff come in?" demanded the astonished Magistrate. The occupant of the dock stated that his mixture was entirely innocent of the harmful nicotine, and composed exclusively of the above-named articles. The Bench decided that during the next eight months this brilliant inventor shall be engaged in more honest work, and he will have 300f. damages to pay to the French Excise.

POISONING BY ARSENIC.—From St. Giniez, in the south of France, a case very similar to that of the famous Maybrick affair is reported. In the present instance a Mme. Carmagnole is on her trial on the accusation of having caused the death of her husband by administering arsenic, a *post-mortem* examination having proved that there was a sufficiency of the poison in the deceased's intestines to have killed him. During the search made by the police at Mme. Carmagnole's house, several empty bottles which had contained "Fowler's liqueur" were found. The bottles bore the address of M. Storace, pharmacist, but he averred that the liqueur had not been purchased by Mme. Carmagnole, nor could he trace by the entries in his books by whom the bottles had been bought. It appears that the prisoner's husband had been suffering for many years before he died, and had undergone all kinds of medical treatment. It is suggested that the Fowler's liqueur may have been one of the many medicaments tried by the patient. The prosecution alleges that Mme. Carmagnole was on intimate terms with another man previous to her husband's decease.

Foreign and Colonial News.

THE ODESSA DRUG-TRADE.—Last year 998,500 roubles worth of pharmaceutical goods were exported from Odessa. By far the greater part of this was shipped to Vladivostok, in Eastern Siberia—a rising port which has a very flourishing and growing trade with Odessa.

TRANSVAAL QUICKSILVER.—A rich quicksilver-mine (says *South Africa*) is said to have been discovered in the district of Waterberg (Transvaal), near Zebedela's Station. Samples of cinnabar ore and pure quicksilver metal from this mine are reported to be at Johannesburg.

EXHIBITION AT BATAVIA.—An exhibition of Dutch Indian products of agriculture and manufacture, to which also foreign articles suitable for introduction into the Dutch colonies will be admitted, is to be held at Batavia in 1893. Dr. M. Treub, Director of the Buitenzorg Botanical Gardens, will act as President of the Agricultural Section.

MR. THOS. A. AITKIN, of Maritzburg (Natal), has found Natal shale rich in paraffin wax and in sulphate of ammonia, as well as productive of oil which is said to equal the best American, and which can be produced locally at a third of the cost. An eminent Scottish consulting oil-chemist has been despatched to Natal, for the purpose of testing Mr. Aitkin's results and going further into the matter.

MERCURIAL POISONING THROUGH EXTERNAL APPLICATION.—An anæmic girl in Germany, twenty years old, had mercurial ointment rubbed on the lower arm and the hand by a medical man, to cure a skin-disease. An hour after the application the girl swooned, and on the sixth day she died of acute mercurial poisoning. It is supposed that the mercury was absorbed through cracks in the girl's skin, and that her anæmic habit of body rendered the effect fatal.

A FAITHLESS CASHIER.—A co-operative association for the supply of medical and pharmaceutical assistance exists in Mannheim. Existed is perhaps the better word, for the cashier, who had just collected 20,000m. from the members wherewith to pay the doctors' and chemists' bills, has bolted with the cash—"gone through," as they say in Germany. The doctors decline to pay any more visits to members until they have been paid, and the poor pharmacists are reported to stand to lose 14,000m. between them.

A PASTEUR INSTITUTE AT POONA.—The establishment of a Pasteur Institute at Poona (India) may now be considered certain, a native gentleman having given a lakh of rupees towards the projected organisation: 10,000r. only will be spent as an initial outlay, leaving the interest on 90,000r. as an endowment fund. The Secretary of State for India has sanctioned the appointment of a medical officer to take charge of the Institute, the only provision being that it shall not involve any addition to the Indian Medical Service.

THE CRYOLITE-FLEET.—None of the Greenland fleet of sailing vessels which ply between Philadelphia and Ivigtut, in the cryolite-trade, had arrived in New York on August 8, and it is feared that they have been "nipped" by the Arctic ice. For several years the vessels have always arrived in June and made two or three voyages during the season. It is believed that the cryolite-vessels *Fluorine*, *Ivigtut*, *Platina*, and *Salinz* left Ivigtut for Philadelphia in the latter part of June. It is also stated that more ice, field and bergs, has been seen this year off the Newfoundland coast than ever before, and that the Greenland coast is almost impenetrable for sailing vessels.

A RIVAL TO STASSFURTH.—According to the German press, potash-deposits equalling the famous Stassfurth mines in richness and extent have been discovered in the Wipper Valley, near Sondershausen, in the German Principality of Schwarzburg-Sondershausen, by a mining-engineer from Dortmund. The Government of the Principality have submitted to the local Legislative Assembly a draft contract with the discoverer of the deposits in which the latter, under penalty of a fine of 3,000,000m., undertakes to form a company (the necessary capital of which is estimated at 8,000,000m.) to work the deposits. The Principality will take shares to the amount of 2,000,000m. in the company, and will receive a royalty of 15 per cent. on the net profits for the sole rights of working to be granted to the discoverer.

THE AMERICAN PINT IN CANADA.—In the United States old wine-measure still rules, but it is not lawful across the Canadian border. Mr. E. A. Goodman, a druggist, of 380 Yonge Street, Toronto, knows this now. On July 27 he had to pay a fine of \$2 and costs for selling turpentine by wine-measure instead of by imperial-measure. Defendant said the prescriptions of medical men were all dispensed on the basis of 16 oz. to the pint. In proof of this assertion he called Dr. W. B. H. Aikins, who showed that the medical profession always took 16 oz. as a pint, and not the imperial 20-oz. measure. But the magistrate pointed out that this was not a case of a doctor's prescription, but a pint of turpentine asked for, and the purchaser got only 16 oz. instead of the 20 oz. which he was entitled to.

EXTENSION OF CARDAMOM-CULTIVATION IN INDIA.—The Government of Bengal have decided that lands newly prepared for cardamom-cultivation in the district of Kalimpong may be held rent-free for the first three years, and after that will be assessed at the rate of 10r. per acre. For the first three years the annual average yield of one acre of cardamom is *nil*, but in the fourth and fifth years about two maunds are obtained annually, and from the sixth to the eighth year, three, four, and subsequently five maunds. The average price of a maund of cardamom at Kalimpong for the past year has been 35r., but with the spread of cultivation the price is likely to fall considerably within the

next ten years. Cardamom-growing is an exceedingly unhealthy form of industry. The cultivators are obliged to keep the plants entirely under water when the pods are ripening, to protect them against rats, and to spend much of their time at the bottom of unhealthy valleys.

TWO FIRES IN ONE WEEK.—The wholesale drug warehouse of Messrs. Tarrant & Co., of New York, was visited by fire on August 3, when \$40,000 damage was done, and again on August 8, when the loss amounted to \$125,000. The second fire broke out early in the morning, as the men of the salvage corps were busy with the wreckage of the first conflagration. All the people in the building made their exit without injury. The smoke which came from the burning building was heavily laden with the odour of burning drugs and perfumery, proving a great source of annoyance to the firemen, who were almost stupefied by it. Travel on the Ninth Avenue elevated railroad on the down-town track was impossible while the fire lasted. The greater portion of the loss (\$90,000) will be paid by the insurance companies. The origin of the fire is attributed to the explosion of a barrel of alcohol. It started in the same building and on the same floor as the first fire, which was attributed to spontaneous combustion among the dried drugs.

CROTON-TREES IN TEA-PLANTATIONS.—Some time ago a writer in the *Times of Ceylon* called attention to the danger in planting croton-oil trees among tea-bushes, as was then done on many places in the Matale district, since it was feared that while gathering the tea-leaves, some croton-leaves might accidentally fall into the baskets and be manufactured into tea. Natives have a dread of the croton-tree, as its poisonous properties are so well known to them that they fear even to pass under its shadow. Even native medical practitioners, in prescribing the oil obtained from the seed as a purgative, give only one drop as a dose for an adult. This is rubbed on a betel-leaf, chewed, and swallowed. But the tea-planters of Matale took no heed of this warning, till at last people in England began to make inquiries regarding the laxative quality of certain brands of tea sent from Ceylon, by the use of which several persons had been taken ill. Shortly after this almost all the croton-trees on the tea-estates disappeared. Planters who did not go in for tea and allowed their crotons to remain, are now making some profit, as of late there has been a demand for the seed.

Gazette.

PARTNERSHIPS DISSOLVED.

Cattley, T., Cattley, M. H., and Cattley, H. T., under the style of Anderson & Cattley, Great Suffolk Street, Southwark, soap manufacturers; as far as regards M. H. Cattley.

Chawner & Pegler, Clay Cross and Stonebroom, physicians and surgeons.

Patterson & Allnutt, High Street, Kingsland, dental surgeons.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Vincent, John Coombe, Bristol, brush and comb manufacturer.

ADJUDICATION.

Parker, Jackson (trading as J. Parker & Co.), Wakefield, soap manufacturer.

THE CHEWING-GUM KING.—"A manufacturer of chewing-gum in Cleveland is a candidate for Congress. Twenty years ago he was not worth \$500; to-day he is rated above \$800,000. One little word explains his rise to opulence—gum. He is the largest manufacturer of chewing gum in the United States. His factory employs 300 persons and turns out between four and five tons daily. Last year his profits are said to have approximated \$275,000, and this year he expects them to reach \$300,000." So says an American contemporary. We have a case yere how men may Soudanly gum to the front if they chews to stick closely to their business.

PHOTOGRAPHIC NOTES.

TONING AND FIXING GELATINO-CHLORIDE PAPER.

IN a recent number of *Wilson's Photographic Magazine* Mr. Lewis Bradfish states that the proper manipulation of this paper is by separate toning and fixing. After washing he recommends a toning-bath of chloride of gold, acetate and carbonate of sodium; when toning is complete a combined hardening and fixing bath, consisting of 40 minims acid sulphite of sodium in solution and 2 oz. of powdered alum in 20 oz. of water; when mixed 2 oz. of hypo. is added. This bath will not keep, and must be freshly prepared every day. On immersion the prints turn yellow, but assume the proper tone in from five to ten minutes.

HOME SALTED AND SENSITISED PAPER.

USE Whatman's paper, and salt with the following:—

Chloride of ammonium	2 drachms
Gelatine	3½ "
Water (warm)	36 oz.

The prints are placed in this, and brushed over with a tuft of cotton-wool, and have to lie immersed till the paper is fully expanded; they are then taken out, and hung up to dry in a warm room. The paper may be floated for about three minutes on the bath singly. Rapidity of printing is secured by the use of a little salt with the gelatine.

The sensitising bath is—

Nitrate of silver	3 drachms 12 grs.
Distilled water	2 oz.

The nitrate, when dissolved, is converted into ammonia nitrate of silver by adding ammonia drop by drop till the precipitate first formed is redissolved. It should then be divided into two equal parts, to one of which add nitric acid till the litmus test paper shows slight acidity. The two halves are then mixed, and the bulk made up with water to 4 oz.

THE THEORY OF DEVELOPMENT.

PROFESSOR H. E. ARMSTRONG at the last meeting of the Camera Club attacked the problem which has allured so many investigators, presented by the development of the dry plate. This paper has been published in the *Chemical News* (65, 181), and those who take a genuine interest in the chemistry of photography, and who can face half-an-hour's hard reading, should refer to the original paper. In regard to the influence of bromide as a restrainer, and the accelerating effect of alkalies, Professor Armstrong states that when ammonia is used as the accelerator, the addition of bromide prevents the solution of silver bromide in the ammonia, and the image is probably not composed entirely of silver, but of a species of pigment, possibly formed by the dissolved silver and the colouring-matter from the oxidised developer, to which also the formation of the peculiar fog which often occurs with ammonia and pyro developers may be attributable. In the case of fixed alkalies being used as accelerators, the bromide has a different action, probably that of neutralising the hydrobromic acid formed and thus preventing the reversal of the action which would otherwise take place. Also, as a silver haloid in the presence of an alkali and reducing agent tends to undergo reduction, the accelerating effect of adding alkali may be understood, as well as the restraining influence of bromide, which tends to reverse the action. Professor Armstrong thinks that the invisible image is not the same as the darkened product formed on development—i.e., an oxyhaloid compound of silver; that there are perhaps two latent images formed, one by the blue and the other by the yellow rays, these behaving differently during development—the blue image being silver and the yellow a silver oxyhaloid, the former being comparable with the silver wire in the De la Rue-Müller cell, whilst in the case of the latter the silver bromide undergoes electrolysis in a circuit which includes oxygen, the halogen which is liberated converting the silver formed by the action of the blue rays into silver haloid; but in gelatine plates this halogen is taken up, and after a time, depending on the exposure, the gelatin becomes saturated, and the silver tends to become rehalogenised; this view

being borne out by the phenomena of over-exposed plates flashing out on development, owing to the richness in oxyhaloid. If sufficient bromide is present the oxyhaloid may be converted into haloid and so the flashing-out prevented.

GELATINE CHLORIDE-OF-SILVER PAPER.

THE growing use of gelatine chloride-of-silver printing cut paper will give interest to the following extract from a paper on its manipulation read by Mr. Mummery before the North Middlesex Photographic Society. Referring to the "combined toning and fixing bath" he says:—"All formulæ for the removal of hypo. by other agents should be studiously avoided, as by their means the salt is merely converted into other compounds almost as detrimental to stability, and is not eliminated. Combined toning and fixing baths probably owe their extended use to the saving of trouble attendant upon the loss of separate fixing." The following bath is recommended by Liesegang:—

A.

	Oz.
Water	24
Hyposulphite of soda	6
Sulphocyanide of ammonium	1
Acetate of soda	1
Sat. sol. of alum	2

B.

Dissolve 30 grains of silver in ½ oz. of water; add 30 grains of common salt, stir till a white precipitate is thrown down. Pour B into A, and leave for a day; then filter, and add the following:—

C.

Water	6 oz.
Chloride of gold	15 gr.
Chloride of ammonium	30 "

This bath will keep for any length, and will give good prints with any of the papers now in the market.

The Blackfriars Sensitising Company recommend the following bath for their well-known "Celerotype" paper:—

A.

	Oz.
Water	24
Hyposulphite of soda	6
Sulphocyanide of ammonium	1
Acetate of soda	1½
Sat. sol. alum	10

Fill the bottle containing the above with scraps of sensitised paper or unfixed prints, and allow it to stand for a day; then filter, and add:—

B.

Water	6 oz.
Chloride of gold	15 gr.
Chloride of ammonium	30 "

The prints with this bath require no preliminary washing.

Another simple bath is made as follows:—

Chloride of gold	6 gr.
Nitrate of lead	3 "
Hyposulphite of soda	3 oz.
Distilled water	20 "

This bath has the advantage of being free from alum.

In using combined toning and fixing baths it is best, in all cases, to dissolve the gold separately and neutralise it with powdered chalk, and afterwards to filter and add to the other salts, which should also have been dissolved and filtered.

A NEW LENS.

MESSRS. ROSS & CO., of New Bond Street and Clapham Common, have introduced a new lens—the "Concentric." In this the outer and inner surfaces of the glass in the doublet lens has the same centre of curvature. The diameter of a lens of 7-inch focus is $\frac{3}{4}$ inch, and it is fitted with stops varying from F. 16 to F. 32. The lens is so light that with mount and cap included it does not exceed 4 oz. in weight. It will cover a 7×5 plate, and with F. 20 covers a whole plate. With F. 16 the field is flat, objects near the edge being as well defined as those in the centre of the plate, and the whole is brilliantly illuminated. The doublet consists of

an outer plano-convex lens of high refractive power cemented to an inner plano-concave of lower refractive power, the dispersion of the inner glass being equal to that of the outer lens. The "Concentric" is specially suited for landscape work, and may be used with much advantage for architecture and copying. Using the aperture at F. 13 the lens will give soft and well-diffused portraits. The "Concentric" lens may be used for every purpose; taking off one of the combinations it forms a long focus landscape lens. The lens is made in eleven sizes—to cover from quarter plate up to 18 × 16.

GOOD DEVELOPER FOR LANTERN PLATES.

The editor of *Photographic News* gives the following as suitable for most brands of commercial plates:

A.				
Hydroquinone	..	..	..	80 grs.
Metabisulphite of potass.	..	..	..	10 "
Bromide of potass.	..	..	..	40 "
Distilled water to make	..	..	..	23 oz.
B.				
Potass. hyrate (sticks)	..	..	..	160 grs.
Salphite of soda	..	..	..	800 "
Distilled water to make	..	..	..	20 oz.

Equal parts of A and B, mixed just before using.

COATING OPALS.

Mr. HENRY WADE, a most successful amateur photographer, recently read a paper before the Manchester Camera Club upon "Gelatin-Chloride of Silver Printing for Paper and Opals." He gives the following formula for the sensitive emulsion:—

No. 1.				
Silver nitrate	..	..	..	1 oz.
Citric acid	..	..	..	1 dr.
Water	..	..	..	1 oz.
No. 2.				
Gelatine	..	..	..	2 oz.
Water	..	..	..	6 "
No. 3.				
Alum	..	..	..	20 grs.
Rochelle salts	..	..	..	20 "
Ammonium chloride	..	..	..	10 "
Water	..	..	..	1 oz.

In practice, dissolve Nos. 1, 2, and 3 in separate vessels; then mix Nos. 2 and 3 together, and gradually add the silver solution to the salted gelatine, very slowly stirring during the whole time, so as to obtain a fine chloride of silver. If it is added in a mass, the particles are apt to be coarse. When well mixed, heat up to 150° and filter through two thicknesses of muslin. With this emulsion washing is dispensed with. The opals to be coated should first be examined to see that they are perfectly even. If not, they must be ground with emery until the surface is uniform. They must also be quite free from grease or dirt. To cleanse them, soak for half an hour to an hour in a weak solution of hydrochloric acid and water, and dry with a clean cloth. In coating the plate, pour the emulsion in a pool in the centre of the plate and guide it with a glass rod to the edges. Pour off the superfluous emulsion, leaving only a thin film upon the plate. Place the opal on a level surface to set. Smooth or flashed opals are much easier to coat than those with a ground surface, and the emulsion runs to the corners without guiding. When set, place the opals on a rack and leave them in the dark to dry; they will be ready in the following morning for printing. All operations, including the preparation of the emulsion and coating, should be performed in a weak light.

TESTING LENSES.

MAJOR DARWIN, in a paper read before the Royal Society, thus describes the methods employed at Kew for testing lenses:—The principal focal length is found by revolving the camera through a known angle, and measuring the movement of the image of a distant object on the ground glass. The observation is directly read off on a scale on the ground glass. The observation is made when the image is at a

point some 14° from the axis of the objective, and it is proved that the focal length thus obtained, even though it may not be identical with the principal focal length as measured on the axis, is, nevertheless, what the photographer in reality wants to ascertain. This test for distortion depends in principle on ascertaining the sagitta or deflection in the image of a straight line along one side of the plate. It is shown that to give the total distortion near the edge of the plate would not answer the practical requirements, and that the proposed method of examination does give the most useful information that can be supplied. Definition is found by ascertaining what is the thinnest black line the image of which is just visible when seen against a bright background. It is shown that this is the best method that could be devised of measuring the defining power of an objective, and that it is not open to serious objections on theoretical grounds. The test for astigmatism is performed by measuring the distance between the focal lines at a position equivalent to the corner of the plate and by calculating from the result thus obtained the approximate diameter of the disc of diffusion due to astigmatism. These tests have been devised by Major Darwin, assisted by Mr. Whipple, the superintendent of the observatory, aided by frequent consultations with Captain Abney.

MOUNTANT FOR GELATINO-CHLORIDE PAPER.

	Oz.
Best thin Scotch glue	3
Water	3
Golden syrup	2
Methylated spirit	3

Soften the glue in 2 oz. of the water in a jar, heat gently in a pan of hot water, and when thoroughly liquid add the syrup. Add the remaining ounce of water to the spirit, and pour this slowly into the jar, keeping the mixture stirred all the time.

This mountant, which is recommended for the Ilford P.O.P. paper, will keep good indefinitely, and is always ready for use by gently warming the bottle in hot water. It dries quickly.

TONING-SOLUTION.

The following formula is recommended by Mr. James Wood, of Liverpool, known in the photographic trade as "Washer" Wood, in compliment to the merits of his admirable washes for prints and plates:—

Stock Solution.

Sodium acetate	..	..	..	180 gr.
Sodium bicarbonate	..	..	..	90 "
Borax	..	..	..	330 "
Distilled water	..	..	..	4 pints

Toning-bath.

Stock solution	..	..	..	5 oz.
Gold chloride	..	..	..	1 gr.

Mix two hours before using.

The best lines are obtained by mixing with an old bath.

EIKONOGEN DEVELOPER.

No. 1.

Warm water	..	..	..	40 oz.
Sodium sulphite (Merck's crystals)	..	..	..	480 grs.
Eikonogen	..	..	..	480 "

No. 2.

Caustic potash	..	..	..	480 grs.
Water	..	..	..	3 oz.

This may be mixed in the proportions of 2 oz. of No. 1, waiting until the image appears before adding No. 2, then add $\frac{1}{2}$ drachm of No. 2 at a time until the details are brought out.

CONTROL OF LENSES.

In his address to the Photographic Convention Mr. George Davison spoke of the local control which Mr. Van der Weyde has devised. By the use of his method the relative proportions of features in portraits or objects in other pictures can, it is said, be altered at will. The relative increase or diminution of parts can be carried to any extent. It is therefore evident that the process can be applied to the artistic and the grotesque.

SCIENTIFIC MYSTERIES.

THIS has proved an excellent book for chemists' counters. "They are selling freely," write a number of chemists last winter. And not only do the books sell at a profit themselves; they establish a business in chemicals and apparatus, which is likely to be permanent. Chemists can obtain these books in dozen parcels (a show-card in each parcel) at 8s. 6d. per dozen from any of the following firms:—

Ayrton & Saunders, Liverpool
Barclay & Sons, London
Bleasdale, Wm., & Co., York
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Evans, Sons & Co., Liverpool
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Newsholme, G. T. W., Sheffield
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Sanger, John, & Sons, London
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Smith, T. H., & Co., Edinburgh
Southall Bros. & Barclay, Brumagm.
Sutton, W., & Co., London
Thompson, John, Liverpool
Thompson, Walters, Hole & Co.
(Limited), London
Townson & Mercer, London
Woolley, James, Sons & Co., Manchester.
Wright, Layman & Umney, London
Wyleys (Limited), Coventry

We will supply a parcel of handbills, with the seller's name attached, to any chemist who has stocked these books and who will send us 3d. towards the cost of carriage.

COMPACT AND CLEAR EXPLANATIONS.

If anybody with an eye to Christmas entertainments is looking for information upon the *modus operandi* by which the most interesting chemical and physical illusions may be produced, here is the book needed. The explanations are compact and clear, and are fully supplemented by cuts and diagrams. A chapter on "Parlour Chemical Magic" is particularly timely.—*Newcastle Chronicle*.

BOYS WHO LOVE EXPLOSIONS,

queer smells, and the other small excitements of experimental chemistry will be interested in "Scientific Mysteries," a shillingsworth emanating from the office of THE CHEMIST AND DRUGGIST. Its pictures and letterpress combine to show how chemical, physical, and optical illusions may be produced.—*Evening News and Post*.

ITS MERITS JUSTIFY A LARGE SALE.

For those of our readers who are of a scientific turn of mind we know of no better or more interesting work than "Scientific Mysteries," which has just been issued from the office of THE CHEMIST AND DRUGGIST (42 Cannon Street, E.C.), and published at 1s., and which will be circulated with the medium of the chemists and druggists. This is an octavo book of 100 pages, with 80 illustrations, and contains nearly 200 chemical, physical, and optical experiments and illusions. It is capably put together, and is well bound. "Scientific Mysteries" has been issued at a very opportune moment, and, once it becomes known, the book is certain to be in great demand. Its merits justify a large sale.—*Hackney Express*.

AN EYE TO CHRISTMAS PARTIES.

A very useful volume, "Scientific Mysteries," issued from the offices of THE CHEMIST AND DRUGGIST, shows how a large number of simple and effective experiments can be made in illustration of chemical, physical, and optical wonders. The collection embraces all kinds of chemical and other experiments, from the strictly scientific to the parlour, and gives details for the manipulation of much that can be made at once instructive and yet amusing. At this time of the season the instructions could be followed with an eye to the entertainment of Christmas parties.—*Weekly Scotsman*.

MAY BE A TREASURE.

A collection of simple and effective experiments, illustrating chemical, physical, and optical wonders. (Offices of THE CHEMIST AND DRUGGIST.) The ingenious boy whose parents do not fear to let him have wonderful uncanny apparatus and deadly chemicals for playthings may find in this book suggestions for illimitable recreation. Some of the experiments are as innocent as they are ingenious, but it is not every boy we would trust to manufacture hydrogen, to melt iron, or to sport with nitric acid, mercury, and similar chemicals. For a boy who can be trusted to be careful the book may be a treasure and may give a direction to taste strongly influencing future years.—*Birmingham Daily Post*.

PHYSICAL AND OPTICAL WONDERS.

Boys of a scientific turn of mind will appreciate "Scientific Mysteries," a little book issued from the office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., which gives in brief and practical shape directions for performing a large number of simple and effective experiments, illustrating chemical, physical, and optical wonders.—*Liverpool Daily Post*.

CAPITAL ILLUSTRATIONS.

A collection of simple experiments, with capital illustrations and clear directions, is published at the office of THE CHEMIST AND DRUGGIST under the title of "Scientific Mysteries." The experiments are well up to date, and deal with "chemical, physical, and optical wonders." It is needless to say that a good deal of apparatus is required for carrying out the experiments.—*Manchester Guardian*.

HANDBOOK OF PARLOUR-MAGIC.

This is a capital little handbook of parlour-magic, combining chemical, physical, and optical wonders, and being in itself an initiation at once into simple magic and the elements of science. The experiments are full of variety, are simple in the explanation, and are well illustrated. It is just the right present for an ingenious and clever boy.—*Birmingham Daily Gazette*.

PROVIDES MUCH ENTERTAINMENT.

Sir David Brewster's "Letters on Natural Magic" has no place in the memory of the younger generation; but something of its spirit will be found in a little book entitled "Scientific Mysteries," which has been published at the offices of THE CHEMIST AND DRUGGIST—presumptively in view of the coming holiday season. The object of the compiler is to furnish by letterpress and illustration directions for a number of simple and effective experiments illustrating chemical, physical, and optical wonders. It opens appropriately with directions for restoring chaos, and resolving it again into what were anciently known as "the four elements"—all of which is to be done in a phial with the aid of mercury, carbonate of potash, blue-tinted spirits of wine, and red-tinted turpentine. Altogether the little volume provides much entertainment for the family circle, which may fairly be described as harmless, though "artificial lightning," "brilliant explosions under water," and "decapitation without murder," may sound rather alarming.—*Daily News*.

"SCIENTIFIC MYSTERIES" IN BELFAST.

Our Belfast correspondent says:—Several chemists here have turned booksellers *pro tem.*, your instructive and amusing little work, "Scientific Mysteries," being exhibited. One chemist informs me he has disposed of quite a number, and it has brought increased business in chemicals.

BOOKS FOR THE CHEMISTS' LIBRARY.

"Art of Dispensing," 3s. 6d. (post free, 3s. 10d.).
Alpe's "Handy-book of Medicine-stamp Duty," 2s. 6d. (post free, 2s. 9d.).
Proctor's "Manual of Pharmaceutical Testing," 2s. 6d. (post free, 2s. 9d.).
"Veterinary Counter Practice," 3s. 6d. (post free, 3s. 9d.).
These can be obtained at the published prices from any of the firms named above or from 42 Cannon Street, E.C.

Practical Notes and Formulae.

ROCK-CANDY SYRUP.

THIS syrup is very much used in American pharmacy, especially at soda-fountains. Professor Ebert says that it is simply the mother-liquor from sugar crystallisation. It is, therefore, of the nature of molasses—i.e., a mixture of cane-sugar and glucose. It is dear at the 55c. a gallon that druggists have been paying for it, as simple syrup can be made from granulated sugar at 34c. a gallon.

LINOLINE.

THOSE who get tired of cod-liver oil emulsion should try this. It was originally, says the *Pharmaceutical Record*, a suggestion of Dr. W. H. Thomson, of New York, who prescribed it largely twenty years ago. It is a pleasant-tasting and admirable emulsion, without the disagreeable features of many of the cod-liver-oil emulsions. The formula is:—

Linseed oil	15 oz.
Oil of wintergreen	2 drachms.
" cinnamon	2 "
Powdered acacia	10 oz.
Water	2 "
Glycerin	5 "
Simple syrup	10 "
Dilute hydrocyanic acid	2½ drachms

Make an emulsion in the usual way. Dose: A teaspoonful gradually increased.

WORMS IN SHEEP.

WHEN sheep are badly infected with both threadworms in their lungs and tapeworms in the intestines, active measures are required. The following is an approved recipe, but special care is required not to exceed the prescribed dose, and also that the arsenic is perfectly dissolved before any of the solution is used. The proportions of arsenic, soda, and water are as follows:—For 50 full-grown sheep: Arsenic, 2 drachms; soda, 4 drachms; water, 1½ pint; dose, 1 oz. For 50 weaners: Arsenic, 100 gr.; soda, 3½ drachms; water, 50 oz.; dose, 1 oz. For 50 lambs: Arsenic, 80 gr.; soda, 3 drachms; water, 50 oz.; dose, 1 oz. Salt should always be kept where the sheep can lick it, and in dry weather flowers of sulphur may be mixed with it. The sheep will not take too much. For tapeworm in sheep the following is recommended:—Powdered areca nut, ½ to 1 drachm; oil of male fern, 10 to 20 drops; give in treacle and water, and follow the next day with a purge. For purges use:—Sulphate of magnesia, 2 oz.; warm water, 1 pint—in one drench. We quote this from an Australian stock journal.

PRESERVATION OF INDIARUBBER GOODS.

IN an article (*India Rubber World*) on "The Deterioration of Druggists' Rubber Goods" Mr. J. A. Sherman mentions a few of the causes which go to spoil this class of stock, and criticises the means which are taken to prevent deterioration. Fine surface-cracks are taken as evidence that the goods are going wrong, and this may be due to (1) being kept in warm dry air, as on top shelves in the shop; (2) exposure to sunlight; thus all goods shown in the window rapidly become bad. These are really the chief sources of trouble. As to the means of preservation, a New York manufacturer claims that small articles like catheters and tubes keep well immersed in water, but Mr. Sherman says that this is an impracticable method when generally applied. It has also been claimed that keeping the goods in air-tight boxes preserves, but this again is denied, and so is the statement that a coating of paraffin is beneficial. Paraffin mixed with unvulcanised rubber will destroy the latter in a short time, and it is very problematical whether it would not have the same effect on vulcanised goods. Exposure to the air is not considered to be detrimental, although a jet of oxygen directed upon an indiarubber ball causes it to soften. On the whole, proper vulcanisation is the only security that indiarubber goods will keep well, and as long they are stored in a part of the shop where the temperature is equable and moderate the most is done that can be to prevent deterioration.

SACCHARINE SOLUTIONS.

SOME experiments made by Mr. Leon C. Fink in regard to the preservation of dilute syrups of glucose and sucrose show (*Bull. Phar.*) that the presence of ½ grain of salicylic acid in each ounce is an absolute safeguard against the formation of fungus. Samples which he has treated have remained perfectly sweet and transparent after exposure for one year.

MICRO-ORGANISMS IN AQ. MENTHÆ PIP.

MONS. H. BARNOUVIN, whose researches into the micro-organisms which exist in medicinal waters we have had occasion to mention, reports (*Rep. de Pharm.*) that he has found in peppermint-water a round and light yellow-coloured unicellular organism, which seems to be that which induces in the water the yellowish precipitate sometimes observed. This precipitate is really composed of the organisms which may be referred to the *Micrococcus aurantiacus* of Cohn.

CEMENTS.

THE following formulae have been devised by Eugen Dieterich:—

Cement of Pompeii, or Universal Cement.

Dissolve 8 oz. of sugar in 24 oz. of water in a glass flask on a water-bath, and to the thin syrup add 2 oz. of slaked lime; keep the mixture at a temperature of about 70–75°C. for three days, shaking frequently; then cool, and decant the clear liquor. Dilute 6½ oz. of this liquor with as much water, and in the mixture steep 16 oz. of fine gelatine for three hours after heating to effect solution. Finally add to the mixture 1½ oz. of glacial acetic acid, and 15 grains of pure carbolic acid.

Diamond Cement.

	Oz.
Fine gelatine	5
Water	4
Glacial acetic acid	1

Let these stand together for several hours, then heat to effect solution, and add 10 grains of carbolic acid to preserve the cement.

Liquid Glue (Sydetikon).

For this use 4 parts of the above-mentioned saccharated solution of lime and dissolve 6 parts of glue or gelatine in it as there directed. Then neutralise the lime with a third part of oxalic acid, and add carbolic acid in the above-mentioned proportion as a preservative.

Cement for Porcelain.

Twenty parts of white lead and 12 parts of pipeclay, carefully dried, are incorporated with 10 parts of boiled linseed oil, heated on a water-bath; the cemented articles are dried slowly in a warm place.—*Pharm. Centralhalle and Amer. Jour. Phar.*

KOLA TONIC WINE.

	Oz.
Fluid extract of kola	3
Syrup of orange-peel	8
Tincture of nux vomica	1
Malaga to	100

Mix, set aside for three weeks, and decant the clear wine.

TASTELESS CASCARA SAGRADA.

REFERRING to Mr. Moss's non-alkaline method for making tasteless extract of cascara sagrada, Mr. Thomas Stephenson, of Bombay, says that the process requires some modification in India, as the length of time required for the percolation of the bark with water is apt to cause fermentation in the former, with consequent destruction of the product.

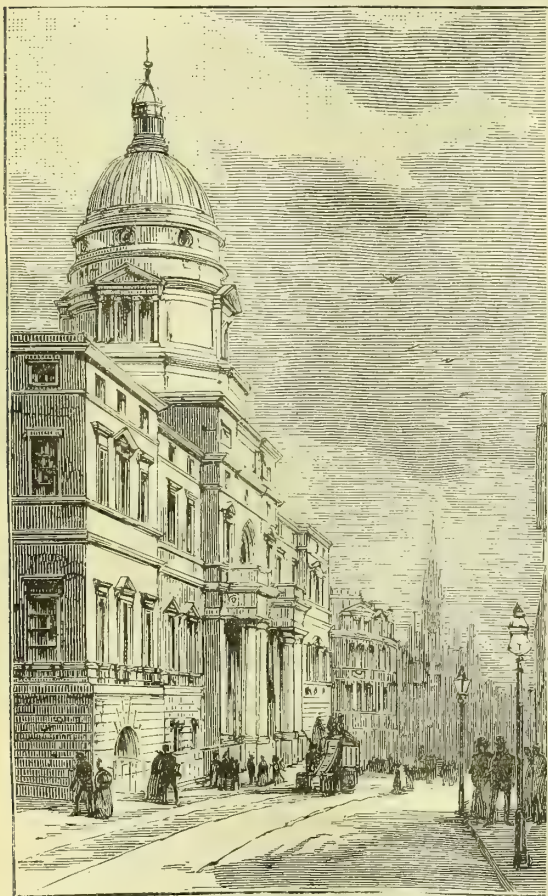
WOMEN-PHYSICIANS IN ENGLAND.—The number of women on the Medical Register is now 130, and 140 are being educated under the conditions laid down by the General Medical Council.

EDINBURGH.

FROM Cardiff, a town of yesterday, to Edinburgh, a city whose annals vanish in the mists of antiquity, is a topographical transition in which a pharmaceutical journalist cannot attempt to follow the Badaekers and Blacks of literature. From the shores of the Forth on the north to the shadows of Blackford Hills on the south; from Leith in the east to the Tor-phin in the west, there are scores of buildings and historic spots in Edinburgh upon which one might linger. But we may more profitably devote the space which we generally reserve for the towns in which the Conference meets to some notes on Edinburgh as a medical centre. To this we have already referred in the article printed in our Summer issue.

THE UNIVERSITY

is situated on the South Bridge, which bounds it on the east, South College Street bounding the west and Chambers Street the north. According to the inscription on the South Bridge portico, the University was founded in



THE UNIVERSITY, SOUTH BRIDGE.

1582, but, as a matter of fact, the site upon which it stands was purchased by the magistrates in 1563, a prelate having bequeathed 8,000 merks for the purpose of founding a University in the city. Mary Stuart favoured the scheme, her son, James VI., granted a Charter in 1582, and teaching commenced in the year following. Divinity, law, and philosophy were the earliest faculties, but medicine was not a part of the curriculum until 1720, up till which time the University was

of little account, St. Andrews outshining it in every respect. There had been several attempts to teach medicine on sound lines for thirty-five years before Alexander Monro *primus* was appointed by the Town Council (who, by the way, still have a share in University control) in 1720; but the advent of Monro was the beginning of the great progress which has continued to this day. In that progress the Monroes, William Cullen, Joseph Black (the chemist), several Gregorys and Duncans, Sime, Christison, and many others whose names occur as noted discoverers in medical and physical science, have had a share. The fine University building dates from the end of last century. It was commenced in 1789, but the poverty of the city prevented its completion until about 1815, when the Government granted the University 10,000*l.* a year to aid in the work. It still gets the grant. The buildings form a regular parallelogram with a court in the centre, the north and south sides being 356 feet in length, and the west and east 255 feet. In the court there is a marble statue of Sir David Brewster, who was Principal of the University. The narrowness of the street in which it is situated detracts from the effect which the truly magnificent proportions of the building should produce.

The University has faculties of arts, divinity, law, and medicine, as well as departments of agriculture, education, music, and science. It has between 4,000 and 5,000 students, about half of whom belong to the Medical School. The rapid



UNIVERSITY MEDICAL SCHOOL. (FROM THE WEST)

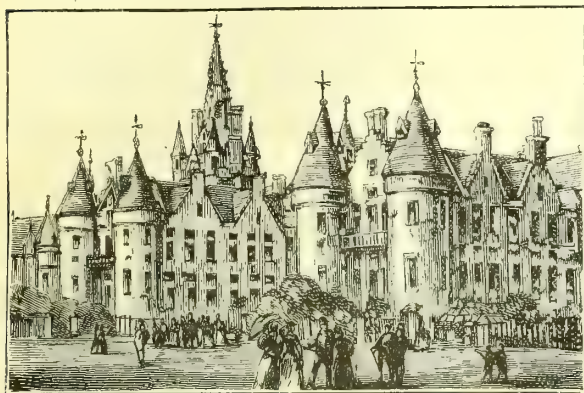
growth of this School since the fifties is one of the striking features about the University. When the Conference visited Edinburgh in 1871 the whole of the faculties were accommodated in the South Bridge building; now we have to go up South College Street to Teviot Row in order to get to the medical quarters, which rival the parent building, if not in purity of architectural style, certainly in amplitude. There all the medical classes are accommodated except natural history, which is still in the old building, and botany, which is taught at the Botanic Gardens, Inverleith Row. The School stands beside the Royal Infirmary—in the architectural sense unhappily, for the Infirmary is in Scotch baronial style, which always looks well in Scotland, and the Medical School is Early Italian, which looks exotic and trivial. But we must take it from the inside, and here we find everything consistent with the fact that the School is the largest in the world. The practical laboratories are a feature of the arrangements, the dissecting-room, especially, being noteworthy for its completeness and magnificent proportions. The McEwan Hall (the gift of Mr. William McEwan, M.P.) is approaching completion, and is to be used for graduation ceremonies.

Amongst the medical professors are Sir Douglas MacLagan (medical jurisprudence), the Privy Council's visitor to the

pharmaceutical examinations; Dr. T. R. Fraser (materia medica); Dr. Crum Brown (chemistry), President of the Chemical Society; and Sir William Turner, the anatomist, whose chair is reputed to be the richest professorial appointment in the world. The Royal College of Surgeons headquarters are in Nicolson Street. This College has recognised teachers there (Dr. Stevenson Macadam holding the chemistry chair) and in the School of Medicine, Chambers Street. There is also the Royal College of Physicians in Queen Street, whose hall is used for the Conjoint Board examinations. The Physicians' Hall contains an exceptionally fine library, and a small but valuable museum of materia medica, which includes the collection of cinchona-barks formed by Martius.

THE ROYAL INFIRMARY

is a national institution. Its site is on the slopes overlooking the Meadows, the Meadow Walk separating it from the University Medical School. The Infirmary was established in 1736, and for more than a century its good work was carried on in an inadequate building off South Bridge. In 1870, the Prince of Wales laid the foundation-stone of the buildings in Lauriston, and although twenty years have not elapsed since they were occupied they are already inadequate, and an addition is contemplated. The plan of the buildings is on the pavilion system, a number of distinct buildings being connected with each other, and the



TWO WINGS OF THE INFIRMARY. (FROM THE SOUTH.)

main frontage presenting a three-storeyed elevation, surmounted by a tower and spire. This faces Heriot's Hospital—an old educational institution. The section of the Infirmary which we illustrate shows two of the wings to be seen from the Meadows. The only hospital in London resembling the Infirmary is St. Thomas's. The Edinburgh Infirmary can accommodate about 700 patients, but it has a superficial area equal to the accommodation, on London principles, of at least 100 more. The dispensary is under the charge of Mr. Charles Arthur (formerly manager to James Robertson & Co.), who has four assistants. The dispensary is quite in keeping with the great institution of which it is a part, and the most advanced pharmacist cannot spend half an hour in it without learning something new.

ROYAL MEDICAL SOCIETY.

Of the medical societies in Edinburgh the most interesting in all respects is the Royal Medical, whose abode is in George IV. Bridge. It happens to be the oldest medical society in the kingdom, for it was founded in 1737, the next in order being the Medical Society of London, which dates from 1773. The peculiarity of the Royal Medical is that it is a society for students who meet together for mutual improvement in medical matters, much in the style that chemists' assistants meet. A library (now one of the best in Edinburgh) has been a standing feature of the Society from the beginning, which was in Dr. William Cullen's student days. He was one of the first members, and from his day until now the annals of medicine are dotted with the names of men who have been members of the Society. A few names will suffice to show what the Society is. Amongst the illustrious dead: Thomas Addison, the revered of Guy's; Akinside, the poet; Richard Bright, of Bright's disease

fame; Oliver Goldsmith, whose ability as a doctor is shadowed by his fame as a *littérateur*; Mungo Park, the African traveller; Charles Darwin, the naturalist; Sir James Y. Simpson, the introducer of chloroform; Sir Dominic Corigan, first President of the Irish Pharmaceutical Society; Dr. John Brown, a brother of Professor Crum Brown—Dr. John was author of "Rab and his Friends," and has been called the Scotch Charles Lamb. Sir Gilbert Blaine, the organiser of the Naval Medical Service, was also a President. He was the man who first made lime-juice what it is—the universal preventive of scurvy. Amongst the living who have filled the chair are all the professors of the Edinburgh medical faculty, Sir Dyce Duckworth, Sir Joseph Lister, Sir James Crichton Browne, Dr. Lauder Brunton, and Dr. Benjamin Ward Richardson. The influence of the Society has been immense, and no juniors' society is more highly respected, it being counted a peculiar honour to be selected as the principal guest at the annual dinner. Dr. David Ferrier was the last one so honoured. The Society has two senior and two junior Presidents.

SCHOOLS FOR WOMEN.

The Royal Colleges of Edinburgh were amongst the first to admit women to the medical examinations, and the consequence is that two prosperous medical schools for women are established in the city, and the Royal Infirmary managers are now to provide the necessary clinical practice for them. Mixed classes have been impossible so far, in spite of the sturdy manner in which Dr. Jex-Blake tried to assert her right to attend the University classes fifteen or sixteen years ago.

MEDICAL CHARITIES

are very numerous in Edinburgh. The Maternity Hospital, the Home for Incurables, eye, ear, and throat dispensaries, and many general dispensaries are scattered throughout the city, their primary object being the succour of the poor, while some of them have the ulterior purpose of giving medical students that opportunity for practice which is a prominent part of their curriculum. Considering the number of students, it is not difficult to understand that the Edinburgh poor are well looked after medically; but we have it on good authority that it is a gross libel to say that poor women are attended in their confinements by as many as a dozen students, each of whom has one department allotted to him.

THE BOTANIC GARDENS.

The Edinburgh University has the peculiar honour of having done more than any other university in the kingdom to infuse the spirit of botanical research amongst medical graduates, especially those who have gone abroad as medical officers in the army. It was here that Darwin became a naturalist, here Cleghorn and Aitchison learnt their botany, and many another who has done good service to materia medica or pure botany. The subject was, and is, taught in the heart of the Botanic Gardens established by the University, but now the property of the Government, by whom they are maintained. The gardens are situated in Inverleith Row, and although not of the magnificent extent of Kew Gardens, they contain a fine collection of medicinal plants, and the facilities for study are exceedingly generous, to which fact is due the great popularity of the gardens with pharmaceutical students. An extensive arboratum is now attached to the gardens, and within its walls is the residence of the professor of botany, Dr. Isaac Bayley Balfour, who is the Regius keeper. Mr. Robert Lindsay, an accomplished practical botanist, is the Curator.

OZONINE is the name of a new solution which is successfully employed for bleaching fibres, wood, straw, cork, and paper. It is made in the following manner:—125 parts of resin are dissolved in 200 parts of oil of turpentine, and to this is added a solution of 25 parts of caustic potash in 40 parts of water and 90 parts of peroxide of hydrogen. The jelly obtained, on exposure to the light, changes in two or three days into a clear fluid, to which the name of ozonine has been given. A teaspoonful of it is added to a gallon of water for washing.

British Pharmaceutical Conference.

TWENTY-NINTH ANNUAL MEETING.

WATERLOO ROOMS, EDINBURGH, AUGUST 22 TO 24, 1892.

MR. EDWARD C. C. STANFORD, F.I.C., F.C.S., PRESIDENT.

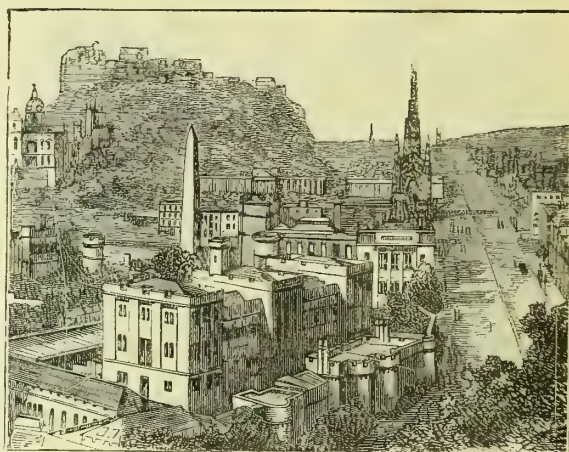
THE RECEPTION.

THE Conference began well. On Monday night 280 ladies and gentlemen passed into the reception-room of the Waterloo Rooms, where Mr. Edward C. C. Stanford (President) and Mrs. Stanford, with Mr. J. Laidlaw Ewing and Mrs. Ewing, received them. It was a goodly company in which one could spot many a regular Conference man, and some who come to Scotland from the South every year managed to make the Conference fit in with their visit this year, which was good for the Conference and themselves as

gramme was short, and confined to songs by Miss Blaik and Mr. James Galloway, so excellently rendered as to necessitate encores. All the arrangements appeared to be perfect, and we heard much satisfaction expressed thereon, as they say locally.



WATERLOO PLACE. (FROM PRINCES STREET.)



LOOKING WEST FROM CALTON HILL.

The Waterloo Rooms were transformed by Tuesday morning into a comfortable meeting-hall with ample air-space, all of which was pretty sure to be wanted before the meeting was over, for the programme had lengthened on to appalling dimensions, and there was such an influx of men who could talk about most things that the whole week rather than two days seemed necessary to do justice to the lot. But first

"THE RIGHT HON. THE LORD PROVOST

and the President," cried the Provost's man and the meeting gave the chief civic authority an upstanding reception. Mr. Stanford (the President) and the Lord Provost were accompanied by Messrs. J. Laidlaw Ewing, T. B. Groves, Richard Reynolds, and S. R. Atkins, who took seats on the left of the President's chair, and Messrs. W. A. H. Naylor (hon. secretary), R. H. Davies (hon. treasurer), F. Ransom (hon. secretary), W. Martindale, and A. W. Gerrard, who sat to the right. Dr. J. R. Russell, the Lord Provost, is a man of fifty or thereabouts, who looks more the student than the city magnate. In personal appearance he resembles somewhat

well. Those who had come from south of the Tweed looked a little like lost sheep for a while, but before 10 o'clock they had commenced to penetrate the mysteries of the Doric, and were making acquaintances which promised to bloom into something warm before the end of the week. The room (one of the finest of the old assembly-rooms wherein the gaiety of Edinburgh has had its outlet for a generation or two) had a brilliant appearance, and the music by Herr Daubmann's band was thoroughly appreciated. The vocal pro-

strongly Mr. Holmes, the Pharmaceutical Society's curator. He speaks distinctly, and his medical knowledge enabled him to refer in sympathetic phrases to points in pharmacy which have from time to time caused some agitation, his references to weights and measures especially calling forth hearty applause. After the Lord Provost had been thanked for his speech of welcome he left the meeting to attend to civic duties, and again the members rose to their feelings. Business was then commenced in earnest.

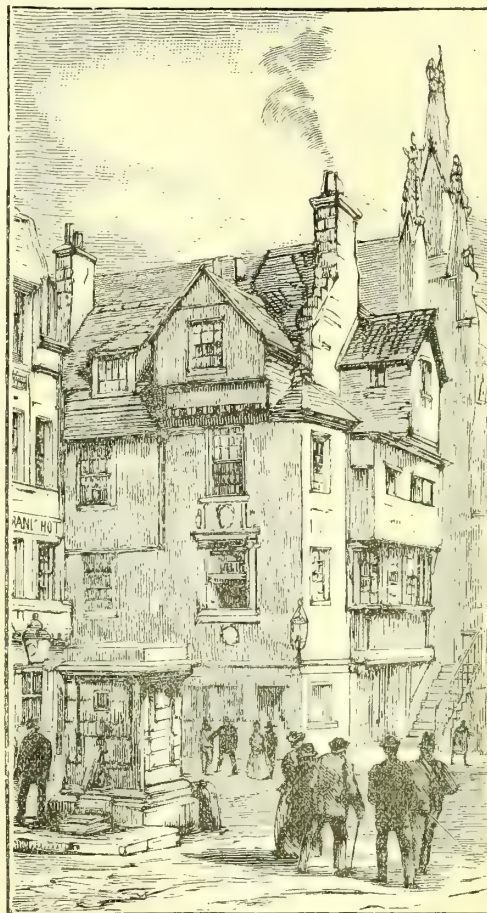
OFFICIAL RECEPTION.

Mr. J. LAIDLAW EWING said: My Lord Provost, Mr. President, ladies and gentlemen,—It is my agreeable duty in the much-to-be-regretted absence of my friend and colleague Mr. Young, to introduce to you the Lord Provost of the city of Edinburgh, who has so kindly agreed to give us an official reception. I wish only to say that the presence of his Lordship here is singularly appropriate, for his Lordship is a member of the medical profession, and a member of the Royal College of Physicians in this city, which has done so much for, and is so honourably associated with, pharmacy. (Applause.)

The LORD PROVOST, who was received with applause, said: This summer we have had the honour and the pleasure of receiving a great many learned bodies, and it has been my lot on many of these occasions to speak words of welcome. But I think there is a peculiar fitness and pleasure for me upon this occasion, because, as you have heard, I am myself somewhat connected with this Conference, being a member of the medical profession, though not a practising member. We recently welcomed the British Association for the Advancement of Science, which deals with a great many branches of science—as a rule purely from the theoretical or scientific aspect—and when welcoming them I had to acknowledge, on behalf of the citizens of Edinburgh, that we were very grateful for the material advantages that pure science, when translated, has given us. Now I welcome you not merely as representatives of a branch of pure science, but as the representatives of an art and practice which has done so much for mankind and which is so honourably connected with this city. There is no town where medical science holds a higher position of honour, where a greater portion of citizens think so much of this distinction in connection therewith, and where this branch of medical science has conferred greater benefits, than on individual citizens of this town. It is, therefore, with very great pleasure that I welcome you. I know that your presence here is extremely grateful to the citizens, and that they recognise not only the good that you are doing for mankind but also what your art has done for this old town. We are deeply concerned with all branches of medical science here. It is a matter in which the inhabitants of this city have always taken a deep interest, and pharmacy has been taught here with great success. The improvements that are being made in the art and science of pharmacy are matters of congratulation to the public. We recognise the difference from the time when the medical art depended upon drugs of which very little was known, and we recognise gratefully to-day the results brought about by your labours, and where the crude materials are no longer used, but the active principles are extracted by the methods devised by you and employed with an accuracy and precision and knowledge which leave little to be desired. Nay, more than that, from the scientific side of your study you have often foretold the action of unknown substances, and then set forth to find those substances, or to complete, by a process of synthesis, from the lower parts of the scale. You have thus gone beyond the greatest dreams of our predecessors, and I have no doubt that by perseverance in the same course the next generation will have at their command powers and potentialities that we do not to-day feel able to anticipate to any extent at all. I welcome you here with the greatest pleasure, and I hope that something may be done at this Conference to advance the art. And now may I add in one word, speaking from my medical knowledge, that I hope that this Conference

will not lose sight of one practical point—that is the introduction of decent weights and standards for use in our Pharmacopœia? (Applause.) Our state as regards weights and measures in this country at the present moment is a scandal to mankind, and I cannot forbear trespassing upon your patience by asking your help to get it redressed. (Applause.)

Mr. E. C. C. STANFORD said: Allow me, on behalf of the British Pharmaceutical Conference, to thank your Lordship for the very kind words in which you have bidden us welcome to this beautiful city. It is twenty-one years since this Conference met in Edinburgh, and long as the time is there are some of us who were present on that occasion who have not yet had time to forget the kindness and hospitality we met with here. (Hear, hear.) We miss some kind faces, but we know that men may come and men may go, but the



JOHN KNOX'S HOUSE.

"The house which projects into the street, at the place where it is suddenly contracted, may be considered an object of no little curiosity as having been the residence of the celebrated John Knox. It was granted to him free of rent by the magistrates, short while after the Reformation, when he officiated as a preacher in the church of St. Giles; and he is said to have occasionally, by way of supererogatory duty, held forth to the people in the street from a projecting window."—Robert Chambers.

hospitality of Edinburgh can always be depended on. I wish personally to thank your Lordship for your kindness in coming here. We are all well aware that the chief magistrate of this great city holds an office which is no sinecure—that his time and attention are very closely occupied and taken up—and I feel personally thankful to his Lordship that he should have found the time and given us the attention of coming here to-day. (Hear, hear.) But we recognise in his Lordship not only the chief magistrate of this great city, but also one of the foremost in that higher rank of medicine of which we constitute the lower

part; and we are glad to know that, in this city at any rate, medicine and pharmacy have never clashed. They have gone on hand in hand together, they have fought, shoulder to shoulder against a common foe, and it is on that account that medicine and pharmacy, the two battalions, have won so many victories in this city. (Hear, hear.) I would fain express a hope that this meeting may add to, increase, and strengthen that bond of union, and I am quite sure I can promise his Lordship that all his expectations will be fulfilled, and that this city will be ever known more and more and wider and wider as one of the greatest centres of medical and pharmaceutical education. I am not sure that I am able to promise him that we can bring in the metric system, but all those who have studied the subject will agree with his Lordship that it is very much required. We must remember that we cannot trespass too long upon his Lordship's time, and I shall now only ask you to accord a very hearty vote of thanks by acclamation to his Lordship for coming here to meet us to-day. (Loud applause.)

The LORD PROVOST said he was very grateful for their vote of thanks. It gave him very great pleasure and he esteemed the honour very much to be with them. He then invited those who were interested in matters of history and antiquity to visit the city chambers and inspect what they had of interest to the historian and antiquarian, and where they would be very welcome. (Applause.) The Lord Provost then left the Conference-room.

DELEGATES.

The following delegates were then accorded a formal welcome:—

Pharmaceutical Society of Great Britain.—Messrs. W. Gowen Cross (Vice-President), L. R. Atkins, Grose, Harrison, Hills, Johnston, Leigh, Martin, Martindale, Newsholme, Southall, Storrar, and Richard Bremridge.

North British Branch.—Messrs. J. L. Ewing, T. Maben, J. B. Stephenson, and J. Rutherford Hill.

Edinburgh Chemists, Assistants, and Apprentices Association.—Messrs. J. Lothian, W. B. Cowie, and A. J. Dey.

Pharmaceutical Society of Ireland.—Messrs. S. D. Beggs, W. F. Wells, and C. C. Payne.

Dundee Chemists' Association.—Messrs. C. Kerr, J. Russell, A. B. Anderson, and W. Park.

Sunderland Chemists' Association.—Messrs. J. Harrison, R. Robinson, and T. Nasbett.

North of England Pharmaceutical Association.—Messrs. N. H. Martin, C. B. Ford, T. Rhuder, and J. Harrison.

Midland Counties Chemists' Association.—Messrs. Hutton, W. Jones, A. Southall, and J. Barclay.

Aberdeen and North of Scotland Chemists' and Druggists Society.—Messrs. G. E. Broomhead, J. Johnston, J. Paterson D. Ritchie, and A. Strachan.

Chemists' Assistants' Association (London).—Messrs. Rogers, Williams, Strother, Stead, and Parry.

Sheffield Pharmaceutical and Chemical Society.—Messrs. A. H. Allen, J. M. Furness, and W. Ward.

Manchester Chemists' Association.—Mr. Louis Siebold.

Liverpool Chemists' Association.—Messrs. A. C. Abraham, J. Bain, M. Conroy, J. Smith, C. Symes, J. S. Ward, W. Wellings, and A. S. Buck.

Leicester Chemists' Association.—Mr. Burford.

Nottingham and Notts Chemists' Association.—Messrs. Bolton and Hill.

APOLOGIES

were received from Mr. Charles Umney (who regretted, as one of Mr. Stanford's first pupils, that he could not be present); Mr. Savage, of Brighton; Dr. Symes, Mr. Bell (Hull); Mr. J. R. Young (Edinburgh); Mr. Schacht, of Bristol; Mr. Druce, of Oxford; and Mr. Daniel Frazer, of Glasgow.

REPORT OF THE EXECUTIVE COMMITTEE.

In presenting the twenty-ninth annual report your Committee feels a measure of disappointment arising from their inability to record an increase in the membership of the

Conference. The special efforts which have been made during the last few years to obtain new members have not met with the success that was anticipated. In order to maintain its position as a representative organisation of all who are connected with pharmacy it is necessary that members severally and generally should avail themselves of suitable opportunities of making known to eligible outsiders the advantages to be derived from the Association. At the meeting held last night sixty were elected to membership.

The question whether it is desirable to continue to meet in the same town, and at about the same time, as the British Association is to be discussed at this meeting. On the present occasion it was found impracticable to meet as usual immediately preceding the British Association, owing to the very early date chosen by the latter.

In February last, at the invitation of the Council of the Pharmaceutical Society of Great Britain, a meeting was held, at which delegates from your Committee met representatives appointed by the Council of the Society, to discuss the suggestion that the Society should hold annual meetings at provincial centres, and to consider the probable effect that such meetings would have upon the Conference. At a subsequent meeting of your Committee it was reported that there appeared no promise that a further consideration of the matter would be likely to lead to any advantageous issue, and the subject may therefore, for the present at least, be considered to be closed.

The Conference has suffered a severe loss by the death of Emeritus Professor Redwood, which occurred in March of the present year. The help and advice received from Dr. Redwood in the early days of the Conference were of the highest value, and his continued interest was shown by his active participation in the meeting held last year at Cardiff. He occupied the position of President of the Conference in 1876 and 1877. His distinguished ability and long experience in all subjects relating to pharmacy gave him an authority in these matters which was recognised and appreciated throughout the world.

The Conference has also to deplore the loss by death of Mr. Thomas Hyde Hills, a former vice-president of the Conference. He was ever ready to promote the welfare of pharmacy in all its branches, and an evidence of his liberality remains in the Bell and Hills Fund, which annually provides for a presentation of books to the town visited by the Conference.

A second grant of 5% in aid of research has been made to Mr. R. A. Cripps, who is continuing his investigations on *ipecacuanha*.

Mr. Louis Siebold, F.I.C., F.C.S., was last year reappointed editor of the "Year Book," and the MS. of Parts I. to IV. inclusive is now in the hands of the printers. Arrangements have been made which will, it is hoped, ensure the earlier publication of this volume.

The reception held last night by the President, and the *conversazione* which followed, were well attended, and proved as entertaining and attractive as any that have preceded them.

This report was read by Mr. RANSOM and, following him, Mr. R. H. DAVIES read the

TREASURER'S REPORT,

which showed that the income for the year consisted of 458*l.* 14*s.* 3*d.* from members' subscriptions, 102*l.* from the "Year-book," and 21*l.* 5*s.* 6*d.* from the sale of the Unofficial Formulary, balances from last year bringing the whole up to 777*l.* 16*s.* 7*d.* Expenditure included: 493*l.* 11*s.* 9*d.* on account of the "Year-book," 20*l.* 0*s.* 7*d.* for the Unofficial Formulary, 65*l.* 11*s.* 9*d.* for secretarial and other expenses; printing, postage, &c., 30*l.* 16*s.*; and the balance was 360*l.* in Consols on the Bell and Hills fund account. Mr. Davies regretted that there had been fewer members last year, 18*l.* less having been received from that source, but the number elected on the previous night would put them all right on that score.

Mr. THOMAS THOMPSON (Edinburgh), who with Mr. D. Anthony, of Cardiff, had audited the accounts, testified to their accuracy.

The way was now clear for the President's address, and on rising Mr. Stanford was received with applause.

THE PRESIDENT'S ADDRESS.

LADIES AND GENTLEMEN,—I have, in the first instance, to thank the Conference for the kind expression of confidence in electing me at Cardiff, in my absence, to the honourable position of President. When your committee first selected me I declined the honour, deeming it impossible that an outsider like myself could do justice to the cause, and that a brilliant flash of silence would suit me best. My friends in the committee would, however, take no denial, pointing out that I should only follow some former Presidents who also were not personally employed in the practice of pharmacy.

Moreover, as one of the founders of the Conference, present at the first meeting at Newcastle in 1863, and assisting at its birth, it was my duty to do anything and everything in my power to promote its best interests.

That duty I fully recognise and accept as a very pleasant one, hoping to follow—though a long way after—the eminent outsiders who have preceded me in this chair. I trust that all shortcomings may be made up by your kind assistance. It is said that outsiders often see the best of the game, and I shall claim the privilege of a sympathetic looker-on, and, perhaps, even dare to criticise some of the moves. It may also be interesting to “see ourselves as others see us,” although it is said we do not often want to repeat the experience. I represent a part of that great public which has already profited so largely by the growth of pharmacy and the increased education of pharmacists, and which has placed a great trust in your hands, and is waiting and watching to see how you keep it. A roving commission and a rambling statement must be allowed me—that of a “chieftain among ye takin’ notes,” a position which would make me rather nervous were it not for the very excellent unwritten rule that this meeting does not criticise the President’s address, except favourably—and you have placed me in the chair to see that your rules are properly respected.

FIRST MEETING.

The memory of that little inaugural meeting, held in a small room at Newcastle in 1863—the year I came to Scotland—supplies me at once with a suitable text. Twenty-one pharmacists, who attended the British Association there, met together and founded the British Pharmaceutical Conference. Twenty-nine years have passed away, and each year has added to its progress. In 1871, when the Conference met last in Edinburgh, it was eight years old, and even then had arrived at years of discretion.

I congratulate the members that they are again invited to this beautiful city, and receive another hearty welcome to modern Athens; and those of us who were present on the last occasion know well what that means. We who nursed this bantling in its infant stage could scarcely have expected that it would have grown so rapidly, and so great, and that the Year-book of Transactions should be looked forward to as an indispensable record of the world’s progress in pharmacy.

Indeed, so proud may we be of our offspring that I thank our friend Reynolds for his timely hint about “garrulous old nurses.”

I think it may be worth our while to pause for a moment, and look back to our birth-year, and see what the interval has done for us, and for our country at large—embracing, as the period does, the latter, the greater, and the better half of the Victorian era. What progress has the world around us made in science, in manufactures, in education; and has our pharmacy kept pace with the general advancement? Can we put down our Ebenezer here, and thank God and take courage as we look forward to greater possibilities?

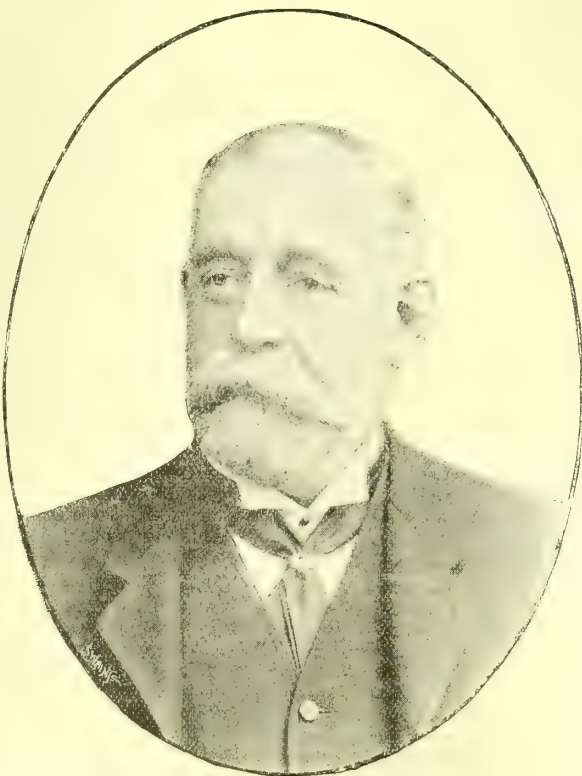
LOSSES.

Looking back has its elements of regret; our attention is at once riveted on the serious gaps made in our ranks by the hand of Death—those eminent men, those dear friends, who have joined the majority, “where beyond these voices there is peace.” Who can fill the vacant spaces where Deane and Brady stood at our first meeting? The first volume of the Transactions contains a paper by Deane on the opium alkaloids, with microscopic illustrations, beautifully drawn by Brady, whose monograph on the *Chal-lenger* foraminifera will alone hand down his name to posterity. We have lost the world-renowned Hanbury, who presided in 1857 and 1868 at Norwich and Exeter; Stoddart, who presided in 1870 and 1871 at Liverpool and Edinburgh; Williams, who presided in 1884 at Hastings; and last, and greatest of all, Redwood, who presided in 1876 and 1877 at Glasgow and Plymouth. Since our last meeting our generous friend Hills has passed away. We have also lost our dear friend John Mackay—who was secretary when we last met here—whose genial presence we miss so much, and whose loss to pharmacy in Scotland is irreparable. One quality was specially

notable in all: they were such lovable men—men with a halo around them, shedding light and love on all who came within their benign influence; men abounding in an enthusiasm which was wonderfully catching, and went far to secure the great success which has always attended the meetings of this Conference.

REDWOOD.

The lamented death of Professor Redwood, the Nestor of British pharmacy, is so recent that we have not yet got over it. He was long spared to us, with his wonderful talents and his great vitality preserved to the last, even to our own last meeting at Cardiff, in his native Glamorganshire; but soon after there was a noise amongst us as “when a standard-bearer faintheeth,” and we can scarcely yet realise that our great champion has retired from the field. No one knows the inner character of a professor better than his assistant,



and having for some time held that happy and intimate association, I wish to record that a warmer friend and a more lovable and unselfish man I never knew. In the present position of British pharmacy he has left us a noble legacy, and his name is commemorated by the Redwood scholarship now connected with the Research Laboratory, but many of us "will long for the touch of a vanished hand, and the sound of a voice that is still."

The British Pharmaceutical Conference is an organisation for the encouragement of pharmaceutical research and the promotion of friendly intercourse among pharmacists. Has it fulfilled these promises? The goodly volumes of Proceedings already published, of which twenty volumes have been issued since last we met here, supplies the answer to the first. The subjects treated are so extensive that it was necessary to supply a general index to the first sixteen volumes and another will soon be required, while the fact that we are meeting for the second time in this city, and for the fifth time in Scotland, where all the meetings have been specially successful, at least shows that even in pharmacy may have run to and fro, and knowledge has been increased.

We again shake hands across the border, and our southern friends will find once more that there is plenty to see and admire in the "knuckle end of Great Britain"—the "land of the mountain and the flood." But this Conference has not only brought together British pharmacists—it has brought us in close connection with distinguished pharmacists abroad of every nationality. It has given us a respect and esteem for one another, and by the excellent researches published in the Year-book, has raised the tone of British pharmacy wherever our language is spoken throughout the world. In the blue list, carefully prepared and annually circulated, attention is called to many subjects deemed worthy of investigation, and where our present knowledge is imperfect. I claim for the British Pharmaceutical Conference that it has amply fulfilled all its promises.

PROGRESS.

I shall not attempt to enumerate the special advances made in pharmacy during the past year—that would be anticipating the admirable summary of the editor of the Year-book, nor shall I follow my accomplished predecessor in speaking of new remedies, but only remark that no physician or pharmacist can afford to order a suit of clothes without a pocket specially made to contain the last edition of Martindale's "Extra Pharmacopœia."

NATIONAL PROGRESS.

I prefer to select a few subjects which may give us an idea of progress during the lifetime of this Conference. During this period the trade of the country, as shown by the imports and exports, has nearly doubled. The parcel-post, the sixpenny telegram, the telephone, the phonograph, the microphone, and the type-writer (unfortunately not yet used for prescriptions, though, perhaps, it would save more time in that than anything) have all been added since our birth-year; we had few ocean telegraphs then, and the first Atlantic cable was still lying useless at the bottom of the ocean, where now there are several lines in constant use. The telegrams have risen from 10 000 000 to 69 000 000, the letters from 617 000 000 to 1 767 000 000, the savings-banks from 44 000 000% to 108 000 000%, the shipping from 24 000 000 tons to 38 000 000 tons, and the applications for patents from 3 309 to 21 308. The tramways are all of our period: they extend to over 1 000 miles, with a capital of 14 000 000%. The cable tramway in this city is a late development. The railway capital has increased from 474 000 000% to 1 004 000 000%, and the passengers from 204 000 000 to 817 000 000; but the number killed has fallen from 1 in 5 000 000 to 1 in 53 000 000. This immunity from accident is due to inventions of our period, to the steel rail, the fish-joint, the block system, and the continuous break; and as thirty times as many are said to be killed in the streets of London, our Metropolitan visitors, when they come here in the luxurious carriages of our "Flying Scotchman," may feel that they are escaping from danger to safety. Our great railways have only deteriorated in one respect—they do not now give us the privilege of travelling to these national gatherings and back at a single fare. In the good old times when the present reign commenced, the fast coach from London took

45½ hours; now messengers on bicycles could easily beat this record. Truly the present times are the oldest and the best. Our great ocean steamships present another instance of greater efficiency and higher speed, producing also greater safety to travellers. The tubular boiler, the twin screws, the surface condenser and the triple-expansion engine, all inventions within our period, have raised the speed from 14 knots an hour to above 20, the boiler-pressure from 25 lbs. to 150 lbs., the horse-power from 3 000 to 20 000, while the consumption of coal has fallen from 3½ lbs. per i.h.p. to 1½ lb., and the weight of the machinery per h.p. is reduced to less than half; and these improvements have only made the Atlantic greyhounds "patent safeties," for the cabin is the safest place in the world. Those of our friends who go on to the West Highlands to see "Caledonia stern and wild" will find steamers where every luxury can be obtained, very different from those I remember.

GAS.

We then knew gas only as our chief means of illumination, and it is but recently that we have learned how to secure a maximum of light by improved burners. In this, the centenary year of its discovery by Murdoch in Ayrshire, it is humiliating to know that most of it is still wasted in this way. We now look upon gas as an important source of heat. It is especially valuable in pharmacy and in cooking. In some of our largest manufactories of glass and steel the firing is entirely done by producer-gas in connection with the Siemens regenerative furnace. There is yet great room for development in the supply of a separate cheap gas entirely for firing purposes, and the use of petroleum-oil gas for illumination. We have also the most efficient of all motive power in the gas-engine, now available up to 300 h.p. We have lived to see gas spontaneously rising with a pressure of 400 lbs. on the inch from bore-holes, and utilised for heating and lighting in Pittsburgh to the extent of 10 000 000 cubic feet a day. Gas would be of little use without matches, and as these are said to be the measure of civilisation, we may be reminded that they were invented by a druggist in 1827—John Walker, of Stockton—and that he sold them in boxes of fifty for a shilling, and now our country alone turns out 300 000 000 every day, and the world's annual production is estimated at 21 000 000%.

ELECTRICITY.

Electricity is rapidly becoming our servant-of-all-work. It promises soon to be our principal light; it supplies the motive power for railways, tramways, vessels, and an innumerable variety of smaller motors. It is used for cooking, for electro-plating, for reduction of metals, for welding iron and tempering steel, for working coal-mines instead of compressed air, down to Edison's method of killing cock-roaches and caterpillars by electrocution. And now it is supplied by metre and measured as easily as gas—in fact, in the United States a customer was fined \$5 000 for stealing it—a new fraud not easy to commit everywhere. The incandescent light is inseparably associated with the name of Swan, one of ourselves. Water-power is largely used for generating electricity: even a portion of Niagara Falls is to be utilised. According to Siemens it is equal to 4 500 000 h.p., which represents all the steam-power in the world. The Schaffhausen falls on the Rhine are utilised to generate electricity used in the reduction of aluminium, and the falls of Tivoli light 40 000 lamps eighteen miles away.

STEAM.

Four-fifths of the world's steam-engines have been made during our period, and the demand is greater than ever, and the consumption of coal goes on ever increasing, and our stock must be some day exhausted; even in fifty years it may become scarce. Then we must look for other sources of power. The waves, the tides, the rivers (the Mersey alone is estimated at 100 000 h.p.), the heat of the sun, may all have to be pressed into our service.

HYGIENE.

The important science of hygiene has grown up during our period, and we now know that cleanliness is not next to, but a part of, godliness—that the dirty saints of the Middle Ages were unsafe, and that the Mosaic law was as good for health as

for morals. Most of the mysterious visitations which used to be called dispensations of Providence we now know to be simply preventible deaths arising from our own neglect. The origin and development of many fatal diseases then unsuspected are known now. The whole treatment of disease has therefore changed. An accomplished nurse is as necessary now as a good physician. Nursing, then left in the hands of a low class of ignorant servants, is now engaged in by some of the noblest, best-educated and most devoted women in the land. The Ambulance Associations are all of our period, and it is now rare for any accident to occur without someone being present who is able to render "first aid," that important service which has saved so many limbs and lives. The medical officers of health for Edinburgh and for Glasgow were both appointed in our birth-year, but the Public Health (Scotland) Act was not passed till 1867. These officers soon showed good cause for their appointment. At that time the upright streets, as Sir E. Chadwick called the tall tenements of the older parts of the city, were subject to periodic outbreaks of fever. The death-rate was over 26 per thousand, the last decade it was only 17.5, a saving of 9 lives per thousand. Glasgow was still more remarkable, because there was more to do. The death-rate was over 30 per thousand, of which the chief zymotic diseases were 6.5. In the next decade the death-rate was reduced to 23, and the chief zymotic diseases to 4.3. In the last decade the death-rate was still further reduced to 24, and the chief zymotic diseases to 3.1, or less than half. The saving of six lives in a thousand amounts, on the present population of greater Glasgow, to 4,048 lives annually saved. The sanitary department costs 45,721*l.* per annum, besides the cost of the cleansing department, which is above 100,000*l.* more, all well spent in the noble service of fighting disease and death. The fourth and last attack of cholera occurred in 1866 and caused 53 deaths, as compared with 3,885 deaths in 1853. The authorities do not dread this terrible epidemic now. No new house is allowed to be occupied unless the drains have been smoke-tested and found perfect, and the Glasgow Police Act is extremely stringent. In 1849, 14,000 deaths from cholera were traced to the drinking of impure water. Only last month Pasteur called attention to the great danger arising in Paris from the use of ice from impure water. Glasgow owes much of its safety to Loch Katrine water, obtained at a cost of 3,300,000*l.* Liverpool has just obtained a pure supply from Wales at a cost of 4,000,000*l.*, and now we hear of Birmingham contemplating an expenditure of over 6,000,000*l.* for the same wise purpose. Perhaps we may hear next of the great metropolis taking its water-supply in hand. It was estimated that during the fair week over 3,000 hot baths were given in the five public baths in Glasgow, and yet our public baths and water-supply are nothing to those of ancient Rome. There is much to be done yet, as 125,000 lives are still annually sacrificed to preventible disease in this country, and Sir Jos. Fayer estimates the loss of labour alone at 7,750,000*l.*

CHEMISTRY.

We have seen chemistry, a science founded on the balance and the weights of atoms and molecules, leaving our earth altogether, and analysing the atmosphere of the sun and other stars, and even assisting in determining their size, distance, and velocity. Our notation has entirely changed, and those who attended our first Conference have had to relearn their atomic weights and combining equivalents, and if the names of the endless new organic compounds continue to increase in length, we may have to study a new alphabet. We do not yet know the elements as multiples of hydrogen, but much has been done to cast more than a doubt on their simple character; and it is probable that some, at least, may be dissociated into simpler forms.

PHOTOGRAPHY.

From the invention of the instantaneous gelatine plate, photography has undergone a revolution, and has become an almost universal national toy, and the sales of apparatus and chemicals must be enormous. In the manufacture of albuminised paper, three factories in the United States are said to use 3,000,000 eggs per annum. It has attained a marvellous development in astronomy, and natural colours are in sight at last. Professor Boys showed here that a photograph could be obtained in a ten-millionth part of a second.

MICROBES.

The greatness of little things has been very forcibly brought home to us in the discovery of the micro-organisms or bacteria, and the large and important part these minute bodies play in our daily life. It is well our eyes are not microscopes, and we cannot see these organisms, and what they feed on in the air: the outlook would be too dreadful. But we are not allowed to forget the omnipresence of an atmosphere with all its impurities. Some of our largest manufactures—bread, wine, beer, spirit, and vinegar—are all the products of various bacteria inducing fermentation. The effects, at least, have been known from the Deluge: we are not told how many of each kind Noah took into the Ark with him, but they were certainly present when he landed, or his grape juice would not have affected him so powerfully.

MANUFACTURES.

I can only select one or two of the larger chemical manufactures to illustrate progress, and such as are allied to pharmacy. Sodium carbonate and bicarbonate have developed into that enormous manufacture known as the alkali-trade, which during our period has attained great development. In the early part of this century sodium carbonate was made from kelp, and I calculate that it must have cost at least 100*l.* per ton from that source. It is a singular fact that the new process for making soda ash, known as "the ammonia-soda process," was first introduced for the manufacture of sodium bicarbonate for use in pharmacy. It is a simple method of decomposing sodium chloride with ammonium bicarbonate. It was patented by Dyer and Hemming in 1838. A company was formed to work the process in London, but it failed entirely: the decomposition was not perfect—there was great loss of ammonia, and the cost of ammonia salts was too great at that time.

SODA.

Many other similar patents were taken out, but the first practical result was obtained by Solvay, who exhibited sodium carbonate made by this process in the Paris Exhibition of 1867. In 1889 Solvay & Co., in their various works abroad, made 400,000 tons, equal to half the world's consumption. Meantime, Brunner, Mond & Co. had established most successful works at Northwich, where they have a brine-well, which is necessary to this process, and other works are being erected. According to the Alkali Report of last year, 278,528 tons of salt were decomposed by this process, against 567,863 tons decomposed by the Le Blanc process. In the ammonia-soda process the soda is first produced as a bicarbonate, and the soda ash is obtained from this by roasting; thus a small pharmaceutical product has developed into an immense industry. This result is almost entirely due to a new science—that of chemical engineering, which is a growth of our period: it enables us to overcome the great practical difficulties in the erection of chemical-plant on a large scale. It is to this science we owe the filter-press, the hydro-extractor, the vacuum pan, the multiple evaporator, better disintegrators, and many others, which have aided manufacturing chemistry and pharmacy. Thus the old Le Blanc process, which has held its own all this century, has now a formidable rival, by which soda ash is made much cheaper, and is only able to hold its own because it is still practically the only source of hydrochloric acid, which since the passing of the Alkali Act—also in our birth-year—has all been collected. In the ammonia-soda process the whole of the chlorine is run away as calcium chloride, whereas in the Le Blanc process half of the chlorine is obtained in the form of bleaching-powder—now 140,000 tons per annum, which at the beginning of this century realised 112*l.* per ton. The other half of the chlorine is still wasted.

SULPHUR.

Another great drawback to this process was the large and offensive outcome of alkali-waste, containing the whole of the sulphur from the vitriol employed to decompose the salt. In Widnes alone there is a deposit of 10,000,000 tons, covering 500 acres of ground, the drainage from which is most offensive. This deposit will now cease, for by the "Chance process" the sulphur is recovered in a very pure form, and the waste is rendered innocuous. Forty-five thousand tons were produced from this new source last year.

and it is rapidly increasing. Brimstone-and-treacle is not the fashionable medicine it used to be, and it never belonged to elegant pharmacy, but should the taste for it be revived, it is well to know that a sufficient quantity can be produced at home.

SULPHATE OF AMMONIA.

Closely connected with the ammonia-soda process, and affording the basis of several important medicines, is the manufacture of ammonium sulphate, and it has attained large proportions, especially in Scotland. At one time urine was almost the only source (ammonium bicarbonate was made not long ago from the urinals of Glasgow), then gas-liquor, from which the greater part of the 143,606 tons made last year in this country was obtained: 26,000 tons of it were obtained by the distillation of Scotch shale, and 6,290 tons from a new source—the waste gases of the Scotch blast-furnaces. Fifty-seven of these furnaces, which used to flame and flare all day and light up the nights, and were generally known as “blazes,” have been tapped at an expense of 444,600*l.*, and the tar and ammonia condensed; and in some of these the products pay better than the iron. What chemical engineering is required here may be estimated by the fact that in one work alone 100,000,000 cubic feet of nearly red-hot gases are dealt with every day.

SHALE OIL.

This great Scotch industry is entirely the growth of our period; in it shales, formerly useless, are converted into paraffin, lubricating and burning oils, and ammonia. Two and a half millions of capital are employed in this trade, and over 55,000,000 gallons of crude oil were distilled last year from 2,311,592 tons of shale. Its development has required the highest talent, and is a triumph of chemical engineering. The devising of refrigerating machinery for compressing the gases and condensing the volatile hydrocarbons led Coleman, who was trained in pharmacy, to the discovery of the celebrated Bell-Coleman refrigerator, one of the greatest successes of the present century. From it arose that enormous importation of dead meat from abroad, which last year amounted to 3,323,821 carcasses of frozen mutton alone, all of which were brought through the tropics and landed in perfect condition.

PETROLEUM.

This shale industry has now a still more gigantic competitor—the petroleum of America, Russia, and many other parts of the world. The production in 1889 was 75,000,000 barrels, or 10,000,000 tons, of which the United States produced 45,000,000 barrels and Russia 25,000,000 barrels. It is estimated that there are 10,000,000 paraffin or petroleum lamps used in this country alone, and the poorest cottage in the kingdom has a cheap and efficient light. An excellent petroleum-gas engine has been introduced, and is highly spoken of as a motor. This petroleum will probably be much more used as a fuel, as it has been solidified, and also as a means of enriching coal-gas. We are specially interested in knowing the name of Redwood as the best authority on this subject.

NATURAL PRODUCTS.

Many of our chemical manufactures have been superseded by the discovery of natural products. The mines of Stassfurt now furnish the bulk of our potash salts and of our bromine, which is found also in a natural deposit in America. Large salinas, or beds of pure salt, have been found in the Argentine; borates in California, sodium sulphate at Wyoming; and the arid mountains of Chili produced last year 945,000 tons of nitrate of soda and much iodine.

COLOURS.

The chemistry of the coal-tar colours was then in its infancy; we now see every shade of colour from this prolific source. From anthracene, discovered by Dr. Anderson, of Glasgow University, alizarine has been produced in such quantity as to entirely supersede the madder-plant and free for growing corn the many acres of land then required for its cultivation. Indigo has also been produced artificially, though not yet so cheaply as to supersede that from cultivation.

Pharmacy has profited largely by the constant researches into this mine of chemical wealth. Its products appeal to all our senses. Our sight is gratified by the beautiful

colours, our taste by the sweetness of saccharin, our smell by the odour of artificial musk; we can feel the sting of carbolic acid, and our hearing is satiated, even tired, by the endless long names it has given to us.

QUININE.

The object of the research which led Perkin to the discovery of mauve, the first of the tar colours—that of artificial quinine—is not yet accomplished, except from cupreine, for which a German patent has been obtained. But is it not highly probable that it may yet crown the magnificent edifice raised on a basis of tar—that sometimes troublesome substance which long ago led to Bishop Berkeley's speculation on matter, and which he recommended as a cure for all diseases? It was prophetic: could he possibly have foreseen such antiseptics as carbolic, cresylic, and salicylic acids, or such febrifuges and anodynes as salicin, antipyrin, antifebrin, and phenacetin? The history of tar-products should form a good sign-post to all young researchers who deal with unpromising materials, and who may be sure that perseverance will find the reward that invariably results from all patient labour. It is painful to reflect that the bulk of these manufactures of the finer chemicals is in the hands of German chemists, who are still ahead in the education necessary for this work. Our nation, however, has often well fought a losing battle, and converted it into a victory, and let us hope we may do this yet.

EDUCATION.

In nothing has our progress been more marked than in education. We had then no Board schools, no free libraries, and less than half the children in London attended school. Now there are 2,590 Board schools in Scotland alone, and the expenditure last year was 1,651,490*l.*; of this amount about one-fifth is expended in the cities of Edinburgh and Glasgow, and these cities possess schools which are equal to any in Europe. We may hope that there will be no illiterates in the next generation. The School Act of Scotland is more extensive than that in England, empowering the Boards to teach everything, and Board schools are almost universal here. In fact, for nearly two hundred years Scotland in her parochial-school system has had a State education. Macaulay says that “Scotland was then the rudest and poorest country that could lay any claim to civilisation. The very name of Scotchman was then alluded to with contempt. Fletcher, of Saltoun, said that nothing but the lash and the stocks could reclaim the vagabonds who infested every part of Scotland, and recommended that course in a pamphlet. A very different course was adopted. The Parliament which sat in Edinburgh [we were then under Home Rule] passed an Act for the establishment of parochial schools. What followed? An improvement such as the world has never seen took place in the moral and intellectual character of the people, and the Scotchman of the eighteenth century was an object not of scorn but of envy, because the State had given him an education.”* We know how many great Scotchmen these schools have distributed to leave their mark all over the world. Now the whole country has a State education, and Wordsworth's prophetic lines are fulfilled—

Oh, for the coming of that glorious time
When, prizing knowledge as her noblest wealth
And best protection, this imperial realm,
While she exacts allegiance, shall admit
An obligation on her part to teach
Those who are born to serve her and obey.

But we have yet much to do in secondary, technical, and university education. Great Britain has only nine universities. Of these the London University is little more than an examining body, and all must look forward to the time when the greatest city in the world will have a real teaching university worthy of it.

With a less population than London, we have four of these universities, and although capable of some reforms and extension, Scotland has reason to be proud of her colleges. In Glasgow we have the largest school of technical education in the kingdom, with 2,800 students, so that

* Macaulay's speech on Education, 1844.

although England is rapidly overtaking us, so far, in free, cheap, universal, unsectarian education, it is "Scotland yet."

But Germany has twenty-three universities, and when she acquired the city of Strassburg she immediately fortified it, not only by guns on the outside, but by building a splendid university within the walls. Now we have handed over Heligoland, she at once sets to work with a biological department to inquire into deep-sea fisheries. We are at last moving in this department, and perhaps it is time, after fishing for so many centuries, for our fishermen to learn something about the habits of fish. Even our plumbers must now be educated, examined, and registered, seeing that they can become efficient distributors of poison without our knowing it. The growth of free libraries, under the Library Act, is well seen here by the splendid Free Library. We have two fine free libraries in Glasgow, due to private benevolence; but we want several more, and we have not yet induced our citizens to adopt the Act, small as the necessary assessment is.

The formation of the large Society of Chemical Industry, with its splendid Journal, for applied chemistry, the Institute of Chemistry, for professional examination, and the Society of Analysts, all in our period, all show the great progress and the many special directions in which education in chemistry is extending. Organic chemistry requires much more extensive teaching and many more teachers than we have at present, and we must look for a great increase and, perhaps, several divisions in this branch of education.

PHARMACEUTICAL EDUCATION.

Have we, then, kept pace with this universal run for knowledge going on around us? To a great extent we have. There are now Pharmaceutical Associations in South Australia, Queensland, Tasmania, New Zealand, South Africa, and Otago. But it is complained that many young men who try to pass the examination of the Pharmaceutical Society in London have not been properly educated at school. Dr. Stevenson, the Government visitor, says about the Preliminary examination: "It is evident that many young men of defective education still unsuccessfully attempt to enter upon the business of pharmacy, most of them failing in simple arithmetic." I am glad to hear that the attempt is unsuccessful; it is unfair to put any uneducated youth into pharmacy—unfair to himself because he is entering a business the professional part of which requires the highest education, and unfair to pharmacy because he lowers the tone of what ought to be a scientific profession. Of the Minor examination Dr. Stevenson says: "The ill-effects of attempts to acquire knowledge haphazard and without systematic teaching are painfully apparent." The same remarks apply to the examinations here, but the percentage of failures is much less.

Now, this is nothing more or less than "cram"—that hideous spectre which haunts all examinations, and makes us wish to find some better substitute for testing knowledge. When will our young men learn that, even if they pass such knowledge can never be of any use to them? But that is not the worst, it is no use to their fellow-men, which is much more important. Knowledge crammed for an examination is of no more value to the mind than undigested food is to the body—it imparts weakness, not strength. It is like a Latin lesson which an idle boy learns to escape the cane or the tawse, and when the ordeal is over he speedily forgets both. Dr. Stevenson, however, adds that "the capabilities of the candidates will be better tested by the new examination," and I hope his expectations will be fulfilled.

I am surprised occasionally to hear some talk of over-education in pharmacy, especially in Scotland, the country that owes her great position entirely to education. I notice those who talk so freely about over-education do not suffer severely from that complaint themselves. If a pharmacist can be over-educated he occupies a perfectly unique position, unapproached by other men. We often hear of over-educating the people: I consider that impossible. It is well known to school inspectors here, where the children are fairly intelligent, that the clever ones do not number more than 4 to 5 per cent. at the outside, and these only *can* be over-educated. As to the others the great difficulty is to educate them at all. I speak as the chairman of a School Board which possesses one of the largest schools in the kingdom.

The artisan of to-day knows more than the middle class did in the last generation; and I hold that the Pharmaceutical Society have always been right in giving the first place to education, for that, and that alone, will elevate pharmacy. It is the only means yet discovered that is always sure to help people to help themselves, and it must begin early. "The time to get ready a ship for the storm is not when the hurricane is on, but when the planks are being picked and the bolts driven home in the dockyard. Build a boy of sound timber and he will weather most things." *

PHARMACY.

But some think there is no inducement in the present and future of the pharmacist to repay liberal education. I have no doubt there is now some truth in this, and that his claims are not properly recognised and rewarded; the public recognition may be tardy, but it may be all the more generous when it comes.

Much progress in pharmacy has marked our period. Many of us remember, with a shudder, the awful powder, the very thought of which haunted our young dreams, taken in some kind of jam, and which gave us a growing horror of that particular variety of preserve which we have never got over. That does not represent the elegant pharmacy of to-day, and our children can take it in a tabloid: much has been done, and more will yet be done to make the administration of nauseous medicines agreeable.

The pharmacist deals with fearfully destructive weapons, and requires a good deal of the *suaviter in modo* to cover his *fortiter in re*. He deals in the oldest of all chemistry, that of medicine. His alchemist ancestors worked early and late to find the elixir of life; he is equally industrious, and much more successful, in his constant search for preventives of death. He is the only person legally allowed to call himself chemist in this country, but perhaps he may yet alter his cognomen. Pharmaceutical chemist is too long, pharmaceuticist is too dreadful, pharmacist is not euphonious. I would suggest pharmacian as being more like physician and surgeon, and that his shop, as suggested long ago by Ince, should be called pharmacy. Judging by the necessity of a carte-de-visite being required to secure a situation, I assume that, in his younger days at any rate, he must be good-looking, and I am not aware that this is an indispensable qualification of any other variety of chemist. But as some of the fair sex are qualifying to take his place, this may put him at a disadvantage. An anomaly exists in Scotland in pharmacists not being secured, as they are in England, from serving on juries; a letter received from the late Lord Advocate convinces one that this has only to be properly represented to be redressed.

POISONS.

In a free-trade country we are agreed that there shall be no free-trade in poisons, and that those only shall be allowed to dispense them who have passed the stringent examinations of the Pharmaceutical Society. The public themselves can judge the value of groceries, of which the more sales the better, and if they are taken in it is their own fault; but they know nothing about medicines, of which the less sold the better for them. They may buy a second quality of the one, if they want something cheaper, but there ought to be no second quality of the other: that must be purity itself and above suspicion. The average Briton is not to be trusted with stimulants, much less with more powerful poisons. We refuse to sell pistols to infants, and poisons to ignorance. The pharmacist does not yet get fair play: grocers and many other dealers have been allowed to traffic in poisons; open doctors' shops compete with him in the sale of medicine, and then the great co-operative trawler bears down upon him and nets everything, not only from a side of bacon to a chest of drawers, but asserts the right also to physic and poison as well as feed, clothe and furnish everybody. The capital of these co-operative societies has increased during our period from 656,640*l.* to 13,721,008*l.*, and the sales from 2,500,000*l.* to 38,000,000*l.* During the past year, however, considerable progress has been made in asserting the rights of the pharmacist as against the sale of poisons by unqualified persons.

* Prof. Drummond.

The prosecutions in Glasgow by the Pharmaceutical Society of some of the open doctors' shop have revealed a low state of medicine in that great city which, fortunately, we look for in vain elsewhere.

GLASGOW.

In going over the Pharmaceutical Register I was surprised to find that there are only fifteen pharmaceutical chemists in Glasgow against thirty-seven in Edinburgh. I append the numbers in five of the larger cities and towns in Scotland:—

	Pharmaceutical Chemists	Population	1 Ph C in
Greater Glasgow ..	15	653,200	41,012
Edinburgh ..	37	261,231	7,031
Perth ..	2	29,972	14,951
Aberdeen ..	10	112,923	11,233
Dundee ..	4	140,633	35,164
All Scotland ..	119	4,033,103	33,891
London ..	507	4,231,431	8,346

This table supplies an object-lesson in Scotch pharmacy, and shows that the higher qualification of the Pharmaceutical Society has not been attractive in Scotland generally. There are twenty large towns in Scotland, with a total population of 471,201, which have no pharmaceutical chemist. Greenock and Govan, each with a population of 60,000, have none; the fair city of Perth, the capital of Scotland to 1842, and Aberdeen are better; but the other cities, except Edinburgh, have a very small representation of pharmacists, and Glasgow presents an extraordinary contrast to Edinburgh in this respect.* There are seventeen of our pharmaceutical chemists in the Mauritius and fifteen in the city of Melbourne, so that Glasgow is much worse off in higher pharmacy than those remote dependencies. What can be the reason of this? The answer is obvious. Pharmacy is at a low ebb here because the work is done by the wrong class. It is estimated, there are 300 of these open doctors' shops in greater Glasgow. Now, this may be justifiable in out-of-the-way country districts, but there can be no excuse for it, except use and wont, in the second city of the empire. Some of these shops have only lads or girls as assistants; whether the law can put this sort of thing down entirely or not I do not know, but it certainly ought to have that power. The three branches of the medical profession should be entirely distinct—the physician, the surgeon, and the pharmacist. The physician should prescribe the medicines but not dispense them, and the pharmacist should dispense but not prescribe. This is the law in France, Germany, and other civilised nations, and it must eventually be the law here. At present, over Great Britain, the pharmacists do only a small portion of the dispensing; the bulk is done by those medical men who represent the old apothecaries—the relics of a bygone age. A physician is not now a seller of physic, and a surgeon is not now a barber. Medical advice and the payment for it does not now depend on the quantity of medicine that can be poured into the patient. We all wish to take as little as possible. The surgeon does not sell his instruments, nor does he make them; he only uses them. Why should the physician do otherwise? That the recent prosecutions are approved by the Faculty of Physicians and Surgeons in Glasgow is shown by the following resolution recently passed by the Council:—“The Council, in view of a recent discussion on the subject in the Faculty that some Fellows have their names appearing so prominently over open-shop doors, or what appear to be shop-doors, so as to convey the impression that they keep open-shops for the sale of drugs, and thus violate a regulation of the Faculty, resolved that the special attention of the Fellows be called to the matter, and that they be requested to avoid everything which might have even the appearance of infringing this or any other of the regulations which they have undertaken loyally to obey.” That this step was necessary, the following advertisement, taken from a Glasgow daily paper, is convincing:—“To Druggists.—Wanted, young man or youth to keep doctor's shop for a week.”

PATENTS.

There are other chartered libertines who have long been disposing of poisons through proprietary medicines, the sort that “don't contain no mercury and goes right to the spot.”

* It will be seen that Edinburgh is better supplied than London, but there are seven towns in Scotland better supplied than Edinburgh.

So it does; for the spot is the extraordinary gullibility of the British public, who will swallow anything with an air of secrecy or mystery about it.

Sir Kenelm Digby's cephalic snuff, “composed of noble cephalic subjects which at once or at most with three times using it, with God's blessing, cured the apoplexy” and everything else, has its counterpart still amongst us. Consul Danby says that 13,000 lbs. tiger's bones, valued at \$2,000, were shipped from one port in China in 1899 for making a tonic medicine to give a tiger's strength and fierceness to the Chinese buyers. Are we any better, and is there anything too ridiculous to attract by advertisement our “thirty millions, mostly fools”? The fact is they require to be saved from these things. In Bulgaria a wholesome law renders a proprietor of medicine advertised to cure a certain disease liable to imprisonment if it fails, and as many of ours are advertised to cure all diseases, from a corn up to a consumption, it would be easy to commit under this law. Even under our own law a lady has recently recovered 100% from certain advertisers for non-fulfilment of contracts. Of course, there are some good medicines among the patents, and these would always survive; but of many, the following advertisement, cut from an Irish paper, is descriptive:—“Wanted, a gentleman to undertake the sale of a patent medicine; the advertiser guarantees it will be profitable to the undertaker.” Why should not these proprietary medicines be really patent, or patented medicines? If they were, and the specification filed in that receptacle of curiosities the Patent Museum, it would be still more interestingly ridiculous. These licences realised last year 225,701%, but that is nothing in our national revenue, and it had better be abolished altogether for all the good, or rather ill, it does. We are told that one firm alone pays over 100,000% for advertisements, and it is said to be good for trade—or is it tirade? But there is another side to the question. According to Murrell 15,000 children are killed every year by soothing-syrup. In 1890 there were 663 fatal cases of poisoning, and of these 149, or 22.4 per cent., were from opium in various forms. Chlorodyne counts for eleven, we owe to this the recent action taken by Government against the proprietors, and the legal decision, that it can only be sold in future under poison restrictions and by qualified men. Coroners have repeatedly called attention to the danger attending the sale of these articles, and we may hope now that such dangerous medicines will not find their way without a caution into the hands of the general public. The *Lancet*, the *British Medical Journal*, and the daily press, have applauded this decision. And I hope that now the Council of the Pharmaceutical Society know their strength they will use it—mercifully of course, but firmly, as not for themselves, but as a protection to the people.

EDINBURGH.

I congratulate the pharmacists of Edinburgh that they do worthily represent Scotch pharmacy and pharmaceutical education, in a city so noted for its noble University and its fine schools as a centre of medical and general education. While Glasgow is celebrated for the extent and variety of its larger chemical-manufacturers, Edinburgh is no less famed for its pharmaceutical specialities.

Edinburgh will always be renowned throughout the world as the birthplace of chloroform, and of all its honours we must give the palm to this. It would be impossible to estimate the agony relieved and the pain assuaged or to over-estimate the vast debt which suffering humanity owes to the pharmacy of this city. But it is celebrated also for the manufacture of morphia, salicin, and antiseptics—the Lister foundation of modern surgery, so common now that every soldier carries an antiseptic dressing in his knapsack; and if we add the many lives which this treatment has saved, it greatly increases the sick and wounded world's indebtedness. Gelatine also is a very large article of manufacture here.

In special investigation from the University, I need only allude to the work of Professor Crum Brown on methyl and ethyl derivatives of strychnine and atropine, and his recent electrolytic synthesis of succinic, suberic, and sebacic acids. Edinburgh may also be proud of its great infirmary, its splendid museum, and its free library with its suggestive motto, “Let there be light.” The Pharmaceutical Society may well be proud of the activity of pharmacy here. The evening meetings held last winter compare most

favourably in interest and importance with those in London. The Assistants' Association, the members of which have much assisted in the Additions to the Pharmacopoeia, and the Pharmacists' Athletic Club are worthy of the highest praise; it is refreshing to hear that notwithstanding their excellent scientific winter work, they held athletic sports last month, in which the usual competitions were fought and won, and to know that a golf-club with a gold medal for competition, has been formed. I suggest most respectfully, to the Assistants' Association to recommend to Dr. Attfield for his next report that the bicycle, golf-club, cricket-bat, and tennis-racket should be added to the B.P.

They might be placed among "the articles employed in chemical testing"—i.e., for the testing of chemists' chests. He will never get more valuable preventive medicines to include in that great work.

BOTANY.

In all pharmaceutical research the study of botany is necessary, so that the plant can be carefully selected before any investigation of its properties is made. There is no difficulty in studying botany here, as the lecture-room and laboratories in the Botanic Gardens are most complete. Glasgow is not so well off, but the University is taking the matter up in earnest, for there is much need of proper botanical class-rooms, museums and laboratories there. Prof. Balfour tells us that there was a Botanic Garden here so early as 1670 for the cultivation of medicinal plants. The world commenced with a garden, and we are led to expect it will end with one, when the desert shall blossom as the rose. We hear of artesian wells in the Sahara desert already rendering a part of it fertile, and given a fertile soil, the air and the birds will plant it. It is not only the rose of Jericho (*Anastatica*) which blows about and grows everywhere. Sebastian found in the ruins of the Colosseum at Rome 260 species of plants brought there by birds, and Darwin grew 82 plants from a ball of clay in the foot of a partridge. The sun never sets on the plantations of our mighty empire. Plants yielding fruit, flowers, and medicine grow for us all over it, and there is not a single hour, day or night, during the entire year when some of these are not ripening for our use—fruit and perfume farms in Australia, for instance. On account of our great ocean commerce, we ought to have the advantage in securing and bringing home the produce of other lands. Thanks to our swift steamers, fruits grow for us abroad better than at home; and this trade, though already large, is in its infancy. The value of fruit in diet is now better known—the grape, the orange, the apple, and for vegetables the tomato, the onion, and the celery, and many others have their valuable properties. There is room for research in the juices of fruits; a recent investigation shows a digestive ferment like pepsin in pineapple-juice, and it is probable that some such ferment is widely distributed in fruits. The study of the edible fungi would lead to an additional food-supply almost entirely neglected; while that of microscopic fungi is becoming more interesting every day. The *Phytophthora infestans*, causing the potato disease, and the *Oidium Tuckerii*, which ravages the vineyards, the numerous ergots which do so much damage to corn-crops, and those which attack our fruit-trees, are only instances which will repay investigation, and may lead to important commercial results. The rise of the sap in high forest-trees is a subject of which almost nothing is known. The formation of organic compounds in plants from inorganic is another tough subject. It has been pointed out that the necessary elements in plants have no higher equivalent than fifty-six. The cultivation of medicinal plants, with the special view of increasing their active principles, is capable of extension, and there are many fertile acres lying idle. Our own wild plants present an immense field for research—to even enumerate those common plants which have been employed in medicine from time immemorial would require a paper to itself. Many of these must possess valuable properties, and it is quite possible we may have too hastily thrown aside some of these in favour of other plants from abroad. Take, for instance, an old remedy for dropsy—the lily of the valley. The examination of this plant has led to the discoveries of convallarin and convallamarin, a valuable remedy for certain heart-diseases. The examination of native herbs might be largely extended.

No ear hath heard, no tongue can tell,
The virtues of the pimpernel.

Is this only fancy, or may there not be some medical virtue intended? The Druids looked on the mistletoe and some other plants as sacred. Is it not probable that the known medical properties of the plant gave it this position? Waste weeds even may be valuable, as, for instance, Esparto grass for paper, and the weed of the Bahamas for rope.

PHARMACY.

It is worthy of notice that tartaric acid and citric acid have been synthesised. Indiarubber and gutta-percha would appear difficult to make in the laboratory; but Professor Tilden, our first Bell scholar, has obtained the former from the isoprene of oil of turpentine by spontaneous polymerisation. If something more difficult is wanted, there are ivory and whalebone wanting substitutes. These are getting dearer every day; every pound of ivory is said to cost a human life; and the small quantity of whalebone got this year fetched 3,000*l.* per ton at Dundee.

As showing the rapid progress of organic chemistry, I notice, in the Journal of the Chemical Society for July, the following new alkaloids:—Aristolochin, aristine, from species of *Aristolochia*; ephedrene, from *Ephedra monastacia*; pillijan, from *Lycopodium saururus*; glaucine, from *Glaucium luteum*; and solidarin, from *Lupinus albus*. This is pretty well for one month. I am sorry to add that all these discoveries are by foreign chemists. In the same journal there is a new sugar by Baeyer; he calls it the simplest sugar of the inositol group; he also calls it cistransparadihydroxyhexamethylene—but as that would be a difficult name to sell over the counter, the author has kindly contracted it to quinitol.

We have now a number of compressed gases, which are chemical engineering conquests over great difficulties, and very useful, such as carbonic acid, sulphurous acid, nitrous oxide, hydrogen, oxygen, and nitrogen; the latter has 5 per cent. of oxygen left in, and is offered as an anæsthetic; even chlorine is now to be obtained in liquid form; extracts of meat and malt, peptones, lanoline, vaseline, and cocaine for local anæsthesia are all of our period.

Nickel and aluminium are two metals now cheaply produced, and are both—and also aluminium bronze—likely to be useful in pharmacy. The great number of colour-indicators that have been added to litmus and turmeric, for the estimation of various bases and acids, give great facilities in testing; volumetric analysis is increasingly useful, and the standard work is still that of one of our founders, Sutton. The training of a pharmacist is particularly valuable for that of a general analyst, whereas the latter are not specially trained in materia medica, and the examination of medicines ought to be in the hands of a pharmacist.

PTOMAINES.

There appears little doubt now that infectious diseases are the product of the ptomaines, resulting from the action of bacteria; these highly toxic alkaloids have been mistaken for other poisonous alkaloids in *post-mortem* examinations of human subjects where poisoning was suspected. In some criminal cases these have been mistaken for coniine, strychnine, delphine, and morphine, which they closely resemble in their reactions. Others resemble nicotine, atropine, digitaline, veratrine, and curarine. It is obvious, therefore, that the *post-mortem* examination for poisons presents hitherto unexpected difficulties. Many fatal cases of poisoning have also occurred from the presence of these ptomaines in meat, especially in pig-meat, which bears out the value of the Mosaic restriction. The following toxic ptomaines have been isolated, and the formulæ are known:—Cadaverine, isoamylamine, neurine, choline, mytilotoxene, typhotoxine, tetanine, and mydatoxene. No doubt many more will yet be added to the list; but Professor Simon points out that the bacterial proteids produced from the bacillus of cholera, typhoid fever, and diphtheria are even more poisonous, and have not yet been isolated. Dr. Koch's *tuberculin* is also a poison of extraordinary virulence. When these bodies are known, the diseases may be conquered by fighting the bacteria with their own products, thus adopting a new and true homœopathic treatment.

The pharmacist will be called upon to isolate and prepare these bodies, and I hope he will also have a large share in the great work of their further investigation. It will call out

the highest powers of research, but that ought not to deter him. The first chemical laboratory in London was that erected by the Pharmaceutical Society, and they are still to the front, having founded the first laboratory devoted entirely to original research in pharmacy. This laboratory has already produced some brilliant researches, and of great practical value, though I hold that is not the first thing to aim at. The scientific side, not the commercial, must be taken up first. We want a diligent search for new truths: we are content to wait for their application. The new title of Research Fellow will, I hope, attract many of the younger men. I would point out, too, that the British Pharmaceutical Conference possesses a research fund, and that we are glad to have demands made on it. There is an immense field for research in the extraordinary variety of natural products which, in daily increasing numbers, pass under the notice of the pharmacist; the book of Nature is always open to his study, and she brings her own reward.

Mr. Goschen in his last Budget said that the profits of the cotton-lords were not equal to those of the medical profession, and the pharmacist may get his own share some day; and the profits on pills will not always be reckoned as pillage. In this purely commercial age, it may seem quixotic to remark that money is not everything. Those of us who are not overstocked with it ought to be thankful for the many good things that money will not buy. It cannot buy health and happiness, but it can, and it does often, sell them. "Better is it to get wisdom than gold," said the king who had abundance of both.

The world provides for the survival of the fittest, but who is to look after the maimed, the halt and the blind? It is the honoured privilege of medicine to take care of the unfittest, the wounded, the weak, the weary who drop out of the race, and restore them to their places in life. The physician's remuneration does not begin and end with his fee; the thought of the conquest won by his knowledge in the restoration of the sick patient to his family, after a long and anxious struggle with disease, must ever form the largest part of it. The same greater reward awaits the surgeon, when his skill enables him to restore some poor limping cripple to renewed activity. And has not the pharmacist his share in this better recompense when he discovers some valuable remedy, and contributes a new weapon to this noble fight? Let me advise our young pharmacists to educate themselves to take their proper share in this great victory. If they are the least afraid that there may be any difficulty in finding a place for a well-educated man, let me remind them of the saying of a canny old Scotchman, so characteristic of his persevering race—

There's aye room at the tap.

Mr. Stanford spoke for fully an hour, and was frequently applauded, while many a laugh made the time feel shorter.

THE PRESIDENT THANKED.

Mr. R. REYNOLDS (Leeds), in moving a vote of thanks to the President for his address, said it was with very great satisfaction to him, as one of the President's old colleagues at the first meeting in Newcastle, that he should have been selected to offer the thanks of the meeting for the office which he had now performed to the Conference. He did not regret that it had fallen in these latter days that Mr. Stanford should occupy the chair. He had a right to it any time within the last twenty years. He was able to enforce the lesson which he had so properly laid before them—those broad views and that question of technical chemistry which was the great force of the age. When the end of the century had its history written, he was convinced that the particular aspect which the historian would note in the last ten years would be the spread of technical education. Amongst the technical chemists he thought Mr. Stanford stood first. (Applause.) They would recollect those honours which had been conferred upon him—those gold medals of the International Exhibitions for his work in the kelp-industry in which he (the speaker) believed Mr. Stanford had no competitor. It was, therefore, well that they should have heard the question of applied chemistry put before them so broadly and with that relation to their own art, because Mr. Stanford could justly claim that pharmacy is an admirable basis for those

who afterwards may feel inclined to extend into other paths. He begged to move that the heartiest vote of thanks of the Conference be given to the President for his able and eloquent address. (Applause.)

Mr. PETER BOA desired, in one word, to second the vote of thanks.

Mr. T. B. GROVES (Weymouth) said he had the honour to ask them to respond to the vote of thanks. It was almost a painful duty to him, as he could not help thinking that he was now at the top of the tree of ex-Presidents, all of his predecessors, except Mr. Bentley, having departed. He asked them to accept the vote of thanks by acclamation. (Loud applause.)

The PRESIDENT thanked the Conference for the kind vote, and apologised for the length of the address.

THE UNOFFICIAL FORMULARY.

Mr. W. MARTINDALE, Chairman of the committee which has charge of the Unofficial Formulary, reported that, as the printers have a good stock of the 1891 Formulary in hand, the committee had not thought it necessary to produce any new formulæ, and they have enough public and private criticism (mainly as to the keeping properties of existing preparations) to keep them working some time should they be again re-appointed.

READING OF PAPERS, AND DISCUSSIONS THEREON.

The first paper read was entitled

NOTES ON STARCH-DIGESTION.

By G. A. GRIERSON, F.L.S.

Medical men now appear to have arrived at the opinion that starches have a good deal to do with dyspepsia, and the consequence is that there is now a regular demand for starch-digestives, especially malt and its extracts and preparations of the pancreatic ferment. The author of the present paper considered that pharmacists should know well the conditions under which such preparations are most active, and as there is some confusion in the testing of malt and pancreatic extracts, through different starches being used in the experiments, the notes of work which he had done in the course of the last two years may assist in producing uniformity. First, as to the relative digestibility of different starches. Experiments were made with mucilages of the different kinds of starch, flours, &c., made by boiling 1 gramme of the starch or flour with water, and making up to 100 c.c. with water. The action of 1 c.c. pancreatic essence at 100° F. on the 100 c.c. of mucilage was then determined, with iodine as an indicator, and the following are the results:—

Maize-starch gave a blue colour after three hours' digestion same after twenty hours.

Wheat-starch and rice gave the blue colour after two hours' digestion.

Tapioca: Faint green at the end of thirty minutes.

Tous-les-mois, Bermuda and St. Vincent arrowroots, and potato-starch ceased to give the blue colour at the end of ten minutes.

Oatmeal, after digesting eighty minutes, gave an exceedingly faint blue.

Wheat-flour: Same after two hours.

Potato-flour: A mucilage of 2 grammes of this with the same quantity of pancreatic essence ceased to give a blue colour in ten minutes.

Boiling the starch-mucilage did not accelerate the digestion. The experiments were repeated with malt-extract, and the conclusions arrived at were that tous-les-mois, arrowroot, and potato-starches are the best for testing malt and pancreatic preparations, as they are most easily digested; and for the same reason they are the best for weak digestion. There is no difference between low and high priced arrowroots. Root-starches are more digestible than seed-starches.

In some experiments on the influence of temperature on the digestibility of starch (the experiments being in all conditions except temperature like the above, and starch the agent) it was found that at 60° F. with pancreatic essence the blue coloration ceased in half an hour, but in ten minutes at 100°, and fifteen minutes at 150° F. High temperatures do not, therefore, as in the case of pepsin, accelerate the rate of digestion.

Dilution appears to exercise a marked influence in retarding the rate of digestion. A gramme of arrowroot was made into mucilage with 50, 100, and 150 c.c. of water, 1 c.c. of pancreatic essence added, and it was found that the stronger solutions (*i.e.*, those with the least water) digested rather more rapidly. The author considered that this is due to the dilution of the ferment, for in experiments wherein the quantity of ferment was varied, the rapidity of digestion was directly proportional to the amount present. The addition of chemicals to a 1-per-cent. mucilage of arrowroot yielded some interesting results bearing upon pharmaceutical and physiological practice. One cubic centimetre of B.P. hydrochloric acid had the effect of completely precipitating the starch, apparently unaltered, after digesting for forty-eight hours at 100° F. Saliva was substituted for pancreatic essence, but the result was the same; on omitting the acid, the saliva did the work in four minutes. The author believed that these experiments show that starch-digestion does not take place in the stomach—at least when the ferments of the saliva and pancreatic juice are only present; also, that they show it to be extremely probable that some forms of dyspepsia may be due to low alkalinity of the gastric juice, and its consequent inability to neutralise the acid-contents of the stomach when they are emptied into the duodenum. It might be supposed from this that the presence of an alkali would facilitate the digestion, and that is generally believed, but experiment did not support the idea. One per cent. of sodium carbonate was used instead of the hydrochloric acid in a similar experiment to that last described, and after two hours digestion was far from complete. Alcohol did not affect the digestion one way or other, although 10 c.c. of Scotch whisky was added along with 1 c.c. of pancreatic essence in a similar experiment—that is, the author explained, what would represent the average present in the stomach after a glass of Scotch whisky.

The author, in concluding, referred to the colours given by different starches: 1 c.c. of decinormal iodine was diluted with water up to 100 c.c., and a mucilage of each starch was made from 0.1 gramme in 10 c.c. of water. To each starch-mucilage 1 c.c. of the dilute iodine was added. Arrowroot, potato-starch, and tapioca gave a bright blue; rice, a faint blue; maize and wheat, a faint violet colour. When more iodine was added to the faint colours, the blue was greatly strengthened, and the author inferred from this that there is a reducing body in the seed-starches which prevents the formation of a deep-blue colour until a certain point is reached.

The PRESIDENT said that this was a very interesting paper, but he hoped that a certain portion of it would not be taken as an advertisement for the Distiller's Company. (Laughter.)

Mr. A. W. GERRARD remarked that the paper had a considerable amount of interest for him, as he had for a long time been engaged on the pancreatic digestion of proteid matter (lean meat), and his own results, to a certain extent, corroborated those of Mr. Grierson on starch. Thus, in regard to temperature, his own experience was that 120° F. was the point at which pancreatic digestion of meat was greatest, a higher temperature than that being decidedly detrimental; indeed, 140° F. he would call "fatal." This was his experience in working on hundredweight quantities of meat. In regard to the influence of dilution with meat it was favourable rather than otherwise, and, instead of the digestive process taking three or four hours, as was generally stated, he found that in one, or at the most two hours, the process was complete, if the meat were finely divided. Of course, it could not be expected that sinewy portions of meat would digest so quickly.

Mr. T. B. GROVES said he was surprised that potato and maranta starches were now put on the same level, because, as a matter of fact, they differed greatly. For example, years ago it had been pointed out that while a jelly of potato starch became liquid in a comparatively short time, a maranta starch retained its firmness for a considerable time. Mr. Groves also referred to the discovery by Mr. Brown of a cellulose-dissolving ferment in grain, and the probable influence of that upon digestion.

Mr. LLOYD WILLIAMS said that it must be remembered, in connection with colour-changes of a solution of diastase

upon starch decoction, that according to the recently published researches of Lintner, jun., the received ideas upon the composition of the coloured bodies which successively appear during the progress of digestion necessitate some modifications. Lintner describes these changes as being due to the presence of a body which he described as isomaltose, and varying quantities of maltose, as against the erythro- and achroo-dextrins described by O'Sullivan. It would be necessary, therefore, that future experimenters should bear this in mind.

Mr. DOTT said that there was one thing in testing extract of malt which was apt to lead to a fallacious inference—*viz.*, that a few particles of starch might remain unacted upon, thus giving the blue iodine coloration, although digestion might be practically complete. For that reason he thought that another means of determining the completion of the digestive process was desirable.

The PRESIDENT suggested that Mr. Dott might explain what he meant by another test.

Mr. DOTT, in response, said that the amount of sugar actually formed ought to be estimated.

Mr. KEMP, of Manchester, on behalf of those who were sitting at the back of the room, said that they would be able to follow the discussion with much greater interest if those who joined in it would speak a little louder. (Laughter.)

Mr. GRIERSON, on being called upon to reply, said that he expected that there would have been much more discussion, as his notes were fragmentary and, he thought, incomplete. There were, however, one or two points raised in the course of the discussion which he might refer to. He corroborated what Mr. Gerrard had said regarding the dilution in the digestion of proteids. It was the case that the process proceeded much more rapidly both with pepsin and pancreatin, although the reverse was the case in starch-digestion. Mr. Groves's remark on the existence of a cellulose-dissolving ferment in grain was of the highest interest. As to Mr. Dott's suggestion to estimate the value of malt-extract by the amount of sugar which was formed, he would say that as the starch was not wholly converted into sugar that would be impossible.

The PRESIDENT then called for the next paper, which was on

A NEW ANTIDOTE FOR STRYCHNIA-POISONING.

By JAMES MACKENZIE, F.R.A.S., Edinburgh.

The author of this paper, a well-known Edinburgh chemist, proposed in it to show how, by the action of an electro-magnetic current, the toxic effects of strychnine upon the animal organism may be counteracted. This experience dates back as far as 1870, when a gentleman gave a Dandie Dinmont terrier a laxative pill such as he was accustomed to take himself. The pill contained colocynth and $\frac{1}{2}$ grain of extract of nux vomica. The dog died of strychnine-poisoning. A similar dog got one of the same pills, and it also died. These deaths set Mr. Mackenzie a-thinking, and when a third dog happened to be accidentally poisoned with 1 grain of strychnine he had a chance of trying the effect of electricity upon it, especially as the dog's jaws were locked and chloroform or belladonna could not be administered. So the terminals of one of Maw's electro-magnetic machines were applied, one to the dog's neck, the other to its rump, and in the course of four hours the animal was sufficiently recovered to express its thanks—with a look; and a dose of castor oil completed the cure. The author thought that this result warranted further attention being given to the subject.

Mr. MARTINDALE, in opening the discussion, said they had a more convenient preparation at hand in most pharmacies in dealing with cases of strychnine-poisoning, and that was apomorphine. A hypodermic injection of $\frac{1}{2}$ grain in solution would act more promptly and give immediate relief by emetic action.

The PRESIDENT said he did not catch how long the treatment was kept up.

Mr. MACKENZIE: The action was continued for four hours.

Mr. GERRARD said he believed it was impracticable to give apomorphine in cases of strychnine-poisoning, as it was likely to bring on the tetanising effect of strychnine by its action. The best method, he thought, was by first administering chloroform and then using the stomach-pump.

Mr. F. C. J. BIRD asked what was the strength of the current of electricity applied. He presumed Mr. Mackenzie used an alternating magnetic-current machine. Did he employ the full power of the machine for four hours, or only half strength?

Mr. GROVES said that some years ago he had a favourite dog which he restored from strychnine-poisoning in about three hours by giving it repeated doses of chloral. He did not know, however, whether the result was obtained by the neutralising effect of the chloral on the strychnine.

Mr. ATKINS also gave particulars of a case he had seen, in which the galvanic current had been used after a lapse of time on the human subject without success, the man finally dying. He should like to ask Mr. Mackenzie whether he had any idea as to the importance of the application of electricity very promptly, or whether, if the poison had taken a firm hold, the electricity was effective.

Mr. C. J. STROTHER said he would like to ask a question on what he might call the mercantile side of the paper. How would chemists under the present law arrange to supply customers in the country with Fellows's syrup? (Laughter.)

Mr. MACKENZIE, in reply, said the machine he used was one of Maw's in a small box, 10 x 4½. The current was not a strong one, but it seemed always that the stronger the current was kept up the better effect was there on the animal. In reply to Mr. Martindale, he thought it was not so much a question of what was the best thing to give as to how to give it, because the jaw was so firmly locked that it was almost impossible to get anything swallowed. He thought the galvanic machine used on the human subject would have to be proportionately stronger than that used for the smaller animal.

The next paper was a

NOTE ON THE PURITY OF COMMERCIAL SALTS OF LITHIUM.

By WM. MAIR.

Acting on a suggestion contained in the Blue List, the author examined a few samples of commercial carbonate and citrate of lithium. They were obtained from manufacturing chemists and wholesale houses. In the case of the carbonate, conversion into sulphate and subsequent examination yielded the following results:—

—	Description of salt	Yield of sulphate from 1 grm. (Theoretical yield 1.486 grm.)	Impurity	Percentage
1	Fine white powder	1.485 grm.	—	—
2	Finely granular powder	1.460 "	Sodium carbonate	—
3	Fine white powder	1.479 "	—	—
4	{ Finely granular powder }	1.448 "	{ Carbonates of sodium and magnesium }	2
5		1.45 "	Sodium carbonate	trace
6	Heavy white powder	1.475 "	Calcium "	—
7	Very fine white powder	1.464 "	Sodium "	1

Sulphating was carefully performed in a platinum crucible and the weighings done with a fine laboratory balance. The calcium in No. 6 was present as the merest trace (not estimated but confirmed), and may have been incidental to the process of manufacture. The alcohol and ether process of the U.S. Pharmacopœia was used for determining the amount of sodium salts present. The author was of opinion that commercial carbonate of lithium as now supplied is reasonably pure and is free from actually added extraneous matter.

Examination of the citrate yielded the following results:—

1. Fine white powder Pure
2. Finely granular powder Traces of sodium
3. In beautiful prismatic crystals.. .. Pure
4. Granular salt Traces of sodium and potassium
5. Crystalline salt " "
6. Granular salt (slightly coloured) sodium "
7. Fine white powder " "

The author did not find the B.P. method of conversion into carbonate satisfactory, but he found the suggestion by Mr. B. S. Proctor useful—that of adding portions of yellow

oxide of mercury to facilitate oxidation. The method of conversion into sulphate—the carbon being expelled as carbonic-acid gas—is more readily performed. The coloration of Example 6 did not respond to any chemical test, and may have been due to the process of manufacture. Nos. 1 and 3 may be regarded as chemically pure, and are supplied by makers who have attained to some reputation for the production of really fine chemicals. The author did not examine any samples of German origin, and he added:—

"The object of this note is chiefly to suggest that greater attention might be paid by our own manufacturers to the perfection of purity in pharmaceutical chemicals. It is, perhaps, a fact, that our chemical laboratories have to depend on Germany for their supplies of absolutely pure chemicals. Salts of excellent quality and of a high degree of purity are made by certain British houses, but it would be desirable that a higher general standard of purity could be obtained, and if the B.P.C. in its efforts 'to maintain uncompromisingly the principle of purity' shall effect any measure of this, the suggestion may not be taken amiss."

Mr. DOTT said he had occasion now and again to examine the commercial lithium carbonate and found that it is never quite pure, but it may be regarded as sufficiently pure for the purposes of pharmacy.

Mr. THOMAS TYLER pointed out that there was a good way of distinguishing the pure from the impure salts—viz., that those containing sodium potassium and the like were in all cases granular. As to Mr. Mair's concluding observations in regard to the supply of pure chemicals, he would say that when the educated pharmacist ceased to use inferior chemicals on account of cheapness in price, competition would cease, and pure chemicals would be readily obtainable.

The following paper was then read:—

VALERIANATE OF ZINC.

By W. A. H. NAYLOR.

The author stated that he proposed to call attention to the quality of valerianate of zinc supplied by manufacturers for use in medicine. Samples were obtained from leading firms and were marked either crystallised, B.P., or precipitated, the last two only being designated on order-form. The samples, eight in all—including an experimental one (No. 5) made by Mr. Naylor himself, from stock articles by official process, for purpose of comparison—were examined as follows:—

(a) A weighed portion was ignited, moistened with nitric acid, dried, and again ignited, the residue being zinc oxyd.

(b) A known quantity was distilled with sulphuric acid and water 1 : 2. The distillate was titrated with decinormal solution of caustic soda. The sulphuric acid which passed over was determined as barium sulphate, and its caustic-soda equivalent was deducted from the total alkali required for neutralisation. The remaining soda was calculated into its equivalent of valerianic acid. $Zn(C_5H_9O_2)_2 \cdot H_2O$ is equivalent to 71.57 per cent. of valeric acid.

(c) The free acids obtained by distillation with diluted sulphuric acid were neutralised (or left very faintly acid) with solution of barium hydrate. Any sulphate of barium was removed by filtration, and the filtrate evaporated to dryness. Complete desiccation of the barium salt was effected by free exposure to a temperature of 130° C. until its weight remained constant. It was then moistened with sulphuric acid, ignited, and the resulting sulphate of barium weighed. Valerate of barium yields by this treatment 68.73 per cent. of sulphate of barium. The following table represents the results obtained by this method of examination:—

	ZnO per cent.	H ₂ C ₄ O ₆ per cent. by titration with NaHO sol.	BaSO ₄ per cent.
1. Zinc valer. crystallised	29.03	73.62	73.63
2. Zinc valer. Brit. Pharm., 1885	23.42	57.47	71.92
3. Zinc valer.	22.84	60.39	73.74
4. Zinc valer.	20.52	55.72	69.56
5. Zinc valer.	25.79	62.00	68.25
6. Zinc valer. precipitated	49.08	43.71	74.53
7. Zinc valer.	64.51	18.24	—
8. Zinc valer.	62.97	59.30	84.80

The samples Nos. 1 to 5 were completely soluble in alcohol, and contained traces only of sulphates. The distillates from sulphuric acid when dissolved in water gave in every case an immediate and considerable bluish-green precipitate on the addition of acetate of copper. In No. 8 acetic acid was present in quantity; the rest—No. 5 excepted—exhibited mere traces. The acid distillate from No. 4 emitted the pronounced odour of valerate of amyl.

The three samples labelled "Precipitated" were only partially dissolved by alcohol. The extent to which they were soluble was determined indirectly by treating them in the cold with alcohol to practical exhaustion, and in the case of two of them drying the insoluble portions in air at the ordinary temperature. The insoluble residue from No. 7 amounted to 75.52 per cent., and from No. 8 to 54.29 per cent. To ascertain if these air-dry residues had a like composition they were separately and successively desiccated over sulphuric acid, then moistened with nitric acid and ignited. No. 7 lost by desiccation 6.70 per cent. and left after ignition a residue of zinc oxide equivalent to 79.38 per cent. Similarly No. 8 lost 4.62 per cent., and gave 8.38 per cent. of zinc oxide. Evidently the insoluble portions approximated to identity of composition. Sample No. 8 gave a residue insoluble in absolute alcohol, which on ignition was equivalent to 31.02 per cent. of zinc oxide.

It has been pointed out by M. F. Sutton that a weak solution of citric or tartaric acid dissolves valerianate of zinc without decomposition, and that it exerts no solvent action on zinc oxide. He recommends this simple test as a means of distinguishing the genuine from a fraudulent article. The Pharmacopœia requires valerianate of zinc to be soluble in alcohol, a requirement that excludes the "precipitated" from official recognition. The Pharmacopœia demand is more exacting than Mr. Sutton's test; for a 2-per-cent. solution of citric acid will dissolve completely samples 6, 7 and 8 of the above table, their respective solubilities being in inverse proportion to their basicity.

Physical Characters.—No. 1 only was "in brilliant white pearly tabular crystals." No. 4 was in small pearly scales. Nos. 2 and 5 were in granular masses, unctuous to the touch. So was No. 3, which presented in addition a dirty white or greyish appearance. No. 6 was in fine powder, and Nos. 7 and 8 consisted partly of powder and partly of small hard pieces. No. 7 was the densest, then followed No. 8 and No. 6.

The author's inferences were:—

(a) That the valerianate of zinc used in medicine is not of uniform composition, and that it does not meet the requirements of the official tests.

(b) That the valerianic acid used in the manufacture of this salt is prepared from an imperfectly purified fusel oil.

Pure anhydrous valerianate of zinc should yield on ignition 30.33 per cent. of zinc oxide, but since the salt in an anhydrous state is not obtainable by drying "on filtering-paper at ordinary temperatures" it would be unfair to demand so high a percentage. Sample No. 5 shows what is practicable by the B.P. process from chemicals of commercial quality.

Mr. Naylor considers that in the next Pharmacopœia the test of the percentage of residue left on ignition after moistening with nitric acid should specify 26 per cent. as a minimum. The United States Pharmacopœia demands 28.3 per cent. of zinc oxide.

The appeal to manufacturers to use, in the preparation of valerianate of zinc, a purer acid than at present will, he is convinced, be met either by a *non possumus* or a ready response.

The PRESIDENT said it was very remarkable that the salts of lithium should be so satisfactory, and valerianate of zinc so impure.

Mr. JOHN HODGKIN said that there was no difficulty in preparing a proper article if chemists would pay the proper price for it. (Hear, hear.) He would like to know if Mr. Naylor had done anything to identify the organic acids separated during analysis, because the amylic alcohol of commerce was of so variable composition that on oxidation a mixture of isomeric acids was obtained, and it was the difficulty and expense of isolating these which determined the price of zinc valerianate.

Mr. TYLER hoped that the inference would not be drawn

from Mr. Hodgkin's remarks that manufacturers were willing to accommodate their products to price. This was very much a question of the quality of fusel oil, and ignorance on the part of certain manufacturers of the fact that the oil generally contained butyl alcohol or its isomers, which, in the course of manufacture, yielded an equivalent of valerianate of amyl. This was pointed out in Attfield's "Chemistry," and it was to that contamination that the bad odour of the valerianate was due. He had lately examined eight samples of fusel oil received from German agents, and the whole of them were unfit as a basis of manufacture. That was the *crux* of the whole question. He agreed that Sutton's test was useless unless the valerianate were pure.

Mr. JAMES MACKENZIE said that valerianate of zinc was at one time more used than it is now. Was that because it was difficult to get it pure or because new heart-remedies had been introduced?

Mr. LLOYD WILLIAMS testified to the extreme variability of commercial fusel oil. German was bad; the English good.

Mr. A. H. ALLEN said there was not much difficulty in obtaining good fusel oil. It was produced by the ton per week in that very city of Edinburgh, and he could say from personal experience, unhappily—(laughter)—that there was a very great difference between the German oil and that made in Edinburgh. He had no doubt about it, for he proved it by experiments on his own body. (Laughter.) He had taken so many drops in whisky every night, and *it was bad*—the German fusel oil, not the whisky. But it should be noted there were four different kinds of amylic alcohol, which, on oxidation, produced eight different kinds of valerianic acid. No wonder they had variations in the character of valerianate of zinc, when they might have any one of these valerianic acids. He thought the Pharmacopœia should say more plainly what it meant by valerianic acid. (Hear, hear.)

Mr. E. S. PARRY said that he could testify to the difficulty Mr. Lloyd Williams had mentioned with regard to the fractionation of fusel oil. In his own laboratory they had had occasion to fractionate a specimen for a special purpose, and it required at least ninety operations before they could separate the oil into anything like chemically pure fractions. It was noteworthy that in some of the samples where the Zn rose in amount, where one would expect a falling-off in quantity of acid, Mr. Naylor's figures showed an increase of acid. This would tend to show that a large amount of butyric, or propionic, or even acetic acid was present, due to the imperfectly purified amylic alcohol. The isomer of valerianic acid could make no difference to the results of analysis, since they all had the same molecular weight.

Mr. MARTINDALE said he always preferred the crystalline valerianate, as being the purest.

Mr. GROVES asked if valerianate of zinc from the natural acid was not obtainable.

Mr. JOHN HODGKIN said it was, but the supply was erratic. Last year, for example, there was very little, and the price was always very high.

Mr. NAYLOR, now replying, said his point was this: If a pharmacist orders zinc valer. B.P. from a manufacturer, he gets something, labelled "Zinci valer. B.P.," which does not conform to official tests. He hoped that manufacturers would soon agree upon this point of isomeric acids, and he thought that some such test as he proposed—viz., a fixed yield of zinc oxide—was desirable.

At this point the members adjourned for

LUNCHEON,

which was served in the dining-room below. It was a hot luncheon, and was considered rather a treat by those accustomed to the cold collations. On resuming proceedings, at 2.15, there were about four dozen gentlemen gathered together, and Mr. Hodgkin was called upon to read his paper, which was as follows:—

CARBO ANIMALIS PURIFICATUS, P.B.

By JOHN HODGKIN, F.L.S., F.I.C., F.C.S.

My attention was some time ago directed to this in consequence of inquiry for Purified animal charcoal guaranteed to answer the P.B. requirements. Accordingly, I made an examination of some that I believed to answer the P.B. tests,

but was much surprised to find that the ash left on ignition was far above the P.B. requirements. I have now collected a certain amount of information on this subject, which I think may perhaps be of sufficient interest to lay before this Conference.

The details as given in the Pharmacopœia are as follows:—

"*Carbo animalis purificatus*. Purified animal charcoal.

"Animal charcoal from which the earthy salts have been almost wholly removed. Product about 10 per cent.

"Take of

Bone black, in powder	..	..	..	16 oz.
Hydrochloric acid..	..	..	..	10 fluid oz.
Distilled water	..	..	..	A sufficiency.

"Mix the hydrochloric acid with a pint of the water, and add the bone-black, stirring occasionally. Digest at a moderate temperature for two days, agitating from time to time; collect the undissolved charcoal on a calico filter, and wash with distilled water until what passes through gives scarcely any precipitate with nitrate of silver. Dry the charcoal, and then heat it to redness in a closely covered crucible.

"*Characters and Tests*.—A black pulverulent substance, inodorous and almost tasteless; 10 or 12 grains well shaken with 1 oz. of water, containing about a fluid drachm of 'solution of litmus,' removes the dissolved colouring-matter; the mixture when thrown upon a filter passing through colourless. When burned at a high temperature, with a little red oxide of mercury, and free access of air, it leaves not more than about 2 per cent. of residue.

"*Dose*.—20 to 60 grains."

I have accordingly made a series of experiments, preparing *Carbo animalis purificatus* by the processes adopted by the B.P. and other Pharmacopœias. The bone-black that I started with was of the following composition:—

Water	..	..	..	..	7.773
Ash	..	..	..	..	78.647
Carbon (by difference)	..	..	..	..	15.580
					100.000

equivalent to 83.107 per cent. ash, and 16.893 per cent. carbon on the anhydrous substance. The ash consisted of—

Fe ₂ O ₃	..	..	..	..	1.80
Al ₂ O ₃	..	..	..	..	0.95
CaO	..	..	..	..	51.73
MgO	..	..	..	..	trace
SiO ₂	..	..	..	..	2.83
Cl	..	..	..	..	0.59
SO ₃	..	..	..	..	1.21
CO ₂	..	..	..	..	1.41
P ₂ O ₅	..	..	..	..	38.83
Fl	..	..	..	..	trace
					99.41

—that is to say, principally of lime and phosphoric acid. This was treated by the Pharmacopœia process, using the exact quantities, with the following result:—

Water	..	..	..	..	00.146
Ash	..	..	..	..	77.042
Carbon	..	..	..	..	22.812
					100.000

—equal to 77.155 per cent. ash and 22.845 per cent. carbon on the anhydrous substance. The composition of the ash had now altered as follows:—

	Original Charcoal	B.P.
Fe ₂ O ₃	1.80	1.51
Al ₂ O ₃	0.95	1.20
CaO	51.73	45.33
MgO	trace	—
SiO ₂	2.86	3.81
Cl	0.59	—
SO ₃	1.21	1.06
CO ₂	1.41	—
P ₂ O ₅	38.83	45.46
Fl	trace	—
	99.41	99.37

—showing that the net result of the process had been to remove a small quantity of lime and a little iron. The

yield of 10 lbs. of charcoal treated by the B.P. process, I may mention, was 6 lbs. 1½ oz., or a yield of nearly 61 per cent., against the B.P. yield of "about 10 per cent."

This is a fair example of the value of the B.P. process. I have had several experiments made strictly in accordance with the B.P. instructions, and the results are practically uniform.

The French Codex (1884) directs that 1 kilo. of charcoal should be mixed with 4 kilos. distilled water, and that 1 kilo. hydrochloric acid should be gradually added, constantly stirring, and that the material should be left in contact for twelve hours, agitating from time to time. It is then to be washed until free from acid and indifferent to nitrate of silver; it is then filtered and dried at about 150° C., sifted through a fine sieve, and preserved in stoppered bottles. No test is given.

The result of this process is as follows:—

Water	..	..	..	..	1.976
Ash	..	..	..	..	56.612
Carbon	..	..	..	..	41.412
					100.000

—equal to ash 57.76 and carbon 42.24 per cent. on the anhydrous substance. The increase of hydrochloric acid has reduced the percentage of the ash considerably as compared with the B.P. The composition of the ash has now become as follows:—

	Original charcoal	Codex
Fe ₂ O ₃	1.80	2.97
Al ₂ O ₃	0.95	0.95
CaO	51.73	47.20
MgO	trace	—
SiO ₂	2.83	10.71
Cl	0.59	—
SO ₃	1.21	1.48
CO ₂	1.41	—
P ₂ O ₅	38.86	33.33
Fl	trace	—
	99.41	99.64

A considerable increase is now noticed to be taking place in the percentage of the silica and iron. A reduction, however, has taken place in the percentage of the phosphoric acid.

As no requirements are given as to the percentage of ash or carbon, the French Codex is in a strong position as compared with the B.P.

The United States Pharmacopœia (6th Decennial Revision, 1833) gives the following process:—

"*Carbo animalis purificatus*. Purified animal charcoal.

	Parts
Animal charcoal, in No. 60 powder	.. 2
Hydrochloric acid	.. 3
Water	.. A sufficiency.

"Pour the hydrochloric acid, previously mixed with 15 parts of water, upon the animal charcoal, and digest the mixture on a water-bath for twenty-four hours, occasionally stirring. Pour off the supernatant liquid and digest the undissolved portion with 15 parts of water for two hours. Transfer the mixture to a strainer, and, when the liquid portion has run off, wash the residue with water until the washings cease to be affected by test-solution of nitrate of silver. Dry the product, heat it to dull redness in a closely-covered crucible, and, when cool, keep it in well-stoppered bottles.

"A dull, black powder, odourless and tasteless, and insoluble in water, alcohol, or other solvents. When ignited at a high temperature with a little red oxide of mercury and with free access of air, it leaves at most only a trace of residue. If 1 part be digested with 2 parts of hydrochloric acid and 6 parts of water, the filtrate, after being super-saturated with water of ammonia, should remain unaffected by test-solution of magnesium (absence of phosphate)."

It should be mentioned that the U.S.P. *Carbo animalis* is required to give an ash of at least 86 per cent. of the original weight, which should be completely soluble in hydrochloric acid with the aid of heat, leaving only 14 per cent. for water and carbon. How far the U.S.P. process answers

is best seen by the following analysis of a sample prepared strictly in accordance with these instructions:—

Water	00.841
Ash	16.383
Carbon	83.071

100.000

—equal to ash 16.12, and charcoal 83.88 per cent. on the anhydrous substance—a most marked improvement and advance on the English and French processes, but still not coming anywhere near their own specified requirements. The ash now consists of:—

	Original Charcoal	U.S.P.
Fe ₂ O ₃	1.80	11.88
Al ₂ O ₃	0.95	5.62
CaO	51.73	9.33
MgO	trace	—
SiO ₂	2.86	59.00
Cl	0.59	—
SO ₃	1.21	2.14
CO ₂	1.41	—
P ₂ O ₅	38.86	11.43
Fl	trace	—
	99.41	99.40

A great reduction both in lime and phosphoric acid has now taken place, whilst the iron, alumina, and silica are steadily increasing. The Pharmacopœia Germanica I. 1872 simply included Carbo animalis, and gave no directions for making Carbo animalis purificatus, which has not appeared in any of the subsequent editions; indeed, even Carbo animalis was dropped in the II. and III. Pharmacopœias, the compilers evidently realising the difficulties connected with the subject. The Italian Pharmacopœia, Rome, 1892, uses—

Animal charcoal	Parts
Concentrated hydrochloric acid (s.g. 1.18) ..	5
Water	100

The process is to mix the charcoal with the acid, diluted with 5 per cent. water. After standing for twenty-four hours the remainder of the water is added, then agitate several times and boil up and collect on a filter, wash, &c., in the usual way. Then follows the important remark, "If a purer quality is desired, repeat the treatment indicated," the compilers evidently being well aware that the initial purification does not give a pure article. No details as to percentage of ash and carbon are given. I have not made a sample by this method, which I have only mentioned on account of the remark as to the second treatment, which is of great service.

These results may be taken to represent the methods that each pharmacopœial authority considered the best, and as the analyses show, not one of them can be held to give a pure or really satisfactory article. The authorities have evidently been under the impression that animal charcoal consisted of carbon and calcium phosphate and infinitesimal quantities of other substances, whereas there are present substances, such as phosphates of iron and alumina (which, after the carbonisation of the bones, become soluble with very great difficulty, and are not easily removed), also silica and a certain amount of calcium sulphate. The processes may be summarised as follows:—

	B.P.	Codex	U.S.P.
Animal charcoal ..	16 oz.	16 oz.	16 oz.
Acid, hydrochloric ..	11½ "	16 "	24 "
Length of maceration ..	43 hrs.	12 hrs.	24 hrs.
Temperature employed ..	"moderate"	cold	water-bath
Anhydrous result:—			
Ash	77.16	57.76	16.12
Carbon	22.84	42.24	83.88

These results show that the B.P. process is (1) deficient in acid, and (2) the temperature used is not high enough. This is evident on comparing the B.P. with the Codex and U.S.P. results. It now became a matter of interest to examine commercial samples of B.P. Carbo animalis purificatus and to see what was being sold under this name. I procured the

following five samples through ordinary trade channels. The analyses were as follows:—

	A	B	C	D	E
Water	17.64	50.44	4.70	5.19	4.01
Ash	16.45	10.00	80.28	73.57	72.67
Carbon	65.91	39.56	15.02	21.24	23.32

equal on the anhydrous substance to—

	A	B	C	D	E
Ash	19.98	20.18	84.24	77.59	75.70
Carbon	80.02	79.82	15.76	22.41	24.30

The ash analysed as follows:—

	A	B	C	D	E
Fe ₂ O ₃	4.87	10.21	2.14	2.02	1.80
Al ₂ O ₃	0.51	2.73	0.84	1.07	1.19
CaO	6.38	4.68	53.00	52.67	48.67
MgO	1.02	—	3.55	—	—
SiO ₂	79.80	73.63	1.00	4.48	6.48
Cl	—	—	1.00	0.50	—
SO ₃	2.81	0.66	—	1.64	—
CO ₂	—	—	2.29	1.22	—
P ₂ O ₅	2.87	7.44	36.89	36.38	40.93
Fl	—	—	—	trace	—
	98.26	99.35	99.71	99.98	99.07

It will be seen that A and B differ very considerably from C, D, and E; in fact, it is evident that they are animal charcoal, which has been treated with acid and a certain percentage of the soluble constituents removed, the high percentage of silica in the ash clearly indicating this. A has evidently been washed with a water containing calcium sulphate in solution. The very high percentage of water in B is worthy of notice; of course, this apparently reduces the percentage of the ash, and as new charcoal will absorb from 80 to 100 per cent. of its own weight of water, this is an easy method of superficial purification.

C, D, and E seem good ordinary charcoals, but not B.P.

These results are excessively surprising, and should put the users of this article on their guard. It is, I believe, practically impossible to make an article that will meet the B.P. requirements, except at a fabulous cost; but it is not difficult to turn out a good article at a moderate price. The best method that I have found to make a good purified animal charcoal is as follows:—Boil the charcoal for some hours with twice its weight of hydrochloric acid and twice its weight of water; filter from the acid solution, and boil up again with half the above quantities of acid and water. Wash free from acid and soluble salts; dry, &c., as usual. Such a treatment gave the following results, F (the product was not heated in a covered crucible, but simply stove-dried):—

	Per cent.
Water	7.847
Ash	13.871
Carbon	78.282

equal on the anhydrous substance to—

	Per cent.
Ash	15.05
Carbon	84.95

The ash analysed as follows:—

Fe ₂ O ₃	5.21
Al ₂ O ₃	1.20
CaO	22.10
MgO	—
SiO ₂	54.81
Cl	—
SO ₃	3.51
CO ₂	—
P ₂ O ₅	13.11
Fl	—

99.94

This is a better charcoal than any of the others, the U.S.P. coming nearest to it. In order to make a full comparison, the decolorising power of each sample was tried. A standard solution of caramel was made containing 0.05 gramme per litre. Two grammes of charcoal were added to 400 c.c. of such standard solution, and the percentage of colour removed was determined.

The results were as follows:—

	Per cent.
Commercial animal charcoal	79.95
P.B.	38.27
Codex	63.19
U.S.P.	48.05
A	62.54
B	63.88
C	67.42
D	68.01
E	50.73
F	86.76

so that this last sample, prepared by the mode I have indicated, comes out best in every way. It has been frequently stated that the decolorising power of animal charcoal is due in a great measure to the calcium phosphate it contains. The decolorising power

that can easily be made and give every satisfaction in practice.

The PRESIDENT said he thought anyone who had had experience in the purification of animal charcoal would not be surprised at the result of this paper. He looked upon the absolute purification of animal charcoal, as Mr. Hodgkin did, as practically impossible. The question was how far it was worth while to carry purification? In the process which Mr. Hodgkin adopted there was still 14 per cent. of ash left. He (the President) was a little surprised to find that where so much of the inorganic matter had been removed, decolorising power was retained, because his experience had been that the more mineral matter was taken out the worse the charcoal became as a decoloriser, and he thought Mr. Hodgkin found that too when he carried it to the very last. His experience was that the process of deterioration began at a much earlier stage than that, and he thought it was progressive. What the absolute decolorising power of animal charcoal was he did not think any of them yet knew. There were many other substitutes that could be got that decolorised better, but they must always be sold very cheaply. The sugar-refiner, who was the prin-

TABLE OF RESULTS.

				On Anhydrous Substance		Percentage Composition of the Ash obtained on Calcination													Total	Decolorising power
	Water	Ash	Carbon	Ash	Carbon	Fe ₂ O ₃	Al ₂ O ₃	CaO	MgO	SiO ₂	Cl	SO ₃	CO ₂	P ₂ O ₅	F					
Commercial bone-black	7.77	76.65	15.58	83.11	16.89	1.80	0.95	51.73	trace	2.86	0.59	1.21	1.41	38.86	trace	99.41	79.95			
P.B. 1885 ..	0.15	77.04	22.81	77.15	22.85	1.51	1.20	45.33	—	3.81	—	1.06	—	46.46	—	93.37	38.27			
Codex Paris 1884 ..	1.98	53.61	41.41	57.76	42.24	2.97	0.95	47.20	—	10.71	—	1.48	—	36.33	—	99.64	63.19			
U.S.P. 6th Decen. Rev. 1883 ..	0.84	16.09	83.07	16.12	83.88	11.88	5.62	9.33	—	59.00	—	2.14	—	11.43	—	99.40	48.05			
Commercial samples of "carbo-animalis purif. P.B."																				
A	17.64	16.45	65.91	19.98	80.02	4.87	0.51	6.38	1.02	79.80	—	2.81	—	2.87	—	99.26	62.54			
B	50.44	10.00	39.56	20.18	79.82	10.21	2.73	4.68	—	73.63	—	0.66	—	7.44	—	99.35	63.88			
C	4.70	80.28	15.02	84.24	15.76	2.14	0.84	53.00	—	3.55	1.00	—	2.29	36.19	—	99.71	67.42			
D	5.19	73.57	21.24	77.69	22.41	2.02	1.07	52.67	—	4.48	0.50	1.64	1.22	36.34	trace	99.98	68.01			
E	4.01	72.67	23.32	75.70	24.30	1.80	1.19	48.67	—	6.48	—	—	—	40.93	—	99.07	50.73			
Special method F.	7.85	13.87	78.28	15.05	84.95	5.21	1.20	22.10	—	54.81	—	3.51	—	13.11	—	99.94	86.76			
Calcis phosphas P.B. dried below 100° C.																		32.65		
Ditto, after ignition																		1.33		

NOTE.—The decolorising power of the charcoal (without previous drying) is expressed in percentage of colour removed from a standard caramel solution.

of this was determined in the same manner with phosphate prepared according to the B.P. directions, and dried at a temperature not exceeding 100° C. The percentage of colour removed was 32.65, whilst if the phosphate was heated in a crucible (as the charcoal is directed to be done) the percentage removed is only 1.33.

In conclusion, I would recommend the adoption of some such process as I have indicated, taking care to use sufficient acid, and to boil well together in the water-bath or otherwise, so as to effect as large a removal of the calcium phosphate and other bodies soluble in hydrochloric acid as possible; that the finished product should not contain more than 8 per cent. of water (drying in a crucible evidently not being necessary) nor more than about 15 per cent. of ash, and containing 75 to 78 per cent. available charcoal. If prepared according to these directions, and meeting these requirements, it will have a high decolorising power. It is possible to make a charcoal with a still lower percentage of ash, even down to below 4 per cent., but the treatment involved diminishes very considerably the decolorising power, and adds enormously to the cost without any compensating advantages. As far as I know—and my experiments confirm my views—it is absolutely impossible to make such charcoal as the B.P. requires, and it therefore seems reasonable to substitute for the theoretical ideal an article

which can be made and give every satisfaction in practice. The sugar-refiner, who was the principal consumer, got the use of his charcoal for the difference between what he paid for it and that for which he sold it as manure, a difference of 2½ to 3%. That made it exceedingly difficult to find any substitute for animal charcoal as a decoloriser that could be sold cheap enough.

Mr. DOTT confirmed Mr. Hodgkin's observations. He had gone into the matter more than once, and his experience was that the B.P. process did not give the article which it pretended to—that was to say, one which was not free from ash, but comparatively free from phosphate of lime. He agreed that the amount of hydrochloric acid directed was quite insufficient, and that ignition was unnecessary. Speaking regarding the removal of colouring-matter by means of the purified charcoal, he said that that greatly depended upon the nature of the colour. Although Mr. Hodgkin's results might be correct—and he thought they were—it was well to note they were quite contrary to the statements of the text-books.

The PRESIDENT said that that statement by Mr. Dott did not quite tally with the experience of sugar-refiners. Charcoal might be burnt over and over again, until it was grey, and yet it decolorised sugar-solutions.

Mr. DOTT agreed. Indeed, a sugar-chemist had told him that it was very much a matter of the state of division in

which the charcoal existed; if it were fine, then it did not decolorise.

Mr. M. CONROY said that some time ago he went over part of the ground which Mr. Hodgkin had now covered. In the main he came to the same conclusions, although he did not work them out so accurately. The quantities that he thought yielded him the best result—of course, he could not get anything like the B.P. article—the best quantities of hydrochloric acid and water that he found in use were 3 parts of acid and 3 parts of water to 1 part of charcoal, and with double treatment. By working with those quantities he got charcoal which yielded 16 per cent. of ash. In reference to decolorisation he said he had found that freshly precipitated phosphate of lime had considerable decolorising properties, and those properties were even superior to the charcoal of the Pharmacopœia. He thought for the purpose of decolorisation crude charcoal was the best; he always obtained the best result from that.

The PRESIDENT: Would not similar results be obtained by hydrate of alumina?

Mr. CONROY: I have not tried that.

Mr. T. TYRER said he should like to confirm the results Mr. Hodgkin had so clearly put before them. There always had been a difference of opinion as to whether the decolorising effect was due to the carbon or to the phosphates, or to the peculiar mechanical condition of the carbon and phosphates intimately mixed. With regard to *Carbo animalis*, B.P., he had lately had numerous applications for animal charcoal, B.P. 1867. He confessed to having studied very carefully the meaning of the definitions in the Pharmacopœia of 1867 and 1885, and he could not see any practical difference. He told those who applied very plainly that there was no difference between the 1867 and 1885. He emphasised the necessity for more hydrochloric acid and for high temperatures. He awaited with interest Mr. Hodgkin's paper on the decolorising effect. He had learned that in the question of decolorisation-standards for saccharine fluids caramel had given way to solution of rose-aniline.

Mr. MACLEWAN thought that caramel was probably not the best colouring-matter which Mr. Hodgkin might have selected, for, as pointed out by Dr. Inglis Clark some six or eight years ago, that colouring-matter was driven out of solution by simple mechanical action in discharging aerated ginger-ale from a syphon.

The PRESIDENT said it was problematical whether charcoal would have the same decolorising power upon indigo as it had upon burnt sugar and rose-aniline. That was a question which they could not decide.

Mr. MARTINDALE said that the necessity of having animal charcoal free from calcium phosphate for decolorising was shown in treating solutions such as citrate of potash. These, before crystallisation, were somewhat dark in colour and it was customary to filter through animal charcoal, the result of this being that the citrate dissolved more of the calcium phosphate and a yellow-coloured solution was obtained which on evaporation contained calcium phosphate.

Mr. BIRD asked if Mr. Hodgkin could explain one difficulty which he had met with in decolorising solutions of citrate of ammonia and acetate of amyl. These were freed from their organic colouring-matter, but on filtration were found to be coloured slightly yellow with a soluble iron salt. How was it that, after treating the charcoal with hydrochloric acid, and so dissolving out all soluble iron, there was still some left which citrate of ammonia would remove?

Mr. JOHN MOSS supported what Mr. Hodgkin had said. He took it that Mr. Hodgkin's idea was to bring the Pharmacopœia in a line with what was practicable and reasonable. The heat of a hot room was quite sufficient for drying the charcoal.

Mr. HODGKIN then replied. He said, regarding the soluble iron found in the charcoal, that, although mineral acids ceased to dissolve iron out of it, there was some left which was soluble in organic acids, especially lactic acid. He preferred his own proportions to those mentioned by Mr. Conroy as less were used and the results were equally good; and regarding the remarks which had been made about decolorisation, he said he selected caramel because litmus was so very variable in tinctorial power and because indigo also never gave the same results twice. Caramel, on the other hand, worked well. But the point of his paper really was that the B.P. process did not produce the B.P. article,

and that animal charcoal B.P. of commerce was not a charcoal satisfying the B.P. requirements; and, as he pointed out, before the condition of things could be made better, some alteration must be made. (Applause.)

A paper, of which the following is an abstract, was then read:—

STRYCHNINE SALTS.

By D. B. DOTT, F.R.S.E.

This note was suggested by the statement of the "Extra Pharmacopœia" that the acid sulphate of strychnine is the most suitable for hypodermic injection; and by Mr. Coull's note on the subject. Mr. Dott has examined the neutral tartrate, citrate, and the hydrochloride of strychnine. He finds the solubility of the neutral tartrate in water to be about 1 in 52, of the citrate 1 in 37, and of the hydrochloride 1 in 35½. The last mentioned, therefore, appears to be the best salt, whether regarded from the point of view of solubility, neutrality, or stability.

Mr. MARTINDALE said the objection to the tartrate was that it was a tartrate, and on that account was unsuitable for hypodermic solutions. He thought the hydrochloride was better, but he still preferred the acid sulphate, and regretted that in a recent edition of his book the solubility of the acid sulphate was stated as 1 in 32 instead of 1 in 62. The acid sulphate had the great advantage of dissolving more quickly than any other salt, and he favoured its use both for hypodermic solutions and for Pharmacopœia preparations. The objection to the hydrochloride was that it crystallised out.

Mr. GEORGE COULL said that Mr. Martindale still missed a very important point which he had stated in his own paper on the subject—namely, that the acid sulphate suffered dissociation in solution, so that one got in solution a neutral sulphate of strychnine and free sulphuric acid. That was proved by the amount of free acid varying with the quantity of the solvent. His friend Mr. Duncan (whom a Transatlantic journalist had described as "a level-headed Scotchman who had solved the strychnine difficulty")—(laughter)—who he regretted was not present that afternoon, had found the solubility of the hydrochloride to be 1 in 37, which agreed very closely with Mr. Dott's result. As to the acid sulphate he also wished to remind Mr. Martindale that a solution containing 1 in 36 crystallised, but 1 in 50 remained clear; so that he still had the opportunity of making it in his book 1 in 50 instead of 1 in 62 as he proposed to do. (Applause.)

Mr. LLOYD WILLIAMS said he had noticed that nitrate of strychnine had been recommended for use in India as a remedy for snake-poisoning, and asked if the solubility of that were known.

Mr. BIRD asked a similar question regarding the hypophosphite.

Mr. DOTT, in reply, said that he would not prepare a hypophosphite if a hydrochloride would answer the same purpose. He agreed with Mr. Coull, from general experience of alkaloids, that the acid sulphate would dissociate in solution. Nitrate of strychnine was a sparingly soluble salt.

Mr. TYRER said that the hypophosphite was soluble 1 in 20, and the nitrate was very sparingly soluble.

Mr. DAVIES then read a paper on

EUCALYPTOL AND EUCALYPTUS OIL.

By R. H. DAVIES, F.I.C., F.C.S., and THOS. H. PEARMAIN.

The authors in this paper communicated further notes on the investigation which they reported upon at last year's Conference. Messrs. J. W. Drysdale & Co. had placed a good supply of *Eucalyptus oleosa* oil at their disposal, and taking advantage of the cold weather in February, they prepared eucalyptol by freezing. They found that with a mixture of snow and salt they could keep as much as 1 and 2 lbs. of the oil at -18°C . for an hour or two. Samples of *E. cineifolia* (so-called *E. oleosa*), *E. Dunosa*, and *E. Globulus* were so treated, and the frozen cake of eucalyptol was submitted to pressure, and after liquefaction again frozen. Out of 75 c.c. of this 69 c.c. distilled at 174.5°C ., at which the boiling-point of eucalyptol may be fixed, and optometric examination showed the sp. rot. pow. to be $[\alpha]_D 0.08$, or -4.8 for a 100 mm. tube, which is a slightly smaller rotation than

the authors recorded last year of a "pure" specimen. The crystals melted at 0.0° to 0.5° C., and solidified again at -1.0° to $+0.0^{\circ}$ C., and the specific gravity was 0.9275 at 15.5° C., 0.9216 at 25° C., and 0.891 at 100° C. These latter factors thus confirm the statement that eucalyptol is identical with cineol, as the latter has a specific gravity of 0.927 at 16° C. The authors were very careful by corroborative experiment to ensure that these figures are correct. In regard to the freezing some experiments were made with mixtures of eucalyptol with *E. amygdalina* oil (which does not contain eucalyptol) with a view to ascertain how far the presence of a diluent affects the amount of eucalyptol crystallising out, and the result was that a mixture of equal parts of the oil and eucalyptol did not freeze at -21° C., although 66.25 parts of eucalyptol and 32.75 parts of the oil did freeze. When alcohol took the place of the *amygdalina* oil the results were much the same, and on the whole it appeared that although much of the eucalyptol can be removed from oils containing it by freezing, yet 60 per cent. of it still remains in.

In the next part of their paper the authors spoke of the iodine absorption by Hübl's method, which they then regarded as *nil*, and have since confirmed, of the solubility of salicylic acid in the oil as a means for detecting turpentine. In this latter case they found *E. encorifolia* oil 3.17 parts dissolved 1 part of salicylic acid; the addition of 10 per cent. of turpentine increased the former factor to 3.51 and 50 per cent. increased it to 6.68 parts. It seems, therefore, that the test is not of great value for eucalyptus oil, especially that containing much eucalyptol. One part of salicylic acid dissolves in 2.55 parts of pure eucalyptol.

Mr. DOTT said that the most interesting point of the paper was the settlement of the boiling-point of pure eucalyptol, regarding which there had been much difference of opinion, as every worker seemed to give a figure which best suited the purpose of some advertised oil.

Mr. GROVES asked if the value of eucalyptus oil really depended upon the eucalyptol which it contained. He had noticed that eucalyptol differed very sensibly in odour from eucalyptus oil, which was agreeable to smell.

Mr. DAVIES, in reply, said that he had made no experiments of any kind, and, as far as he was aware, no physiological experiments had been made by medical men as to the comparative medicinal value of eucalyptol and the oil. But he would say that the fact remained that eucalyptol was a large constituent portion of the oil, and the only portion which was used by itself. He had made eucalyptol from ol. cyni—that is, oil of wormwood—and from cajuput oil, and the more he purified them the more identical they became with eucalyptol from eucalyptus oil.

The PRESIDENT then called upon Mr. Gerrard to read his paper, but

Mr. McLAREN, the Convener of the Excursions Committee, protested against this paper being proceeded with. He said that it wanted but five minutes to 4 o'clock, and the brakes were waiting to take the party to Roslin, and he thought that the Conference should now adjourn.

Mr. KEMP, of Manchester, protested against this course. The proceedings were down to last till 4 o'clock, and it was yet ten minutes to that hour.

The PRESIDENT replied that he was in the hands of the meeting, and as it was evident that Mr. McLaren's proposal found most favour, the Conference was adjourned for the day.

WEDNESDAY'S PROCEEDINGS.

On Wednesday morning a change was effected in the interior of the room. The President's platform was shifted round to the side, and the chairs placed in front of it, this being with the object of improving the acoustic properties of the room. It was an improvement, and the thirty or forty members present at 10.10 appreciated the President's reference to the change. Mr. STANFORD added that he would depart slightly from the order of the programme, and would take first the paper on

UNG. HYD. NIT. OXYD. B.P.

By FREDERICK DAVIS.

According to the present British Pharmacopœia, this ointment is ordered to be prepared with hard and soft paraffins in the proportion of three parts of the latter to one of the former. It will be remembered that the directions appended to the formula are as follows:—"Heat the hard and soft paraffins together, and when the mixture in cooling begins to thicken, add the oxide of mercury in a glass or porcelain mortar and mix the whole thoroughly." No further instructions with regard to cooling the ointment are given. In practice, however, it is found that the resulting ointment is frequently lumpy, probably brought about by too rapid cooling. Of twelve samples of this ointment obtained from an equal number of sources, eight were found to be more or less lumpy; but it is pleasing to be able to state that in all cases the quantity of active ingredient came out to within a fraction of a grain of the amount prescribed. Nevertheless, it may be considered that a lumpy ointment is an unsatisfactory one, and, therefore, I venture to suggest that pharmacists should in all cases cool this ointment slowly. Such a course can be easily adopted by standing the vessel containing the cooling ointment in another vessel containing warm water, giving the ointment an occasional stir until it has assumed a state of solidity sufficient to prevent the hard paraffin from separating out. It appears to be rapid cooling which renders the ointment lumpy, and therefore the presence of the warm water in the outer vessel cooling slowly obviates this. I have found practically that an ointment which has once become lumpy in the manner indicated cannot be rendered satisfactorily smooth, even by continued rubbing either upon a slab or by the aid of the pestle and mortar. It would appear that ung. hyd. nit. oxyd. has a peculiar tendency to become lumpy in this way—much more so than other B.P. ointments in which the basis is the same. I have, therefore, restricted my remarks to this ointment only.

Mr. A. W. GERRARD said there was not much new in this, for attention had been drawn to the difficulty in THE CHEMIST AND DRUGGIST some years ago, and the recommendation was then made to add a little soft paraffin or of an oil to the ointment, as well as to cool gradually and stir constantly.

Mr. T. MABEN thought it was quite unnecessary to add soft paraffin or oil to the ointment, which required no alteration whatever, but simply care in stirring while it is cooling.

Mr. T. F. ABRAHAM said he took this opportunity of protesting against any extension of the use of hard and soft paraffins for ointments. Such preparations were very objectionable in use, and the objections were well shown in the case of boric-acid ointment. When applied to a wound the soft-paraffin part of this ointment slowly melted and exuded away, leaving the solid and irritating mass of hard paraffin upon the wound. It was difficult to remove that mass. An ointment made with lard, with or without paraffin, has not this objection.

Mr. GERRARD asked the indulgence of the Chair while he explained that Mr. Abraham's objection to boric-acid ointment was not altogether right. Sir Joseph Lister's object in making the ointment of the consistence which it is, was to have a protecting ointment, and his own experience in making large quantities was that the ointment can be produced easily—viz., by stirring from three to four hours, so as to get a nice soft ointment with a lot of air in it. This ointment was soothing when applied, well adapted for the designed purpose, and produced no irritation.

Mr. NAYLOR then read an abstract of the following paper:—

PODOPHYLLUM EMODI.

By JOHN C. UMNEY.

This Himalayan drug has been imported recently in some quantity, possibly owing to the favourable opinion of its value, based on the amount of resin it contains, expressed by Dymock and Hooper (*Pharmaceutical Journal*, 3, xix). The constituents of the resin have been examined by T. A. Thompson (*American Journal of Pharmacy*, vol. lxi. p. 245), who states that it contains 25 per cent. more podophylotoxin

than the resin of *Podophyllum peltatum*. Subject to the confirmation of the results of these workers, Dr. Atfield has recommended the inclusion of the rhizome of *P. Emodi* as a source of podophyllin resin in the next edition of the Pharmacopœia. One would naturally expect, from the figures obtained by Thompson, the resin of *P. Emodi* to be more active physiologically than that of *P. peltatum*; but that does not prove, upon repeated trial, to be the case. An examination of the constituents of the resin has, therefore, been made following the lines detailed by Podwissotzki in his examination of the resin of *P. peltatum*.

The resin was first extracted following the pharmacopœial process for the preparation of podophyllin resin, and found to be equivalent to 11.4 per cent. The resin thus obtained was then treated by the various methods recommended by Podwissotzki and the following constituents isolated:—

Crude podophyllotoxin, which consists principally of picropodophyllin in solution in picropodophyllic acid, and to which the activity of the resin is said to be due, and was found to be present to the extent of 17.85 per cent.

Picropodophyllin was isolated in fine silky needle-shaped crystals, resembling caffeine in appearance, which melted after recrystallisation at 208°–210° C., and is undoubtedly identical with the crystalline substance obtained by Podwissotzki from *P. peltatum*, which melted at 200°–210° C. The quantity was small, and amounted to 2.6 per cent. of the resin.

Picropodophyllic acid was obtained by treatment of the crude podophyllotoxin with ammonia, but considerable difficulty was experienced in purifying the acid owing to its ready decomposition. In this respect it agrees closely with the similar body obtained by Podwissotzki from the resin of *P. peltatum*.

Podophyllic acid (melting-point 125° C.) was separated by precipitation from chloroformic solution by ether to the extent of 30.8 per cent., and it is to this inert acid that Thompson has applied the name of podophyllotoxin. This different application of the name given by Podwissotzki to the active ingredient of the resin has led to misconception.

Podophylloquercetin agreed in every respect with that separated by Podwissotzki from *P. peltatum* and melted after sublimation at 248° C.

Fatty matter was removed from the resin by petroleum ether, and was found to differ from that obtained from *P. peltatum* by being non-crystalline and semi-fluid at ordinary temperatures.

Podwissotzki in his examination of the resin of *P. peltatum* makes no mention of the proportion of the various bodies separated therefrom, and on this account experiments under similar conditions have been made on a sample of resin from the rhizome of this species to determine its relative composition.

	<i>P. Emodi</i>	<i>P. peltatum</i>
Resin by official process for podophyllin resin ..	11.4 per cent.	5.9 per cent.
Podophyllotoxin (crude)	17.8 per cent. of resin	33.8 per cent. of resin
Pure crystalline picropodophyllin ..	2.6 "	4.5 "
Picropodophyllic acid ..	not determined	not determined
Podophyllic acid ..	30.8 per cent. of resin	6.9 per cent. of resin
Podophylloquercetin ..	1.3 "	2.4 "
Fatty matter ..	2.3 "	5.7 "

The near relationship of the two species is evidenced by the close agreement in character of their several constituents, but the value of *P. Emodi*, dependent on the larger quantity of resin which it contains, is counterbalanced by the smaller proportion of the active ingredient present in that resin. Hence it seems undesirable that *P. Emodi* should be employed as an alternative source for the preparation according to the official process of podophyllin resin.

The PRESIDENT said that this was a very valuable paper, and deserved more time than they could give to it.

Mr. Moss said he could not add much to the paper except to corroborate Mr. Umney's observation that the yield of resin from *Podophyllum Emodi* is larger than from *P. pel-*

tatum, and although the former resin was more active sometimes, it was uncertain and could not be depended upon. For that reason he agreed that it was undesirable to officialise it.

Mr. RICHARD REYNOLDS said there could be no confusion in collecting these two species of *Podophyllum*. He had them growing in his own garden, and the *P. Emodi* leaf became of a brilliant red colour, while the *peltatum* remained green.

AN AMERICAN VISITOR.

The PRESIDENT said that they had present that morning a distinguished visitor, Professor L. E. Sayre, Dean of the Faculty of Pharmacy in the University of Kansas, and a member of the United States Pharmacopœia Committee. He was sure they would all bid Professor Sayre a hearty welcome, and he would ask Mr. Sayre to come up to the platform. (Hear, hear.)

Professor SAYRE walked up amidst applause, and on this subsiding he said that it gave him a great deal of pleasure to be present that day. When he left the States on June 4 he arranged his programme with a view to being at the Conference, as the proceedings had a direct bearing upon the revision of the U.S. Pharmacopœia. That revision had now been going on for two years, and by the time he got back to America he hoped that part of the work would have gone to press. It was his great regret to hear that since he had come across his esteemed friend, Professor Bedford, had passed away. He desired to thank the meeting for the welcome which had been extended to him, and trusted that the remainder of the meeting would be pleasurable and profitable. (Applause.)

The meeting then proceeded to the consideration of the next paper, on

A NEW METHOD FOR THE ESTIMATION OF GRAPE-SUGAR.

By A. W. GERRARD, F.C.S., Teacher of Pharmacy to University College.

About the time Professor Sir Joseph Lister introduced his latest antiseptic—the so-called double cyanide of mercury and zinc—some experiments were made by me to prepare other double cyanides. Among the results the most striking was the formation of a colourless double cyanide of potassium and copper. Knowing the power of alkaline cyanides to dissolve certain oxides, it was thought probable this new compound might act as a solvent of cuprous oxide. Such was found to be the case; likewise it could be added to Fehling's solution to prevent the precipitation of that oxide during the estimation of grape-sugar.

To prepare this salt a 10-per-cent. solution of the purest cyanide of potassium is slowly poured into a 10-per-cent. cold solution of copper sulphate until the mixture is colourless. The chemical changes which occur during the progress of the reaction are evidently of a complex character, as is well shown by the various coloured products obtained during admixture of the two salts. On adding the cyanide to the copper-salt a pale-green precipitate first appears, which soon darkens, becoming brown; the precipitate then gradually dissolves, leaving a solution of a purplish-red colour which a few drops more cyanide solution finally renders colourless. To obtain the salt in a crystalline form the solution may be slowly evaporated over sulphuric acid, when crystals of sulphate of potassium are first deposited; on removal of these the mother liquor, on further evaporation, yields transparent crystals of the double salt. After a number of experiments it was found that cyanide of potassium might, under certain conditions, be added direct to Fehling's solution with the same result as using the double salt, and trouble thus avoided. It should be pointed out that cyanide of potassium is not merely a solvent of cuprous oxide, for it cannot be added to Fehling's solution without forming the double salt referred to, consequently, an additional amount of copper sulphate must be added to satisfy the wants of the cyanide as the following experiments demonstrated:—

1. To 1 vol. Fehling's solution enough cyanide of potassium was added to just remove its blue colour. On boiling a portion of this with grape-sugar it gave no result.

2. Another volume of Fehling's solution was just decolourised by potassium cyanide and mixed with a second equal volume of Fehling; a portion of the product on boiling

with grape sugar give no precipitate, but there was a steady disappearance of the blue colour. On estimating the amount of copper available for reduction in this solution, or, what is the same thing, its glucose value, it was found that 10 c.c. was reduced by .025 gramme glucose, whereas 10 c.c. of Fehling is reduced by .05 gramme of glucose, thus showing a loss in copper or sugar value of 50 per cent., a loss due to the combination of half the copper with the cyanide.

3. In this experiment Fehling's solution was prepared with twice the ordinary quantity of copper sulphate and then divided into two equal volumes. One volume was just decolourised with potassium cyanide and mixed with the second volume. A portion of this on estimation proved to have approximately the same value as Fehling's solution—that is, 10 c.c. equals .05 gramme glucose. During reduction it gave no precipitate, but a gradual passage from blue to colourless.

4. This experiment was made to ascertain the effect of both excess and deficiency of cyanide in the solution. With excess the sugar value of the Fehling was lowered. With deficiency the result was peculiar, yet quite consistent with circumstances. On running in the sugar solution on to the boiling-test solution, the blue colour faded up to a certain point, when a yellow precipitate began to appear, and continued to form till reduction was complete.

These experiments formed the basis upon which the construction of a formula for the new solution was founded. It was evident therefrom that cyanide of potassium must be used in definite quantity, likewise that if the solution was to have the same value as Fehling's solution, it must contain twice as much copper sulphate as the latter. For the purpose of determining the amount of cyanide of potassium required to unite with the extra copper, 100 c.c. of Fehling's solution was made with double its ordinary quantity of copper-sulphate. To this was carefully added just enough cyanide of potassium, of 98 per cent. strength, to bring its reducible copper value to that of Fehling's solution. After several experiments, it was found that the 100 c.c. required an average of 33 grammes of the cyanide, which quantity I have adopted for my formula. It should here be pointed out that as the best cyanide of potassium of commerce varies slightly in strength, a little more or less may be required. In my earliest formula I adopted the plan generally followed with Fehling's solution, that is keeping the copper-sulphate in one bottle, and the alkaline salts in another. It soon, however, became evident that cyanide of potassium could not be kept long in contact with caustic alkalies without decomposition and destruction of the test. This circumstance determined me to keep the cyanide apart from the alkalies, so that three solutions have to be used for an estimation. Following are the various formulæ for the solutions:—

Solution No. 1.

Take of
Sulphate of copper (recrystallised) 69.30 grammes
Distilled water to 500 c.c.
Dissolve.

Solution No. 2.

Take of
Tartarated soda (crystallised) .. 175 grammes
Distilled water to 500 c.c.
Dissolve.

Solution No. 3.

Take of
Cyanide of potassium (98-per-cent.) 33 grains, or a sufficiency
Water to 500 c.c.
Dissolve.

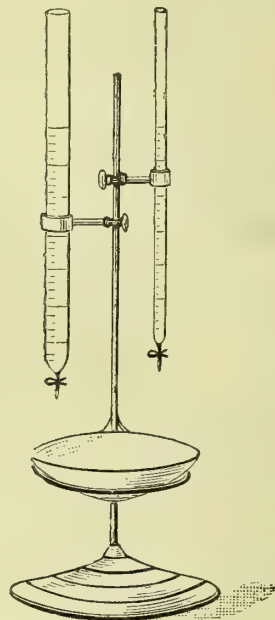
For the purpose of testing the solutions, mix 5 c.c. of each with about 50 c.c. of distilled water, then boil. Whilst boiling run in a solution of grape-sugar until the blue colour is gone. If, during the reaction, any precipitate appears, more cyanide of potassium must be cautiously added to solution No. 3 until, on boiling again as above, it gives no precipitate.

I have employed these solutions for some time for the estimation of grape-sugar in urine, and the advantage which I believe may be fairly claimed for them over Pavy's solution is that the boiling can be done in an open dish, thus avoid-

ing the use of a glass flask and long condensing-tube employed to condense the ammonia in Pavy's test. As compared with Fehling's solution the point gained is that the end reaction is very sharp, being merely a passage from blue to colourless. Those in the habit of using Fehling's test know full well the difficulty of determining with nicety the end of the reduction, by reason of the obscuring red precipitate which with urines weak in sugar is very slow to subside and not easy to filter.

I have named this test the Cyano-Cupric Test, and there is just one point more to remark on. After reduction with grape-sugar it soon oxidises, again assuming its blue colour. This, of course, should not be mistaken for incomplete reduction, as the same thing happens with both Fehling's and Parry's tests.

Mr. GERRARD practically demonstrated the utility of the process with apparatus such as is sketched below—viz., a porcelain dish for the test-solution. In this it is heated, and



while boiling the sugar-solution was run in from one of the burettes, which are graduated in percentages of sugar. When the end point is reached a precipitate begins to form and the blue colour of the test solution disappears.

The PRESIDENT said the method had the disadvantage of requiring three solutions.

Mr. A. H. ALLEN said he had listened with pleasure to Mr. Gerrard's paper, and, like the President, he was a little struck with that question of the keeping of the solutions. Potassium cyanide decomposed in solution, and as this salt was so highly important a part of the process, how were they to be certain as to the proper amount of cyanide added? If he followed Mr. Gerrard correctly the cyanide of potassium really was used as a solvent for the cupric oxide. Mr. Gerrard said there was no reduction of cupric oxide in the presence of cyanide of potassium. He thought that was a slip—he meant “no precipitation.” Unless there was some easy means of regulating the strength and the necessary quantity used of this cyanide it seemed to him a difficulty. He fully appreciated the inconvenience of the ordinary Fehling's method. It had been said that an analytical method would find its own level. He was afraid that was not true of Fehling's solution. If Mr. Gerrard was able to overcome the difficulty in regard to the cyanide he could quite understand that the method was a very important one, and a decided improvement.

Mr. GROVES said he had used a method by which he added ferrocyanide of potassium to the ordinary Fehling's solution, and it had the effect of changing the colour of

the precipitate from red to white. The object of the alteration was to show the end point more clearly, but he did not think it did.

Mr. MARTINDALE said he feared that exposure to the air in the method before them would cause the same absorption which was found in Pavy's method. The necessity of using a flask was to prevent access of air. He noticed that the solution in Mr. Garrod's dish was becoming blue, which showed that it had that objection.

Mr. F. J. C. BIRD said that some years ago there was a note in the "Year-book of Pharmacy," respecting the use of glycerine instead of the alkaline tartrate. He had found it very satisfactory indeed in practice.

Mr. GRIERSON said in the course of the reading of the paper he got the impression that they were going to have a great improvement on the old Pavy method. Fehling's method was almost inapplicable in ordinary pharmaceutical practice, Pavy's method being preferred on account of its sharp end reaction. The great objection to Pavy's method had been the care required in execution, and the somewhat complicated apparatus required. He was in hopes that the cyanide method would have got over the absorption which reproduced the blue colour; but it seemed to him that this was not so.

Mr. GERRARD, in reply, stated that what he meant in saying that no reduction took place was that there was no precipitation, and therefore no evidence of reduction. He also remarked in regard to the use of ferrocyanide that he had tried it, and many other salts, none of which, however, had the beneficial influence of potassium cyanide. Mr. Martindale had objected that re-oxidisation took place, but he would remind him that this was no objection, for the simple reason that the process was complete when the blue colour disappeared. At that point all the sugar had been estimated. (Hear, hear.) He did not believe that the addition of glycerine to Fehling's solution was at all good, and he might say regarding the keeping properties of potassium cyanide that he had had it in solution for three months and it had not changed in value.

The next paper was on

POTASSIUM BROMIDE.

By D. B. DOTT, F.R.S.E.

In this short paper the author gave an account of the analysis of three samples of the commercial potassium bromide. The following are the results obtained:—

	A	B	C
Potassium bromide	98.241	97.415	93.401
chloride .. ..	.197	1.004	3.973
Water	1.010	.610	1.320
Undetermined .. ..	.352	.971	1.306
	100.000	100.000	100.000

As each of these passed the official tests, the author suggested that the amount of bromine actually present in the silver salt should be determined by passing chlorine gas over the fused salt until it ceases to lose weight. The loss in weight, multiplied by 1.7967, gives the bromine, from which datum it is easy to calculate the proportions of chloride and bromide present in the original salt.

The PRESIDENT thought it would be extremely difficult to reduce the percentage of chloride below what it was in Mr. Dott's figures. The first one would be an extremely pure commercial article.

Mr. E. J. PARRY said that Mr. Dott had assumed that it was possible to allow adulterations in potassium bromide that would yield no reaction with silver nitrate, and thus allow an addition of chloride to bring up the titration result. But he appeared to have forgotten that potassium bromide crystallises in such a characteristic form that it allows of very little adulteration outside the halogen salts of the alkalis, which yield a precipitate with silver nitrate. Thus a sample of which 10 grains require 840 grain measures of the volumetric solution of silver nitrate could not contain more than traces of chlorides.

Mr. J. B. STEPHENSON next read a paper on

JAMBUL: ITS INFLUENCE ON THE ACTION OF DIASTATIC FERMENTS.

By THOMAS STEPHENSON, F.C.S., Pharmaceutical Chemist, Bombay.

The author of this paper stated that *Eugenia Jambolana*, Lam. (*Syzygium Jambolanum*, D.C.), is a very common tree in India, and the bark has long been used by the natives as a remedy for diarrhoea, being very astringent; and a syrup prepared from the juice of the ripe fruit, which is also very astringent, has also been used for a similar purpose. But it is as a diabetic remedy that the drug has been used, and for which the natives of India have employed the seeds for centuries. Some doubt appears to exist as to whether this property is possessed in greater degree by the pericarp, or the kernel of the seed; as to what this active principle is, or what causes the action that these seeds appear to have on diastatic fermentation. The following experiments were made on the latter point:—

Twenty-one grammes of arrowroot, with 700 c.c. boiling water, cooled to about 100° F., was divided into seven equal portions, to each of which were added 2 grammes extract of malt. Various preparations of jambul were added, and the solutions kept for two hours at a temperature of 96° to 100° F., and the sugar estimated by means of Fehling's solution, with the result that the greatest influence over the action of the diastase was found to be possessed by a preparation of the fresh kernels by a process avoiding the use of heat. So far as this property is connected with their medicinal action, therefore, it follows that such preparations would be most efficacious therapeutically. Next to that in efficacy came a liquid extract from fresh kernels. Experiment showed that 4 parts of steam-dried seeds represented 6½ parts of fresh seeds. The pericarps have a much feebler action than the kernels, and, as they represent about 7 per cent. of the entire seeds, it is advisable, both on economic and therapeutic grounds, to discard them in making any preparation of the drug. The relative influence which the various forms of the drug possess on the formation of sugar may therefore be tabulated as follows, the figures representing the amount of sugar which would have been formed in their absence:—Old seeds, 0.00; pericarps, 0.05; fresh kernels, 0.28; old extract, 0.00; fresh kernels, with heat, 0.18; and steam-dried kernels, 0.11. The author stated, in conclusion, that we have here some explanation of the very discrepant results which have appeared with regard to jambul and its action in diabetes. There can be no doubt that in the majority of cases old seeds have been used; while the probability that the extraction was made by heat in cases where preparations of the drug were employed is equally great. A preparation of jambul, to represent its full medicinal activity, should therefore be made from fresh seeds, discarding the pericarps; and heat should be avoided. A weak alcoholic menstruum extracts the constituents, making an active and stable preparation; and a liquid extract may be made by percolating with dilute spirit (25 per cent.) until about three-fourths of the product is obtained, setting this aside, and exhausting with water, finally evaporating the weak percolate to small bulk, to make up the amount represented by the drug.

The PRESIDENT said the Conference would receive this paper gladly, since it was read by the President of the last meeting in Scotland—(hear, hear)—and further, that it was the result of an investigation by his son.

Mr. RICHARD REYNOLDS said the subject of jambul had recently been referred to an investigation committee of the British Medical Association for full inquiry, and the general result of their inquiry was that the use of jambul in diabetes was a field which should not be neglected, but instead of administering it in 1-drachm doses as had been the custom, the committee recommended that an ounce of the powder should be given in the course of a day. He thought that Mr. Thomas Stephenson's investigation was much in advance of anything that had been published in England.

Mr. GRIERSON was not inclined to attach much importance to the action of jambul in preventing diastatic ferment-

tation, for, as he had shown the previous day, small amounts of chemicals greatly retarded the process; moreover, he was inclined to think that Mr. Stephenson was quite wrong in his conclusions on this point, so far as diabetes was concerned, as the question of diabetes was not to prevent the formation of sugar, but to ensure that the sugar, in passing through the liver, was converted into glycogen or such other products as were formed in normal health. Upon that factor Mr. Stephenson gave no information. (Hear, hear)

Mr. J. B. STEPHENSON said that the point of the paper was the relative value of different parts of the fruit, and Mr. Grierson quite overlooked that. The therapeutic efficacy of the fruit in preventing the formation of sugar was a secondary matter.

Mr. CHARLES ARTHUR stated that jambul had been used in the Edinburgh Infirmary, but up to the present they had obtained absolutely no good result, and he agreed with the results made by Mr. Grierson regarding the incorrectness of Mr. Thomas Stephenson's physiological data.

A paper was then read on

EXPERIMENTS ON THE ALKALOIDS OF TEA.

By ALFRED H. ALLEN, F.I.C., F.C.S.

It is scarcely possible in an abstract to do justice to this paper, which was a record of researches which the author has been carrying on for some time in regard to the properties of caffeine, and the best means of assaying tea. After referring to the recent change in English fiscal arrangements, whereby the manufacture of the alkaloid has been transferred from Germany to England, Mr. Allen spoke of the effect of heat upon caffeine, showing that the heat of a water-bath served to give a distinct sublimate of the alkaloid. The amount was small, but it was sufficient to warrant extended experiment, with the result that heating at 120° C. the volatilisation from dry caffeine amounted to 0.32 per cent. at the end of two hours, and steadily increased to 19.42 per cent. at the end of twenty-nine hours' heating. This resublimed (anhydrous) caffeine melted at 231.5° C., and resolidified at 223° C. This alone proved the identity of the sublimate with caffeine, and corroborative experiment sustained this conclusion. But although dry caffeine volatilises when heated, a solution of caffeine in water on evaporation was found not to lose any of its alkaloid.

The author proceeded to show that caffeine is very sensitive to the action of alkalies, decomposing into caffeidine and carbonic acid, the base produced suffering secondary decomposition. Lime trimethylamine is found amongst the secondary products. The reactions which occur were in the paper traced with great minuteness, and all the factors influencing the opinions formed were quantitatively worked out with the general result as stated. Applying the knowledge gained of the behaviour of caffeine with alkalies to the isolation of the alkaloid, the author first pointed out that the great majority of published processes for the assay of tea are completely worthless, because they give very variable results, and even individual processes behave so in the hands of individual operators. It was necessary, before the author formulated an assay process of his own, that many other points should be taken into consideration. Thus the behaviour of aqueous solutions of caffeine on evaporation was studied, and it was found that the alkaloid cannot be completely crystallised out. The effects of solvents—chloroform, benzene, ether, alcohol, &c.—on tea and magnesia mixtures and the like were also studied, this branch necessitating an examination of all known processes of assay, and the results showed how very greatly the tannin in the leaf disturbs the operator. Paul and Cownley's process appeared to come out best; still, it was not perfect, and the following is the quintessence of the research:—

To assay tea, 6 grammes of the finely-powdered sample is boiled in 500 c.c. of water, contained in a flask with a reflux condenser, for six or eight hours. Filter, and wash the filtrate with water to 600 c.c. Heat to nearly boiling-point, and add 4 grammes of acetate of lead. Again boil in the reflux apparatus for ten minutes, whereby, on removing the heating-burner, the colouring-matter is precipitated in flocks. If the decoction is not colourless, add more acetate and repeat. Filter, take 500 c.c. of the filtrate (= 5 grammes [of tea], evaporate to 50 c.c. precipitate lead

with sodium phosphate. Again filter, evaporate to about 40 c.c., extract the caffeine with four—or, better, five—washings of chloroform, and evaporate the washings. The caffeine is obtained in snow-white crystals.

The following are some of Mr. Allen's results:—

Description of Tea.	Per cent. of Caffeine.
Assam whole leaf (Pekoe)	4.02
„ broken „	4.02
Ceylon whole leaf (Pekoe)	3.85
„ broken „	4.03
Java Pekoe	3.75
Moning black leaf	3.74
Moyune gunpowder	2.89
Natal Souchong	3.08

The last sample was the first imported into England from Natal. It contained 8.33 per cent. of tannin and 6.14 per cent. of ash. Moisture, 8.36 per cent. Mr. Allen acknowledged his indebtedness to Messrs. C. M. Caius, G. F. A. Caius, and G. E. Scott Smith for assistance in the research.

The PRESIDENT said Mr. Allen had given them a most interesting and complete paper, and had gone into the matter with his usual minuteness and care. He would like to ask Mr. Allen if he had any grounds whatever for the idea that the active principle of tea may be a glucoside, and, if so, whether the addition of a little acid might not increase the yield. Perhaps Dr. Paul would also make some remarks on the subject.

Dr. PAUL said that to some extent he could confirm the statements of Mr. Allen. With regard to the difference between the physiological action of caffeine and theine, Mr. Allen was mistaken as to what had taken place. The suggestion that there might be a difference between caffeine and theine was based upon a very slender observation made by Dr. Lauder Brunton and Prof. Cash, which was not at all followed up. The idea that there was any distinction between caffeine and theine in chemical or in physiological action was merely conjecture. Mr. Allen was quite right as to the chemical behaviour of caffeine or theine in stating that it might be dried at 100° C. with perfect safety. As to the action of lime or alkalies, and especially baryta, Mr. Allen was right in saying that caffeine might be decomposed by these. But in the analysis of tea no sane person would attempt to boil the tea with lime. He would use the lime in such a way as to do the work he wanted to be done, so as to extract the theine from the rest of the material without decomposing it. It could be done by mixing powdered tea with powdered lime, moistening with water, drying, and then submitting it to extraction. There was not a fraction of decomposition in that way of the caffeine or theine. The proper solvent, he thought, was alcohol; ether or chloroform would not do. The amount of theine obtained from different kinds of tea in that way was very considerably in excess of any of the previously published results. Mr. Allen also spoke of citrate of caffeine as a mixture. He thought that was in direct opposition to what had been established; it was a salt as much as any other salt. Mr. Allen had also referred to hydrolysis of caffeine when speaking of titration. To apply any method of titration to caffeine was out of the question altogether. His idea about the state in which caffeine existed in tea, and the state that determined the difficulty of extracting it, was not very definitely formed; but it was his conviction that some, at any rate, of the caffeine was so intimately associated either with colouring-matter or astringent substance that there was great difficulty in separating it. In the experiment that had been made on the table with sulphuric acid, in the charred deposit at the bottom of the glass there was practically the whole of the caffeine; they could not get it out. Of what Mr. Allen had laid before them, what was true was not new, and what was new was not true. (Laughter.)

Mr. T. F. ABRAHAM asked, if caffeine was the active principle of tea, how did it happen that the universal verdict of users of tea throughout the world was that a few minutes sufficed to extract the virtue from the tea? Mr. Allen talked of the necessity of treating the tea for hours in order to extract the active principle. Were there not two principles? Was it the same principle which took hours for extraction as that which required a minute or two.

Mr. T. M. CLAGUE had always understood that in making tea the short infusion was adopted in order that as little as possible of the offensive principles should be taken. He had taken the quantity of caffeine that was supposed to be found in a given quantity of tea, and had found that he got no physiological effect with it commensurate with that obtained from the infusion made in a short time. It had occurred to him that it might be possible to split up that combination by something like a fermentation process, and so get out all the caffeine within a comparatively short time.

Mr. GERRARD said it was his experience with three samples of caffeine that if you took a piece of red litmus paper and just moistened it with water, and placed upon it a few crystals of caffeine, it would give a faintly alkaline reaction. Another point was the process Mr. Allen mentioned of using acetate of lead to precipitate colouring-matter, and adding phosphate of sodium afterwards to precipitate the lead. In that case he got, of course, some acetate of sodium formed in his solution, and he understood the author to say that acetate of sodium and similar salts were obstacles to the extraction of caffeine.

Mr. ALLEN: Obstacles to its crystallisation in water.

Mr. GERRARD: That, then, was satisfactory. There were some remarkable points about Mr. Allen's communication, and he was much interested in it.

The PRESIDENT said that Mr. Reynolds had just drawn his attention to the fact that caffeine was referred to in the Pharmacopœia as being neutral in action.

Mr. MARTINDALE protested against such a thing as citrate of caffeine being retained in the Pharmacopœia. It was a mere mixture of equal parts of caffeine and citric acid, and they wanted a definite salt, such as the hydrobromate. (Applause.)

Mr. ALLEN, in replying, said that his paper had suffered somewhat from the condensation necessary in reading it, hence some objections which had been raised would disappear when the paper was seen in full. He would not dispute Dr. Paul's assertion in regard to caffeine citrate being a definite salt, but he maintained that it was, and if Dr. Paul wanted more evidence on that point he would refer him to the *Pharmaceutical Journal*, ser. 3, vol. xix., p. 252, where it was stated: "The B.P. article [*i.e.*, the citrate] is generally regarded as an indefinite, unstable, inaccurately described, and superfluous preparation." (Great laughter.) After referring to the objections to the magnesium method, Mr. Allen maintained that Dr. Paul had given no proof that the caffeine could not be extracted from tea by boiling.

Dr. PAUL said the proof was that if, after extracting all the alkaloid from tea by boiling in water, the tea were dried, mixed with lime, and extracted with alcohol, more caffeine was extracted.

Mr. ALLEN, replying to the remarks by Mr. Abraham, said that in half an hour boiling water extracted 246 per cent. of caffeine and about double that quantity in six hours. It took seventeen days to do the same with cold water. Paul and Cownley's process was good up to 90 per cent. After that no more caffeine was extracted.

The next paper was on

TESTS FOR THE PURITY OF CHLOROFORM.

By DAVID BROWN, F.C.S.

The author, referring to the fatal accidents with chloroform, said that although these are attributed to impurities, an overdose, or an underdose (the administrators are never very sure which), there are no two opinions that chloroform for anæsthetic purposes should be of rigid purity. The B.P., unfortunately, does not ensure by its tests that it is so, as these tests enable considerable quantities of impurities to pass, and the author advocated a more careful system of testing. He believed that the sulphuric-acid and bad smell tests of the B.P. are reliable if modified suitably. The quantity of acid to be used with the chloroform should, with the quantity of the latter, be fixed. "A few drops" of chloroform are not enough to shake with the acid, or the nose of an expert may fail to detect impurity in the residue from "a few drops," although a novice would detect such a smell in the residue from an ounce. The author, therefore, suggested that (1) in the acid-test, at least 9 parts of chloroform should be shaken with 1 part of pure sulphuric acid continuously for twenty

minutes, after which the acid is to be separated, diluted with 3 vols. of water, and any colour or foreign odour noted; (2) the fractional-distillation test already described by the author should be adopted instead of the B.P. smell-test—*viz.* to distil until 15 per cent. of the original quantity is left. Evaporate that at 80°-90° C., and then judge the odour; (3) that zinc iodide and starch be used to detect the first signs of decomposition; and (4) that the extent to which sulphuric acid decomposes chlorinated compounds be determined.

The author then proceeded to show how far commercial chloroform behaves towards these tests, and the following is a concise summary of his results:—

B.P. Bad-smell Test.

Scotch Chloroform.—Nine samples; one was "slightly bad," one "bad," and a third "very bad." The rest "no bad smell."

English.—Four samples; one "slight," and three "very bad smell."

German.—Three samples; two "bad," and one "no bad smell."

Modified Acid test.—Sixteen samples were tried, and of these three only gave no colour; eight gave shades of straw colour, and the rest were more distinctly coloured. On diluting the acid, three only were found to have no colour, the rest being shades of pink, and one only was free from odour; "tarry," "pine," "bitter almond," "vinous," and "fatty acid" being the characteristics, with adjectives, attached to the odours of the rest.

Fractional Distillation.—Under this test nine out of sixteen specimens came out in 115 per cent. residue with "no bad smell," but two only of these were free from smell on further evaporation, the rest being "bad," "burnt sugar," "vanilla," "wood tar," "creosotic," and the like. The residues varied from *nil* (in one case) to 1 from 1,946,100, to 1 from 202,663.

Zinc Iodide and Starch.—Only one specimen gave a distinct coloration; the rest none.

The author also gave his estimates of the amount of chlorinated impurities present—*viz.*, from 1 in 13,776 to 1 in 399,200—and in summing up said that Professor Ramsay's baryta-water test is, on the whole, preferable to the zinc iodide and starch one for the detection of decomposition, but he submitted that chloroform should not be condemned because it is old.

The PRESIDENT having invited discussion,

Mr. DOTT said he could not undertake to criticise by simply looking at the tables for a few minutes, but in regard to the statement by Professor Ramsay that carbonyl-chloride was the poisonous constituent of chloroform, he thought it would be very interesting to have the Professor's reasons for that statement. He had put the matter before a physiologist, who only smiled at the assertion that so minute a quantity of the compound would have the physiological effect averred by the Professor.

Mr. MARTINDALE said that Professor Ramsay had worked in connection with the British Medical Association's committee. He doubted Professor Ramsay's conclusion, but thought that the baryta-test might be useful. The great point Mr. Martindale considered for pharmacists was to ensure that chloroform was properly stored, that it should be kept in bottles as nearly full as possible, and not exposed to light. Still, after all, he felt that the dangers of chloroform were inherent in chloroform itself as much as in any product of decomposition.

Mr. W. G. CROSS put a question regarding a very bad and pungent odour which had developed in a Winchester of chloroform.

Mr. GROVES asked if the figures applied to chloroform prepared by the B.P. process from rectified spirit. For himself, he thought that chloroform made extemporaneously from chloral was much to be preferred to the article distilled by the B.P. process.

The PRESIDENT asked Mr. Brown if some of the samples were obtained from acetone, to which

Mr. BROWN replied, "Yes."

It would be interesting, the PRESIDENT continued, to have the result of the examination of those specimens.

Mr. REYNOLDS also asked Mr. Brown to indicate which of the chloroforms had been prepared from methylated spirit.

Mr. GERRARD was of opinion that chloroform manufacturers were using their utmost endeavours to supply a pure article. He thought they must all know that carbonyl chloride was not itself a poison. There was no evidence of that. Although they aimed at absolute purity, it was not always possible to obtain that. He had noticed that in distilling 200 c.c. the last few c.c. contained acetone, which he had proved by tests, but he would not condemn a chloroform of that kind.

Dr. INGLIS CLARK said that Mr. Gerrard's remarks were very opportune. It was now time, he thought, that doctors recovered from the scare from which they had been suffering lately. Doctors, and nurses, and other people had gone off their heads in regard to the impurity of chloroform. One day a sample would be submitted to them with the statement that it had no anæsthetic power, and the very next day a sample of the same chloroform would be sent to them with the statement that it was a deadly poison, and that the mere smell of it was sufficient to kill a person. All that was hysterical nonsense, and seemed to show that there was something else than the purity of chloroform behind it all. It was the experience of manufacturers that men all over the kingdom had become old wives on this subject. One man said that he gave 6 oz. of chloroform without producing the slightest effect, while 2 drachms of the same article would send a patient off the next time. He considered this aiming at absolute purity very bad, for this reason—that chloroform was an exceedingly sensitive substance, and the more it was heated and distilled the more they were apt to break down the molecule and give rise to contamination. What he thought should be done was—first, to ensure by proper methods of purification that the chloroform was right, and then not to be sparing with the alcohol, but to add 1 or 2 per cent. of it in order to be able to be absolutely sure that it would keep. There was no use in trying to see how little would do that. (Hear, hear.) If all that was said about the impurities of chloroform were true, it followed, as a matter of course, that these impurities were more highly poisonous than concentrated hydrocyanic acid or aconitine, which was perfectly ridiculous. Carbonyl chloride was not a poison: he had inhaled it many a time with no bad effect.

The PRESIDENT said he thought they must agree that the baryta-test of Professor Ramsay's must be added to the Pharmacopœia. Professor Ramsay found carbonyl chloride in chloroform which had been used in a fatal case. He afterwards made the substance from absolutely pure chloroform; he was certain of the purity. It boiled to $\frac{1}{100}$ degree of the accepted figure, and by oxidation he produced carbonyl chloride. He considered that it was quite proved that it was carbonyl chloride which produced the fatal case—that it closed the glottis, and in that way produced death.

Mr. A. H. MASON said he had been told often and often by medical men that it was only in Scotland that they knew how to administer it. They were told to-day that English and Scotch and German chloroform had certain properties or certain defects. He would like to be sure that German chloroform was not of English manufacture. He noticed in the second table given that there was a smell of almonds about one sample. He believed almond-meal was used for luting the stoppers of bottles, and that was probably where the smell of almonds had come from.

Mr. BROWN said that the sample Mr. Mason referred to had no luting of any description upon it. With regard to the presence of carbonyl chloride he could speak from experience that it was a most irritating substance to inhale, and for that reason it would be so noticeable in chloroform in use that he did not think there would be any danger of it causing death. As regards the samples they were from acetone, alcohol, methylated spirit, ketones, and chloral hydrate. He believed perfectly pure chloroform could be prepared from any of these. He might, however, say that the present sample, and the only one that answered all the tests, was a sample prepared from acetone. He acknowledged the correctness of the 1.497 specific gravity in the B.P., and did not think it was necessary to reduce it further. (Applause.)

MASSACRING THE INNOCENTS.

At this stage members adjourned for luncheon, and on resuming an hour later, twenty papers faced them, and a new order of proceedings had to be instituted. There were two dozen members, or thereabouts, present at the start, but as the afternoon proceeded the attendance increased to over a hundred.

Mr. NAYLOR read the first paper which was on

VORTMANN'S TEST FOR HYDROCYANIC ACID.

By H. BOWDEN.

G. Vortmann ("Monatshefte für Chemie," vii., 416, 417) gives a test for detecting traces of hydrocyanic, which is mentioned in the Blue List No. 42, and in the "Year Book of Pharmacy," 1887, page 124. To the sample suspected a few drops of potassium-nitrite solution and 3 drops of ferric-chloride solution are added. A yellow-brown precipitate forms. Dilute sulphuric acid is added in sufficient quantity to dissolve the precipitate to a yellow solution; the whole is boiled, cooled, and the iron removed by a drop or two of ammonia. The mixture is then filtered, and to the filtrate a very dilute solution of ammonium sulphide is added. A pink-purple colour is produced, which soon changes to blue and remains blue for some time, then changing to green and lastly to pink-purple, the colour not being so deep as the first. Qualitative experiments showed the test to answer very well.

Quantitative experiments were then made. First the strength of the dilute hydrocyanic acid used for the experiments was obtained by precipitating a weighed quantity of a dilute hydrocyanic acid with silver nitrate, and weighing the silver cyanide produced.

Determination A. [Weight of HCN taken = 6.3955 grammes. Ag. CN obtained = .5945 gramme.]

Determination B. Weight of HCN taken = 13.2322 grammes. Ag. CN obtained = 1.224 gramme.

A. Real HCN per cent. = 1.87

B. Real HCN per cent. = 1.85.

Mean = 1.865 per cent.

Experiment a: 2 c.c. of the above acid was diluted to a litre with water, and 1 c.c. examined by Vortmann's test. Result—a deep pink-purple colour, soon changing to blue; most distinctly visible. Amount of real HCN detected = 0.0000373 gramme.

Experiment b: 1 c.c. of the dilute acid was diluted to a litre with water, and 1 c.c., examined by Vortmann's test, gave a most distinct pink-purple colour, the blue being less distinct. Amount of real HCN detected = 0.00001865 gramme.

Experiment c: 0.5 c.c. of the dilute acid was diluted to a litre with water, and 1 c.c., examined by Vortmann's test, gave a pale but distinct pink-purple colour, changing in about two minutes, the blue being invisible or nearly so. Amount of real HCN detected = 0.000009325 gramme.

Experiment d: .25 c.c. of the dilute acid was diluted to a litre with water, and 1 c.c., examined by Vortmann's test, gave a very faint pink-purple colour, vanishing in less than a minute, the other colours not being perceptible. Amount of real HCN = 0.0000046625 gramme.

It follows from these results that 0.00001865 gramme of HCN (experiment b) ought to be detected easily by those who perform the test for the first, as it is so delicate and easily performed.

The test is applicable to cyanides as well as free HCN.

There was no discussion on this paper.

Next Mr. RANSOM read an abstract of a paper on

BARBADOES AND CURACAO ALOES.

By E. M. HOLMES, F.L.S.

This paper dealt with the origin of these kinds of aloes. After referring to the great divergence of opinion amongst authorities, he said he had arrived at the conclusion that the aloes of Curaçao was probably modified to some extent by an admixture of the juice of the leaves of *Aloe spicata* and *Aloe succotrina*, but this conclusion is disputed by Señor S. C. Henriquez, who manufactures aloes at Curaçao. This gentleman sent him six specimens of Curaçao aloes, with a

letter, in which he said:—"I have carefully prepared specimens of the aloe-plants of Curaçao, Aruba, and Bonaire, and also of the same plant growing at Coro, a neighbouring place in Venezuela, and could not trace any difference between the several specimens, and I am greatly inclined to believe the statement in 'Pharmacographia' that the aloe of Curaçao, Aruba, Bonaire, and Barbadoes, is the same plant. I have made the observation that much depends on the way the juice is treated. It yields a gumlike the Barbadoes at times, at other times like the Cape or 'Capey Barbadoes,' and even in some cases a drug almost equal to Socotrine." Senor Henriquez also stated that in manufacturing aloe the juice mixed with four times its bulk of water. By boiling for a little while, and, after cooling, filtering it through flannel, a juice is obtained which, carefully inspissated, yields a drug of orange colour quite soluble in alcohol and free of all nauseous smell. If the juice, without any addition of water, be evaporated, keeping it constantly below boiling-point, and allowed to cool, when the moisture has been reduced to 10 per cent., gently stirring it during the process, and the stuff be cased at a temperature under 100° F., the paste will be uniform and after some time become dull. It will lose the original bad smell and become rather aromatic. But if boxed hot, the mass will separate, generally into layers of gum and resin; and it will, moreover, if the heat was excessive at the time of boiling, become and remain glossy and adhesive. If iron pans are used instead of copper ones, the powder obtained from the drug will have a greenish colour, and if the drug comes in contact with rust, all alkalis be not avoided, a black paste is produced. Samples of six kinds of aloe, prepared by Senor Henriquez, were exhibited, and their characteristics were described, these showing that aloe prepared by evaporation under boiling-point is blackish-brown in colour, vitreous and translucent, and like Barbadoes and Cape in odour. The powder is bright yellowish-brown. That evaporated on a sand-bath is reddish-brown, resinous and waxy, translucent, with a characteristic heavy, stramonium-like odour of Curaçao aloe, and the powder a dull yellowish-brown. Other samples varied from these main conditions according to such determining factors as the period of collection and the length of time the juice was kept before evaporation. Most of the specimens present the appearance known as "Capey" Barbadoes—that is, they possess the distinctive odour and conchoidal fracture of Barbadoes aloe, but have the vitreous lustre of Cape aloe. The specimens yielded from 69 to 82 per cent. of aqueous extract.

The PRESIDENT expressed his high opinion of the services which Mr. Holmes had rendered to the Conference by this communication.

In a rather low voice, and on a low platform, Mr. COULL followed with

QUININE PHOSPHATE.

By GEORGE COULL, B.Sc.

Having had occasion recently to ascertain the composition of quinine phosphate for a special purpose, I consulted the authorities accessible to me, and found a considerable divergence of opinion regarding its formula. Davies says the formula of the phosphate in Easton's syrup may, with high probability, be taken as $3(C_{20}H_{24}N_2O_2)_2H_3PO_4$, but does not mention water of crystallisation ("Year-book," 1883, p. 571); Anderson supposes $3(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 6H_2O$, and the correctness of his supposition is doubted by Gmelin ("Chemistry," vol. xvii. p. 276); Gerhardt gives $2(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 2H_2O$ (Watts' "Dictionary," 1st ed. vol. v. p. 22); Hesse $2(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 8H_2O$ (Gmelin, vol. xvii. p. 615); Stillé and Maisch (4th ed. p. 1291) give the same formula as Hesse, and state that the salt contains 75.85 per cent. of quinine, but the formula requires 72.82 per cent.

It was necessary, in the ordinary course of laboratory work, to determine with accuracy the formula of the phosphate of quinine in use, which was of standard English make, and obtained direct from the manufacturer. After completing the work, it occurred to me that the results obtained would be useful to others, and might appropriately be communicated to the Conference. With the view of adding to the usefulness of this note, a standard sample of German make, also direct from the manufacturer, was examined for comparison.

The *alkaloid*, which may be assumed to be quinine, was estimated by dissolving in water with the aid of hydrochloric acid, adding ammonia in excess, washing out with chloroform, evaporating, and drying at 110° C. till constant.

Phosphoric acid was determined by titrating a solution of the salt in dilute alcohol with $\frac{N}{10}$ soda solution, using phenolphthalein an indicator.

Water was determined by heating the salt at 110° C. till constant. It loses all its water at 100° C.; but the operation is considerably shortened at the temperature indicated.

The results obtained were as follows:—

English Quinine Phosphate						
			1	2	Mean	Theory
Alkaloid	..	..	75.14	75.20	75.17	76.18
Acid	..	..	16.16	16.24	16.20	15.36
Water	..	..	8.99	8.97	8.98	8.46
					100.35	100.00

The last column gives the theoretical percentage for the formula $3(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 6H_2O$.

							German Quinine Phosphate			
							1	2	Mean	Theory
Alkaloid	..	..					79.27	79.41	79.34	79.22
Acid	..	..	..				12.17	12.17	12.17	11.98
Water	..	..	..				8.54	8.36	8.45	8.80
									99.96	100.00

The last column gives the theoretical percentage for the formula $2(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 4H_2O$. From these results we may conclude that the formula of the English salt is $3(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 6H_2O$, and that of the German $2(C_{20}H_{24}N_2O_2)_2H_3PO_4 \cdot 4H_2O$. The fact that there are at least two phosphates of quinine will at once account for the different formulæ having been assigned to it. This difference in the percentage of alkaloid is a point of practical importance. In the B.P.C. formula for *syrupus ferri quiniæ et strychninæ phosphatum*, phosphate of quinine is ordered; but the Formulary gives no indication as to the composition of the salt to be employed. It would be a distinct advantage if a salt having a definite formula were specified by the committee.

BARIUM HYPOPHOSPHITE.

By GEORGE COULL, B.Sc.

This salt is included in the B.P.C. Formulary, and is ordered to be used in making liquor ferri hypophosphitis fortior and acidum hypophosphorosum. The Committee have been under the impression that the barium hypophosphite of commerce is hydrated, as it is said the salt should contain not less than 95 per cent. $Ba(PH_2O_2)_2 \cdot H_2O$. As the following experiments show, the salt of commerce is anhydrous, and if analysed for barium alone or hypophosphorous acid alone, and the amount of $Ba(PH_2O_2)_2 \cdot H_2O$ calculated, the results are very misleading.

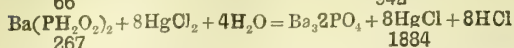
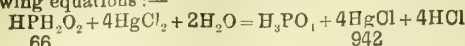
Two samples were examined lately. Previous to the quantitative determinations qualitative analysis revealed the presence of calcium and a trace of chloride in both, the calcium being in larger quantity in No. II. than in No. I.

The barium, hypophosphorous acid, and water were determined twice:—

The *barium* by precipitating with excess of sulphuric acid in presence of hydrochloric acid.

The *hypophosphorous acid* by noting the reducing-power of the salt on excess of mercuric chloride in presence of hydrochloric acid. The amount of calomel formed is a measure of

the hypophosphorous acid present, according to the following equations:—



The water was estimated by heating about 1 gramme at 100°C . till constant. Theory for a pure hydrated salt requires 63 per cent.

The results are here tabulated:—

No. I	1	2	Mean
Ba	45.69	45.83	45.71
(PH_2O_2) ₂	49.75	50.68	50.16
H ₂ O	1.25	1.15	1.20
Ca	Indirectly		97.07
			2.09
			99.16
No. II.	1	2	Mean
Ba	38.59	39.53	39.06
(PH_2O_2) ₂	52.99	52.85	52.92
H ₂ O	1.23	1.13	1.18
Ca	Indirectly		93.16
			4.88
			98.04

These results are rather startling. In sample No. I. there is 6.65 per cent. more barium than in No. II., and 2.76 per cent. less of the acid radicle. This peculiar state of things puzzled me for some time, until it occurred to me that it was caused by the presence of calcium. The atomic weight of calcium being 40 and that of barium 137, the deficiency of barium in No. II. would be made up with calcium, which would combine with the excess of hypophosphorous acid.

Calculating accordingly, in No. I. the mean percentage of Ba 45.71 requires 43.37 (PH_2O_2) to form $\text{Ba}(\text{PH}_2\text{O}_2)_2$; this leaves $50.16 - 43.37 = 6.79$ PH_2O_2 to combine with calcium, of which it requires 2.09; therefore, adding 2.09 to 97.07 brings the percentage to 99.16, leaving a deficiency of .84 for experimental error and a trace of chloride which was present.

Similarly No. II. contains 39.06 Ba, which requires 37.07 (PH_2O_2), and leaves 15.85 (PH_2O_2) to combine with calcium 4.88; adding this amount of calcium to the mean percentage previously obtained, gives 98.04.

If in an examination of this article (say sample I.) the barium alone be estimated, and calculated into the hydrated salt $\text{Ba}(\text{PH}_2\text{O}_2)_2 \cdot \text{H}_2\text{O}$, it will give a percentage of 95.08, which would apparently be up to the standard of purity required by the Formulary; but the salt is anhydrous, so that 95.08 $\text{Ba}(\text{PH}_2\text{O}_2)_2 \cdot \text{H}_2\text{O}$ is equivalent to 89.08 $\text{Ba}(\text{PH}_2\text{O}_2)_2$, and adding the water found, 1.2 per cent., the amount of barium, hypophosphite, and water is 90.28 per cent., leaving about 10 per cent. for impurities—*i.e.*, nearly twice the maximum amount of impurity allowed.

In the case of No. II. the figures are Ba 39.06 per cent. = $\text{Ba}(\text{PH}_2\text{O}_2)_2 \cdot \text{H}_2\text{O}$ 81.27 per cent. = $\text{Ba}(\text{PH}_2\text{O}_2)_2$ 76.14 per cent.; and adding the water found, 1.18, we get 77.32 per cent. of anhydrous barium, hypophosphite, and water. This is an extremely bad sample, containing fully four times the maximum of impurity. If the reducing action alone be noted, and the amount of calomel formed calculated into $\text{Ba}(\text{PH}_2\text{O}_2)_2 \cdot \text{H}_2\text{O}$, No. II., the worst sample, will appear to contain 116.1 per cent., and No. I. 110 per cent. Barium hypophosphite containing not less than 95 per cent. $\text{Ba}(\text{PH}_2\text{O}_2)_2 \cdot \text{H}_2\text{O}$ is used in making acidum hypophosphoratum, B.P.C., and among the tests is one for calcium. The acid should not, after neutralisation, give a precipitate with solution of ammonium oxalate, a result practically unattainable.

Therefore, in view of the variation which exists, and the fact that the commercial article is anhydrous, it seems desirable that the Formulary Committee order the anhydrous salt to be used, and raise the standard of purity in their discretion.

Phosphoric Acid.—The author having found that on dissolving iron wire in 1.750 phosphoric acid, and diluting the solution formed, filtration was exceedingly difficult, owing to the presence of suspended matter, he endeavoured to trace the source of the trouble. This he ascertained on experiment to be silica. Mr. Hodgkin, in his last year's paper, incidentally mentioned this contamination, and Mr. Coull now desired to point the moral again—not to evaporate phosphoric acid in porcelain crucibles, and to urge that the Pharmacopœia should direct that "when syrupy phosphoric acid is mixed with its own volume of water it should give no precipitate." That would exclude silica.

Mr. DOTT said he thought that Hesse's formula for quinine phosphate was the correct one, and Mr. Coull agreed with it, except as to the amount of water of crystallisation in the molecule barium hypophosphite. He had examined by the mercury process, and found it to be equal to 100 per cent. He did not imagine that the salt contained any water of crystallisation.

Mr. T. TYRER agreed that the presence of calcium and barium hypophosphite was not good pharmacy, and he pointed out that Mr. Dott's statement differed materially from Mr. Coull's. The subject recalled the discussion of the previous day on "Lithium Salts." He thought that, while manufacturers were not justified in sending out any article which was not of the degree of purity wanted, it was well to consider sometimes how far it was necessary to insist upon absolute purity. He judged from the figures that the barium hypophosphite, which was impure, had been made by the process of double decomposition, and that he considered a faulty process. As to the phosphoric acid, the small amount of silica present did not vitiate it much, and he reminded the meeting that the use of platinum basins for evaporating such articles necessitated a large expenditure in apparatus.

Mr. MARTINDALE said that Mr. Coull's notes had some bearing on the Unofficial Formulary processes, and he would assure him that they would have the full consideration of the Committee. He did not agree with Mr. Tyrer regarding what he had said about the purity of medicinal chemicals. As pharmacists they should not admit the presence of lead in citric and tartaric acids if they knew it was possible to obtain them free from that contamination. The same also applied to phosphoric acid.

Mr. TYRER said he did not differ from that view, and he maintained that manufacturers should supply what was demanded, but he would remind the meeting that manufacturers would have to be millionaires if they were to use platinum basins in the manufacture of such articles.

Mr. HODGKIN said that manufacturers did not wish to make articles which would scrape through, but those which were best suited for the purpose required. Sometimes increased purity meant increased cost, and that was a matter which the purchasers must face. Tartaric and citric acids free from lead had been produced in this country, and were still obtainable.

The PRESIDENT said that he must put an end to the discussion. (Hear, hear.) It was quite evident that the British Pharmaceutical Conference had no sympathy whatever with manufacturers. He was proceeding to call on the author of the next paper, when

Mr. COULL requested permission to reply; and he said that although Hesse was an older man than himself, still these were the figures which he had obtained by actually analysing quinine phosphate, and they agreed very well with the formula which he had put down. Mr. Coull also spoke, amidst considerable manifestations of impatience, upon the phosphoric-acid question, but the remarks did not reach the reporters' table.

The following were then read by the author:—

THE MELTING-POINT OF CACAO-BUTTER.

By T. MALTBY CLAGUE.

In connection with some experimental work on the influence of some drugs commonly used in suppositories and pessaries on the melting-point of cacao-butter, the results of which were published in THE CHEMIST AND DRUGGIST of June 6, 1891, the author examined a number of trade samples

and showed that their melting-point varied from 74.5° F. to 91° F., as compared with the official 86° to 95°. A sample expressed by the author with heat gave 91° and by percolation with ether 83°. The subject was again entered upon owing to observation of statements by Redwood and A. H. Allen that some fats possess a two-fold melting-point—an original one, and one acquired after heating to a few degrees above melting-point. Samples were thus examined with the following results:—

	Sample No. 1	Sample No. 2	Sample No. 3
Original melting-point	75°	86°	85°
After being heated to 105°	77.5°	89°	86°
" " 120°	84°	85°	91°
" " 150°	85°	83°	92°
" " 180°	80°	80°	85°

The third sample was one prepared by percolation with ether from unroasted nibs, and from the results it would appear that cacao-butter undergoes a rise in its melting-point; that if temperature be further increased its melting-point becomes lowered to an intermediate one, which is maintained for a few days. The author therefore advised dispensers to note that fluctuations in the melting-point of cacao-butter can oftentimes be put down to the influence of heat only, and he cautioned them as to the use of cacao-butter in suppository-making which at all closely approximates in its melting-point to the temperature of the human body. He also recommended Redwood's method for taking melting-points.

DETERMINATION OF MELTING-POINTS BY CAPILLARY TUBES.

By T. MALTBY CLAGUE.

This paper arose from a somewhat curious incident experienced by the author. He had put a few ounces of cacao-butter into a beaker and proposed to melt the butter by placing the beaker in water a few degrees above the melting-point of the butter, and maintaining it at that; but he found that at ten degrees above the melting-point of the butter it had not become clear, although when he plunged a piece of feeding-bottle tube into the half-melted fat straightway the tube was filled with perfectly liquid fat. That led him to try other tubes, and the result was the following determinations of the melting-point of a theobroma-and-wax mixture with tubes of different diameters, a Hicks half-minute clinical thermometer being used:—

Tube of 0.12 in. diam. gave m.p. 103.8° F.	
" 0.24 " " " 105 " "	
" 0.42 " " " 106.3 " "	
" 0.64 " " " 110 " "	
" 1.26 " " " 113 " "	

By Redwood's method the melting-point of the butter came out at 105° F. With much smaller tubes a sample of cacao-butter (m.p. 85° F.) was tried, after the diameter had been accurately determined. A tube of $\frac{1}{77}$ in. diameter gave 86° F., $\frac{1}{26}$ in. 83° F., $\frac{1}{30}$ in. 82° F., and $\frac{1}{50}$ in. 81° F. The author therefore felt justified in requiring of the Pharmacopoeia better definition of "a capillary tube" and even more precise guidance than Attfield's size for such tubes—that of a knitting-needle, for such needles are of various sizes. He showed, further, that it is highly important, as Mr. A. H. Allen has suggested, that some time should elapse after the tube has been filled with the fat. What time should this be? The following results may assist in answering that question:—Tubes were filled with the m.p. 85° F. cacao-butter. Ten minutes after filling, the contents of one melted at 75°; $1\frac{1}{4}$ hour after, 85° F.; and twenty-four hours after, 90° F.

Mr. MARTINDALE, in opening the discussion, said he thought the difference of temperature might be accounted for in cacao-butter by the fact that it consisted of two different principles. There was, probably, stearine and oleine present, and the mixture of these two, if allowed to crystallise, lowered the initial point of the stearine had it been pure.

Mr. ALLEN said no doubt Mr. Martindale had hit the right

nail on the head in saying it was a question, when they had a mixture of several bodies having different melting-points, that they did not know which one to take.

The PRESIDENT then called upon Mr. PETER MACLEWAN to read an abstract of the following paper:—

THE SOLVENT ACTION OF ALCOHOL OF DIFFERENT DEGREES OF STRENGTH ON SOME OF THE DRUGS USED IN MAKING PHARMACOPŒIAL TINCTURES.

By E. H. FARR and R. WRIGHT, Pharmaceutical Chemists.

Tincture of Cinchona.

Cinchona-bark may almost be said to have been the "bête-noir" of pharmacy, and its preparations have received more attention at the hands of practical pharmacists than those of any other drug, except, perhaps, opium.

The difficulty, if not the impossibility, of effecting complete exhaustion of the drug by aqueous treatment, as also the consequent fact that neither the infusion, the decoction, nor the fluid extract represent the full medicinal activity of the drug from which they have been produced, has always been admitted. Conclusive proof of this fact, so far as the preparations of yellow cinchona-bark are concerned, was first afforded by Mr. C. Ekin, who, in a paper read at the Pharmaceutical Conference of 1878, showed that the fluid extract did not contain more than one-fourth, and the infusion and decoction not more than five-eighths, of the alkaloids present in the bark.

These results were substantially confirmed by Dr. B. H. Paul, in a note read at an evening meeting of the Pharmaceutical Society. As to whether a more satisfactory exhaustion of the bark is effected in the process of making the tincture, opinions have been divided.

Ekin, in the note just alluded to, stated that in working on a bark containing 2 per cent. of quinine the exhaustion was practically complete; Paul, on the contrary, asserted that from the marc remaining from the preparation of the tincture it was possible to prepare a second tincture equal in strength to the first; and this was confirmed by Braithwaite, who found that in making the B.P. tincture not more than half the alkaloids were extracted.

In the 1885 Pharmacopoeia, owing mainly to the recommendation of Mr. E. M. Holmes and the late Mr. J. E. Howard, the bark of *Cinchona succirubra* was substituted for the Calisaya bark for the production of the galenical preparations of cinchona.

Since that time no experimental data showing the extent to which exhaustion is effected in the preparation of the decoction and the acid infusion have been published.

The tincture has, however, been submitted to examination by Mr. J. S. Ward, who, in a paper read before the Liverpool Chemists' Association, showed that commercial samples of the tincture only contained about 45 per cent. of the theoretical yield, calculated from the quantity of bark employed in its preparation.

In order to ascertain the degree to which the exhaustion of red cinchona-bark could be effected by means of an alcoholic menstruum, and also to find by what menstruum the most perfect exhaustion might be secured, thirteen specimens of the bark were obtained, and after being reduced to No. 40 powder a series of tinctures was made from each, by the B.P. process, with alcohol of 90, 80, 70, 60 and 50 per cent. strength (by volume). All the specimens of drug employed were found to be fully up to the B.P. standard, and four contained a percentage of alkaloid in excess of that required by the B.P., the amount varying between 6 and 8.2 per cent. total alkaloids. In order to ascertain what method was best adapted for the estimation of the alkaloids, the following experiments were tried upon a standard tincture.

Experiment I.—Twenty-five c.c. of the tincture was acidified with dilute sulphuric acid, and evaporated over a water-bath until all spirit had been driven off. An excess of soda solution was then added, and the alkaloids extracted by agitation with benzolated amyl alcohol. From the latter solution the alkaloids were withdrawn by agitation with acidulated water, and were subsequently recovered from the mixed acid solutions, after addition of an excess of solution of soda, by shaking with chloroform and evaporating the chloroformic solution to dryness.

Experiment II.—Twenty-five c.c. of the tincture was boiled with a little s'aked lime, the mixture filtered, and

the precipitate washed with 2 fluid ounces of boiling methylated spirit, added gradually. The filtrate was then acidified with dilute sulphuric acid, and evaporated over a water-bath until the alcohol had been driven off. The liquid was then made alkaline, and the alkaloids removed by means of benzoated amylic alcohol. From the latter solution they were recovered by shaking with several small quantities of acidulated water, mixing the acid liquids, adding an excess of solution of soda, and taking out with chloroform.

Experiment III.—Twenty-five c.c. of the tincture was mixed with a little slaked lime, and the mixture evaporated to dryness over a water-bath. The dry extract was mixed with a little sand, and the mixture treated with successive portions of boiling chloroform till exhausted. The chloroformic solutions were mixed, and the alkaloids shaken out with acidulated water. From the latter solution the alkaloids were subsequently recovered by means of chloroform.

Experiment IV.—Ten c.c. of the tincture was diluted with 50 c.c. water, an excess of solution of soda added, and the liquid shaken up with four successive small quantities

reagent. The acid solutions are mixed and made alkaline, and the liquid shaken—first with 10 c.c., and then with two successive 5 c.c., of chloroform. The latter is drawn off into a tared platinum dish, and evaporated over a water-bath, and the residue in a water-oven at 100°, and weighed. The results of the estimation of the tinctures are given in Table I.

The percentage of extractive was ascertained by evaporating 10 c.c. of the tincture, drying the residue at 100°, weighing, and multiplying the result by 10.

A glance at the table of results will show that the most complete exhaustion of cinchona-bark is made by the employment of a 70 or 80-per-cent. menstruum. A study of the table also proves that alcohol is a better solvent of the active principles of cinchona than is generally supposed. The weakest series of tinctures in the table contain 63 per cent. of the alkaloids present in the drug operated upon; and in case of the specimen from which No. 8 series was prepared, and which contained 8.2 per cent. total alkaloids, no less than 91 per cent. was extracted.

TABLE I.
Showing Quantitative Results of Estimation of Tinctures of Cinchona.

No.	Amount of Alkaloid in Grammes from 100 c.c. Tincture.					Amount of Extractive in Grammes from 100 c.c. Tincture.				
	90-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	90-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture
1	.80	.79	.88	.85	.78	6.93	6.98	8.04	8.06	7.60
2	.76	.84	.89	.85	.77	4.16	4.76	5.14	4.96	4.70
3	1.25	1.29	1.23	1.36	1.22	6.24	6.40	6.24	7.30	6.64
4	1.22	1.22	1.37	1.10	1.15	5.75	5.66	6.42	5.40	5.90
5	.80	.94	.83	.83	.74	5.20	5.82	5.98	5.56	5.13
6	1.16	1.15	1.16	1.09	1.01	5.72	5.96	5.30	6.10	5.94
7	.66	.79	.76	.74	.61	4.66	5.20	5.30	5.62	5.00
8	1.27	1.50	1.50	1.43	1.25	6.95	7.62	7.90	7.63	7.45
9	.84	.93	.95	.84	.84	4.90	5.44	6.02	5.64	5.76
10	.97	1.03	.85	.77	.73	5.72	6.22	5.14	5.03	4.93
11	.73	.79	.82	.76	.74	4.85	5.23	5.58	5.00	4.64
12	.63	.75	.78	.69	.65	5.42	6.04	6.32	6.00	5.74
13	.76	.89	.90	.82	.82	4.50	5.24	5.56	5.16	5.40
Average	.91	.99	1.00	.93	.87	5.43	5.89	6.14	5.96	5.76

of chloroform. From the mixed chloroformic solutions the alkaloids were extracted by agitation with acidulated water. Finally the mixed acid alkaloidal solutions were made alkaline, and the alkaloids shaken out with chloroform.

The results were as follows:—

Experiment 1	..	100-c.c. tincture	=	.778	gramme total alkaloids.
" 2	..	100-c.c. "	=	.784	" " "
" 3	..	100-c.c. "	=	.872	" " "
" 4	..	100-c.c. "	=	.928	" " "

The alkaloidal residues presented the same appearance, and the results of these experiments pointed to process 4 as being the most suitable for the purpose.

In order to confirm the above results, another sample of tincture was taken, and estimated by this process. As a check upon the result, a second estimation was also made, the tincture being evaporated with water, the residual liquor acidified, the alkaloids precipitated as periodides, the latter decomposed by means of a 5-per-cent. solution of sulphurous acid, and the alkaloids recovered from the solution, to which an excess of solution of soda had been added, by means of chloroform.

The yield of alkaloids was as follows:—

By Process 4	..	100-c.c. tincture	=	.790	gramme alkaloids.
By precipitation	..	100-c.c. "	=	.780	" " "

The details of the process of estimation are as follows:—Ten c.c. of the tincture is introduced into a stoppered glass separator, and diluted with 50 c.c. water; a slight excess of solution of soda is then added, and the alkaloids removed by shaking—first with 10 c.c., and then with three successive 5 c.c., chloroform. The chloroformic solutions are drawn off in turn, mixed, and the alkaloids taken out by shaking with successive small quantities of acidulated water, until the latter ceases to give alkaloidal indications with Mayer's

With the subject of the standardisation of this tincture it is our intention to deal subsequently.

In order to test the comparative value of alternative processes for the preparation of this tincture, two samples of bark—one in No. 40 and the other in No. 60 powder—were taken, and a series of tinctures made from each, with a 70-per-cent. menstruum, by the processes outlined in previous papers, and which we have termed those of simple maceration, double maceration, macero-percolation, and continuous percolation.

These tinctures were estimated by the process previously employed, with the results indicated in Table II.

TABLE II.
Showing Results of Experiments on Process for Making Tincture.

	Percentage of Alkaloid				Percentage of Extractive			
	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation
I.	.68	.65	.89	.97	4.10	4.80	5.06	5.34
II.	1.07	1.06	1.33	1.29	5.16	5.28	6.46	6.24

Those results sufficiently establish the superiority of the percolation processes, and seem further to prove that the process of macero-percolation and that of continuous percolation are about equally well-adapted for the preparation of this tincture.

Mr. GROVES said he hoped the paper would lead in the

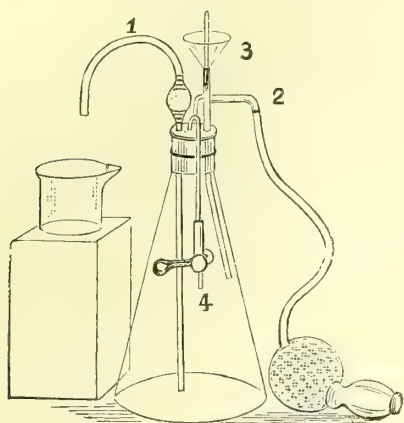
next edition of the Pharmacopœia to there being several strengths of alcohol corresponding to the qualities of drugs under treatment. He had found, for instance, that tincture of cascarrilla made with proof spirit was certainly nothing like so good as tincture made with slightly stronger spirit. He thought the tendency of these researches by Messrs. Farr and Wright would be to lead probably to an extension of that plan of adapting the drug to the menstruum best suited for it. It was a valuable piece of work.

Mr. BIRD then read the following note, and demonstrated to the gratification of the meeting the use of

A FILTER FOR "MAYER" ESTIMATIONS.

By F. C. J. BIRD.

This was a description of the apparatus which we sketch here. We have a conical flask fitted with a rubber cork, through which passes tube 1, shaped as shown, the bulb being filled with asbestos; 2 is the bellows of a spray-producer, and is connected with a tube which passes into the air-space of the flask. In 3 we have a funnel closed with a stopper, the limb of the funnel being bent to an angle and bent diagonally as shown. The fourth tube (4) is closed with a burette-clip.



In working, the "Mayer's" solution is run in through the funnel into the alkaloidal solution until precipitation apparently ceases; then some of the mixture is squeezed out with the bellows through tube 1, thus enabling the operator to judge, by testing the clear liquid driven into the beaker, whether the end point has been reached or not.

The PRESIDENT said the apparatus was a very clever one for filtration, and he complimented Mr. Bird very highly upon it.

ESTIMATION OF PHENOL.

The Conference had now to deal with a paper entitled "The Action of Iodine on Phenol in Alkaline Solution, under various conditions, with special reference to the Estimation of Phenol Volumetrically by this method," and when the author, Mr. Thomas Carswell, appeared with a bulky manuscript something like horror crept over the audience. Mr. Carswell was implored to give a short abstract of it, and he said he would, but straightway proceeded to fill up the time from 3.15 to 3.40. The pity of it was, too, that the paper seemed to be a good one, representing much work and a lively acquaintance with the subject. But it is impossible to report, from the statement made by the author, anything like a sequential description of his work. He sketched upon the blackboard graphic formulæ which were not seen; he formulated laws and propositions which the absence of data placed in the realms of the unknown, and had a fine stroke of revenge for his doubtful welcome by thoroughly befogging the audience, and keeping the floor for twenty-five minutes, in spite of the prayers of the chair, and the interruptions from the benches.

When Mr. Carswell resumed his seat the rest of the papers were taken as read. They were the following:—

CONCENTRATED OIL OF LEMON.

By ARTHUR A. BARRETT, Pharmaceutical Chemist, Messina.

The author showed a sample of this oil at an evening meeting of the Pharmaceutical Society, and he now referred to Tilden and Wallach's researches, stating that essence of lemon owes its value to the presence of a body which, in the absence of exact knowledge, he calls "concentrated essence of lemon." This body is said to have been isolated so far back as the year of the Philadelphia Exhibition in 1876, but little was heard of it until about three years ago, since which time its use for special purposes has considerably increased, displacing the ordinary essence. As to what the constitution of the concentrated oil is he was unable to say, and he does not think that concentrated oil of lemon has been used for pharmaceutical purposes so far. He thinks, however, that it would be advantageously used in making concentrated infusion of gentian.

A great deal of mistrust in concentrated oil arises through its great concentration. As to the exact relative strength, no two opinions are exactly alike, and the article should be allowed to stand on its merits. In England the largest proportion of concentrated oil which he ever obtained was 5 per cent., and the average, using the best quality oil obtainable, was a little over 4. The strength may, therefore, be considered as twenty-four times, and if comparison is made with ordinary commercial qualities, the strength is thirty times.

ESSENCE OF LEMON.

By ARTHUR A. BARRETT, Messina.

In this paper it was stated that in making oil of lemon, one man takes a lemon in his hand, and with three rapid strokes with a large knife cuts off nearly all the peel in three slices. The central portion which is left consists of most of the pulp with a little of the peel—top and bottom. This is simply pressed for making lemon-juice. The slices pass to a second workman, who sits on a low chair with an ordinary common quality bath-sponge, worth about 6d., in one hand. With the other he presses the slice of peel against the sponge, pressing the edges of the peel only with his fingers, the object being to press the convex piece of lemon-peel as nearly flat as possible. One man can extract about 1½ lb. essence of lemon per day. To ensure the cells being fully charged with moisture, it is usual to allow the lemons to stand in water for a short time. After referring to the preparation of lemon-peel for candying, the author said that the peel is sometimes deprived of its oil without rupturing the oil-vessels, and the quantity of essence obtained in this way is considerable. It is generally assumed in England that all pure essence of lemon is good. This is far from being the case. He had seen essence of lemon containing 15 per cent. of turpentine, which was really superior to essence of lemon made the same day in my presence, and absolutely pure. This results from the extraordinary variation in the quality of the essence made in the various months. This difference is not noticed much in England, even the best exporters having to make an average sample, which they can supply all the year round. Turpentine is in large use, and is purified in a peculiar way. One exporter is said to use 10 tons per annum. Strange to say, the worst qualities of essence all go to London, Manchester, and Glasgow. In particular English wholesale druggists have an unenviable reputation for buying low qualities. Experienced buyers claim to be able to distinguish the district and village in which an essence had been made simply by smell and inspection. Testing is carried out as follows:—A sample is poured out into a tumbler and shaken up after placing the hand on top. Great attention is then paid to the duration and size of the bubbles and froth, the colour is noted, and one smell is taken with the glass full and another after emptying it. Turpentine will certainly be detected in this way if over 5 per cent is present.

PRELIMINARY PROXIMATE ANALYSIS OF A SAMPLE OF COMMERCIAL MYRABALANS.

By A. CAMPBELL STARK.

The myrabalans of commerce consist of a mixture of the fruits of several species of *Terminalia*, the principal being

T. Chebula, *T. bellerica*, and *T. citrina*. The fruits on which the following analysis was performed were kindly examined for me by Mr. E. M. Holmes, who thinks they were derived from *Terminalia Chebula* and *citrina*. Myrabalans have for a long time been used in this country as a tanning material, and several species, particularly *T. bellerica* and *Chebula*, are used as medicines in the East. Full descriptions of the uses of the fruits have been given by Hooper, Dymock, and others, and an analysis of the fruits of *T. bellerica* has lately been published. ("Pharmacopœia Indica," No. 3, 1890.)

It has been suggested that commercial myrabalans would form a useful addition to our list of astringent drugs, and it is with a view of ascertaining what bodies, besides tannins, are present, and what advantages this drug possesses, if any, over other astringent substances, that I have attempted this analysis.

Dr. Apéry (of Constantinople) has very strongly recommended the use of myrabalans in the treatment of dysentery and diarrhœa, and also considers the drug to be cholagogue. He describes its effects in the treatment of dysentery as very remarkable. (*L'Union Pharmaceutique*, 1887.)

The same author also gives some details of analysis (*Journal de Pharmacie et Chimie*, 1888, p. 140), and states that the different varieties of fruits are all derived from the same plant, but at different stages of maturity.

I have not been able to find in account of a full analysis of a sample of commercial myrabalans, although much work has been done upon the tannins present.

Analysis.

Estimation of Moisture.—5.032 grammes of the finely-powdered and well-mixed drug, dried on a water-bath, lost .355 gramme = 7.05 per cent. moisture.

Estimation of Ash.—2.517 grammes of powder yielded .058 gramme = 2.30 per cent. ash.

The ash was exhausted with water and hydrochloric acid successively, with the following result:—

	Per cent.
Soluble in water	1.202
" in HCl .. .. .	.872
Insoluble residue .. .. .	.233
	2.304

The portion soluble in water (the solution was strongly alkaline) contained carbonate of potassium and chloride of sodium. That soluble in hydrochloric acid contained oxide of iron and phosphates of calcium and magnesium. The insoluble portion was not further examined; it was probably silica. The ash had a slightly green appearance, but I was unable to confirm the presence of manganese.

The amount of ash is unusual, since Allen ("Commercial Organic Analysis," vol. iii., part I., p. 106) gives the proportion of ash usually yielded by commercial myrabalans as about 10 per cent. After four estimations, however, I am satisfied that the figures I have given are correct for the sample under consideration.

One hundred grammes of the drug, reduced to very fine powder, were packed in a percolator, and extracted successively with petroleum ether, ethylic ether, alcohol (s.g. .810), and distilled water, the powder being dried in the air between each extraction. Four extracts were thus obtained, which were examined as follows:—

Petroleum-ether Extract.—Colour, light yellow; a drop evaporated on a piece of blue paper left a slight oily stain. A few c.c. evaporated in a watch-glass in the air left no smell. I did not further examine this extract for volatile oil.

Half the total extract, evaporated on a water-bath until the weight was constant, yielded .255 gramme = .510 per cent. of a yellow semi-solid residue, having, when warm, a strong fatty smell. This was treated with cold absolute alcohol, when .241 gramme dissolved.

The alcoholic solution was distinctly acid to litmus, and phenolphthalein. An attempt was made to titrate it with ^N alcoholic soda, but owing to an unlucky accident, which occasioned some loss, the estimation was not complete. The quantity required would not have been less than 20 c.c.

The residue was soluble in chloroform and appeared to me to be wax.

Petroleum-ether extract contained:—

	Per cent.
Soluble in cold alcohol (partly free fatty acid) ..	.482
Soluble in chloroform (wax) .. .. .	.028
	.510

Etherial Extract (1,300 c.c.)—Colour light yellow. Some of the ether used, which I believed to be absolute, I subsequently found to contain a little alcohol and water. The ether was therefore distilled off, the residual extract dried under sulphuric acid and treated with ether (of s.g. .719), the portion insoluble in ether being dissolved in alcohol and added to the alcoholic extract. This etherial extract still contained tannin, and I found by direct experiment that the tannin present in the drug is slightly soluble in ether of s.g. .719. Half this etherial extract was distilled, and the residue which had the peculiar smell of powdered myrabalans, dried until the weight was constant. It weighed 3.165 = 6.33 per cent. It was treated successively with distilled water and alcohol.

	Per cent.
A. Soluble in water	4.04
B. Soluble in alcohol	1.32
C. Insoluble in alcohol and water, soluble in ether ..	.97

The Aqueous Solution, A (200 c.c.) was of a light-brown colour, and evidently contained tannin. On standing a few hours a white deposit fell; this was filtered off from a portion of the liquid and examined: it appeared to me to be gallic acid.

Ten c.c. of the solution, after redissolving the deposit by heat, were taken, and the tannin precipitated by solution of gelatine, avoiding excess; the mixture was filtered, and the filtrate well washed with acetic ether. The etherial solution separated, evaporated, and the residue dried, weighed .056 gramme = 2.24 per cent. gallic acid.

The aqueous solution from this operation was examined, but I could not find anything present except a little tannin. A portion of the solution was treated with lead acetate, filtered, excess of lead removed with sulphuretted hydrogen, and the acetic acid got rid of by evaporation. Nothing but a little tannin appeared to be present in the solution.

Alcoholic Solution, B (100 c.c.)—This was of a greenish colour, and gave evidence of containing gallic acid.

Twenty c.c. were evaporated, and the residue exhausted with boiling water which dissolved .078 gramme = .78 per cent. soluble in hot water. This appeared to me to consist entirely of gallic acid.

The residue, .54 per cent., consisted of a soft green resin. This substance is, presumably, the "myrabalamine" of Dr. Apéry.

The residue C, insoluble in alcohol and water = .97 per cent. (by difference), was redissolved in ether, and the solution again evaporated. It was of a brown colour, and had the character of an indifferent resin. All the solutions mentioned above were examined for alkaloids, bitter principle, glucoside, or sugar, without result. The etherial extract contained:—

	Per cent.
Gallic acid	3.02
Tannins	1.80
Green resin, soluble in alcohol .. .. .	.54
Brown resin, soluble in ether .. .. .	.97

6.33

Alcoholic Extract (1,500 c.c.)—This was of a dark-brown colour, and deposited slightly on standing.

Fifteen c.c. evaporated, and the residue dried until the weight was constant, weighed .251 gramme = 25.1 per cent. matter soluble in alcohol.

One hundred and fifty c.c. of the alcoholic extract were taken and evaporated at a low temperature (below 80° C.) until all the alcohol was driven off, the residue filtered, and the filtrate made up with washings to 150 c.c.

Fifteen c.c. of this solution evaporated, and the residue dried, weighed .231 gramme = 23.1 per cent. soluble in water.

Examination for Tannin.—Fifteen c.c. of the aqueous solution were precipitated with acetate of lead; the precipitate, rapidly washed and dried, weighed .336 gramme. The precipitate, incinerated and heated in the blowpipe-flame until the weight was constant, weighed .119 gramme = 20.7 per cent. matter precipitated by acetate of lead.

Fifteen c.c. of the aqueous solution, precipitated in the same manner with acetate of copper, gave a precipitate weighing .249 gramme, and a residue, after heating, of .061 gramme = 18.8 per cent. tannin, &c., precipitated by acetate of copper.

The matter (1.9 per cent.) precipitated by lead acetate, but not by copper acetate, I believe to contain a bitter principle. Its examination is reserved for the sequel to this paper.

Myrabalans, as is well known, contain both ellagic and gallo-tannic acids. Much work has been done on the former by Loewe and others.

The percentage of tannins found in the sample of myrabalans under consideration (20.6 per cent.) is low, since Allen and others give the average proportion of tannin in myrabalans as from 20 to 40 per cent. My figures represent the mean of four estimations.

Estimation of Glucose.—The filtrate left from the precipitation by lead reduced Fehling's solution (after removal of the excess of lead acetate from the solution). On estimation, 1 c.c. of Fehling's solution was decomposed by 6.6 c.c. of the filtrate = 1.13 per cent. glucose.

Estimation of Saccharose.—A portion of the filtrate was boiled with 2 per cent. of hydrochloric acid for half an hour, and the solution, estimated by Fehling's reagent, = 1.25 saccharose and other carbohydrates.

The residue, insoluble in water, from the alcoholic extract was treated with dilute ammonia (1 in 50) as long as anything was removed; the filtrate rendered slightly acid with acetic acid, evaporated, washed, and dried, weighed .086 gramme = .86 per cent. phlobaphene.

The washings from this operation, evaporated, left a dark-brown residue, weighing .035 gramme. It was freely soluble in water, gave no precipitate with gelatine, had no taste, and seemed to me to be a colouring matter.

The residue from the treatment with ammonia was of a pale green colour; it weighed .071 = .71 per cent. It was insoluble in ether, alcohol, or chloroform, freely soluble in dilute caustic soda, the solution being a dark greenish-brown colour.

Aqueous Extract (1,500 c.c.)—This was of a very dark-brown colour. Fifteen c.c., evaporated and dried, weighed .051 gramme = 5.1 per cent. of matter soluble in water.

I regret that great pressure of business compels me to defer the examination of this solution until later on.

It will be understood that the foregoing details merely represent a preliminary examination of the chief constituents of commercial myrabalans. I trust to be able to publish further details shortly.

NOTE ON THE EXAMINATION OF SPURIOUS IPECACUANHA.

By THEO. H. WARDLEWORTH.

The high prices for ipecacuanha which have ruled for some time past have produced the usual flood of consignments of so-called ipecacuanha. Some have been so palpably spurious that they have scarcely called for notice, while others have been better calculated to deceive.

A recent arrival in this country which was described as ipecacuanha was so large, and its virtues were so loudly sung by the shippers, that it called for more than passing notice. At first sight the light-coloured straight roots seemed to indicate that the parcel deserved slight attention. On careful examination, however, the samples were found to contain roots here and there which possessed that annulation which is so strongly characteristic of the *Cephaelis Ipecacuanha*. As the shipper claimed that the drug was largely used as ipecacuanha in Parnahiba and district, and as the quantity was so large, the writer decided to make, as far as possible, an exhaustive examination of the root. Close scrutiny proved it to be the *Ionidium Ipecacuanha*. Mr. Wardleworth gave particulars of the structural and other differences between the true and the spurious ipecacuanha.

LYCOPERSICON ESCULENTUM.

By FREDK. DAVIS.

The author has found in the tomato, in addition to malic acid, the presence of which has already been recorded, a

volatile oil resembling oil of garlic, but this does not appear to be present in the uncooked fruit. This oil on examination will be found to consist of oxide and sulphide of allyl say $(C_3H_5)_2S$.

PRESENTATION FROM BELL AND HILL'S FUND.

The PRESIDENT said he had now a very pleasing duty to perform, namely, the presentation of books from the Bell and Hill's fund. Though both these gentlemen had now passed away, their names would be perpetuated by the presentations made from this fund. He might remind them that since the death of Jacob Bell they had now for the first time a retail chemist in the House of Commons, namely, Mr. Townsend, of Bristol, and if they had any grievance he should advise them to write to Mr. Townsend claiming him as their member. He had pleasure in handing over to Mr. Ewing, the esteemed chairman of the North British Branch of the Pharmaceutical Society, the books presented, the titles of which were as follows:—Hooker's "Genera Plantarum," by Bentham, three volumes; Peddie's "Manual of Physics"; Schmiedeberg's "Elements of Pharmacology"; Mendeléeff's "Principles of Chemistry." They had also two splendid books presented by Mr. Thomas Hanbury, in memory of his brother, namely, "Science Papers" and "Pharmacographia."

Mr. EWING expressed his pleasure in accepting the books, which, he said, would form a valuable addition to their library—a library very largely consulted for purposes of reference, not only by chemists in Edinburgh but throughout Scotland, and also by members of the medical profession. He wished, in one word, to say regarding Mr. Hills, who had died during the past year, that there was no pharmacist who came north of the Tweed so singularly beloved as he had been.

ELECTION OF FORMULARY COMMITTEE.

Mr. BRANSON, of Leeds, moved the re-election of the Formulary Committee.

Mr. MASON seconded the motion, which was unanimously agreed to.

BRITISH ASSOCIATION AND THE CONFERENCE.

Mr. J. C. C. PAYNE (Belfast) said that he was a representative from a country which was supposed to be always giving trouble. ("Hear, hear," and laughter.) In this case, however, he thought it was the Conference that had a grievance. There appeared to be an unwritten law that the Conference must be held in the same town and at the same time as the British Association. This rule was attended with considerable inconvenience, as they were crowded out of hotels as well as out of the daily press. If the meetings were held at different times or in different places, some of their members who were also members of the British Association might find it difficult to attend both meetings. But it was quite obvious, from the success of the present Conference, that it was not disadvantageous to have the meetings at a different time, for with the exception of the Conference at Manchester in 1887, when 228 were registered as being present, this had been the most largely attended during the last ten years, as there were over 200 members attending it. In submitting his resolution he did not wish to show any disrespect to Nottingham, where the British Association was to meet next year. He concluded by moving—

That in future the Conference do not meet in the same town or at the same time as the British Association.

Mr. HODGKIN expressed his willingness to second the motion if Mr. Payne would modify it by adding after the words "do not" the words "of necessity."

Mr. PAYNE agreed to the modification suggested.

Mr. BUTLER, in supporting the resolution, said he did not see why the Pharmaceutical Conference should allow itself to be dragged at the tail of the British Association; a remark which led

The PRESIDENT to say that the Pharmaceutical Conference had undoubtedly originated from the British Association, and had been attached to it for many years as regarded the holding of their meetings. He had always thought that the Cor-

ference had suffered a good deal in consequence, as the two meetings clashed.

Mr. JAMES MACKENZIE (Edinburgh), asked if there was any resolution standing in the rules at present as to the holding of the Conference, and, having been answered in the negative, he contended that Mr. Payne's resolution was unnecessary.

After further discussion, in the course of which it was pointed out that the practice of holding the Conference at the same time and place had been thrice broken through,

Mr. REYNOLDS moved the previous question.

Mr. MACKENZIE seconded.

A vote was then taken, with the result that Mr. Payne's resolution was declared to be carried.

PLACE OF MEETING FOR 1893.

Mr. BOLTON (Nottingham) said that he had listened to the discussion that just closed with some degree of interest, because he had been deputed by the Nottingham and Notts Chemists' Association, and the trade in general at Nottingham, to invite the Conference to hold its meetings next year in that town. He hoped that, should the Conference accept the invitation, they would be able in Nottingham to put them not at the tail of the British Association, but at the head of it. He was sorry that Mr. FitzHugh, the Mayor of Nottingham, and the President of their Association had been unable, because of his important duties as chief citizen of Nottingham, to be present at that Conference and give the invitation. He (Mr. Bolton) had been asked by Mr. FitzHugh to say that it was his earnest hope that they would visit Nottingham. It was now twenty-seven years since the Conference had been there, and if they agreed to come next year they would find that many changes had taken place. Then the population was 80,000, now it was between 230,000 and 240,000. They had many places of interest to visitors. There was the Nottingham Castle and Art Museum; and they had what they were very proud of—namely, a University College, the only one in the kingdom which had been founded by the people, managed by their representatives, and carried on under the direction of the corporation. (Applause.)

Mr. GILL, the secretary of the Nottingham Chemists' Association, in supporting the invitation, said that Mr. Bolton had omitted to mention one attraction in Nottingham—a great one for ladies—namely, the manufacture of lace. (Applause and laughter.)

Mr. DAVIES moved that the invitation be accepted and the 1893 meeting be held at Nottingham.

Mr. ABRAHAM seconded.

The PRESIDENT said that he remembered with feelings of pleasure their last visit to Nottingham, and he should be happy if it were decided to go there again. He was not quite sure, however, that the attraction which Mr. Gill had spoken of—namely, the manufacture of lace—was a desirable one, because it was one that might prove most expensive if their lady friends had it brought under their notice. (Laughter.)

The motion was then put to the meeting and unanimously agreed to.

Mr. MACKENZIE asked when the meeting would be held?

The PRESIDENT said that would have to be decided by the local committee of the Executive.

ELECTION OF OFFICERS FOR 1893.

Mr. REYNOLDS moved the election of the following gentlemen:—

President.

Octavius Corder, Norwich.

Vice-Presidents.

M. Carteighe, F.I.C., F.C.S., London. | W. Hayes, Dublin.
J. L. Ewing, Edinburgh. | R. Fitz-Hugh, Nottingham.

Treasurer.

R. H. Davies, F.I.C., F.C.S., London.

Honorary General Secretaries.

W. A. H. Naylor, F.I.C., F.C.S., London.
F. Ransom, F.C.S., Hitchin.

Honorary Local Secretary.

C. A. Bolton, Nottingham.

Other Members of the Executive Committee.

Peter Boa, Edinburgh.	E. M. Holmes, F.L.S., London.
D. B. Dott, F.R.S.E., Edinburgh.	A. H. Mason, F.C.S., F.R.M.S., London.
A. W. Gerrard, F.C.S., London.	
W. Gill, Nottingham.	R. Wright, Buxton.
J. Hodgkin, F.I.C., F.C.S., London.	J. C. C. Payne, Belfast.

Auditors.

Thomas Thompson, Edinburgh.
John Wilford, Nottingham.

The motion was agreed to unanimously.

VOTES OF THANKS.

Mr. ATKINS said that he had a most important resolution to propose—namely, that a cordial vote of thanks should be awarded to the local committee, especially to Mr. Boa, Mr. Young, and Mr. Ewing, for the very successful manner in which the arrangements connected with the Edinburgh visit had been carried out. Everything had been a great success—the lunches had been excellent, the drives had been charming, and the hotel accommodation, he believed, had been very good. He wished to recognise particularly the hospitality accorded to the ladies (hear, hear, and applause), and he felt that he was only expressing the feelings and sentiments of the meeting when he added that to the ladies of Edinburgh who had so kindly ministered to the requirements of the ladies who had come as visitors in connection with the Conference their very best thanks were due. (Applause.) Two things were required in connection with all the arrangements that had been made—first prevision, to think out and forecast what would be needed, and then provision for what prevision indicated. The arrangements had been excellent, and they had been exceptionally well carried out. (Applause.) He had been present at twenty-one of the twenty-nine meetings of the Conference, and the arrangements for their enjoyment in Edinburgh had surpassed any of them. Edinburgh had a reputation for hospitality to sustain (which was sometimes a dangerous reputation), and it had sustained it worthily on this occasion. (Applause.) To Mr. Boa, for the patient attention he had bestowed, to their dear friend Mr. Young, who regretted, as they all did, his inability to be present with them, and to Mr. Ewing, with his kind and genial presence and his unstinted hospitality, they were all greatly indebted. (Applause.)

Mr. CONROY, in seconding the resolution, said that he could heartily endorse every word that had been said by Mr. Atkins. He had never attended any Conference meetings where all the arrangements had been carried out so successfully. (Applause.)

The PRESIDENT, before putting the resolution to the meeting, said he was very sorry their dear friend Mr. Young was not present, but he had excellent substitutes in Mr. Boa and Mr. Ewing.

The resolution was then put to the meeting, and carried with great applause.

Mr. EWING, in acknowledging the vote of thanks, said that it had been a great pleasure to him to assist in making their visit a pleasant one.

Mr. BOA also replied. He said that, although he had been supposed to have done a great deal of work in connection with the arrangements, he had really not done so much as might have been expected, because he had had a great deal of assistance. There was a large and enthusiastic working committee. The conveners of the committees, Mr. McLaren, Mr. Thomson, and Mr. Aitken (whose names he mentioned that they might share in the appreciation which had been shown) had done almost as much as himself.

Mr. MARTINDALE moved, and Mr. CROSS seconded, that a vote of thanks be given to the Edinburgh University authorities for permission to inspect the Medical School. This was agreed to.

Mr. GROVES moved a vote of thanks to the President, and, amidst loud acclamation, he said that he had never sat under an abler chairman than Mr. Stanford, who had shown so intimate an acquaintance with pharmaceutical matters, and had conducted the proceedings with so much skill. This vote was seconded by Dr. INGLIS CLARK, and, with loud bravoos, was put to the meeting by Mr. Groves, and unanimously passed.

The PRESIDENT, in reply, said that he could not forget the

kindness of the members of the Conference, nor could he forget the fact that it was owing to the admirable services of the honorary secretaries that much of the success of the meeting was due. If there were no President, he could guarantee that the secretaries could go out into the streets and bring in any man from there, and in the matter of ten minutes would have coached him sufficiently to conduct the business in a proper manner. (Applause.)

Mr. MARTINDALE then moved that the thanks of the meeting be given to Mr. Naylor and Mr. Ransom for their services.

Mr. ATKINS seconded this, and it was passed with applause.

This concluded the proceedings.

CONFERENCE EXTRAS.

The arrangements made by the local committee for the entertainment of the visitors were of the most ample description. First may be mentioned what was done for the ladies. Mrs. James Buchanan was the convener of the committee in charge of this matter, and they had the drawing-room in the Waterloo Rooms available for the use of visitors during the Conference. Immediately after the President's address on Tuesday, a party of about forty had a drive through the city, with Mrs. Inglis Clark and Miss Dott as guides, returning to luncheon at the Waterloo Hotel. On Wednesday a party of thirty-six were conveyed in carriages to the Botanical Gardens by Mr. Rutherford Hill, and at the conclusion of the visit one-half of the party were invited by Mrs. Buchanan and one-half by Mrs. Brown to luncheon at the respective houses of those ladies. The weather was fine, and the visit proved a great success. On Wednesday evening, at the time the gentlemen of the Conference were attending the smoking concert, the ladies were invited to meet for a musical evening at the Waterloo Hotel, where arrangements had been made under Mrs. Buchanan's direction.

On Tuesday, at 4 o'clock, over 200 members and lady friends embarked on coaches for an excursion to Rosslyn Castle and Chapel. The party was favoured with good weather, and the drive to Rosslyn was much enjoyed, English visitors especially being charmed with the architectural beauty of the ancient chapel. An excellent tea was served in the Royal Hotel, and the party returned to Edinburgh shortly after 8 o'clock.

On Tuesday evening Mr. J. L. Ewing, Chairman of the North British Branch, entertained the officials of the Pharmaceutical Society, and Mr. J. R. Young the officials of the Conference, to dinner at the Central Hotel. The dinner was private, but we are allowed to say that Mr. Ewing presided, and in the absence of his brother host through illness, Mr. J. R. Young, junior, acted as croupier. About forty gentlemen were present, and they were very much struck with the special richness of the floral decorations. The following are the toasts which were given:—

"The Pharmaceutical Society of Great Britain," by Mr. D. Brown. Response by Mr. Cross and Mr. Bremridge.

"Past Presidents of the Pharmaceutical Conference," by Mr. Noble. Response by Mr. Martindale and Mr. Stephenson.

"The North British Branch," by Mr. Atkins. Response by Mr. Mabon.

"Distinguished Visitors," by Mr. Johnston. Response by Mr. Groves and Mr. Wells.

"Mr. J. R. Young, senior," by Mr. Reynolds. Response by Mr. Young, junior.

"The Press," by Dr. Inglis Clark. Response by Dr. Paul and Mr. MacEwan.

The Chairman and the Croupier were also toasted.

MEMBERS PRESENT.

Abraham, T. F., Liverpool
Aitken, R., Edinburgh
Alexander, J., Liverpool
Allan, W., Dumfries
Allen, A. H., Sheffield
Anderson, A. B., Dundee
Anderson, J., Edinburgh
Archer, C., Edinburgh
Arkinstall, W., London
Atkins, S. R., Salisbury
Bain, J., Liverpool

Baillie, J., Dumbarton
Bascombe, F., London
Baxter, W., Edinburgh
Bayley, Mr. and Mrs. G. H., Saltair
Beggs, Mr. and Mrs. G. D., Balke
Berry, W., Clifton
Bird, F. C. J., London
Boa, Peter, Edinburgh
Bolton, Mr. and Mrs. C. A., Nottingham
Borthwick, A. J., Selkirk

Bowen, J. W., London
Bowman, J., Leith
Bowman, Mrs., Leith
Branson, F. W., Leeds
Bremridge, R., London
Broadbent, H., Leeds
Broomhead, G. E., Aberdeen
Brown, A., Edinburgh
Brown, D. R., Edinburgh
Brown, J., Edinburgh
Brown, Miss, Dublin
Bruce, A. G., Edinburgh
Buck, A. S., Liverpool
Burford, S. F., Leicester
Butler, E. H., Leicester
Christie, R. A., Edinburgh
Clague, T. M., Newcastle-on-Tyne
Clark, A., Edinburgh
Clark, J., Aberdeen
Clark, J., York
Clark, W. Inglis, Edinburgh
Coats, J. T., Leith
Coleman, A., Cardiff
Collier, H., London
Conroy, J. T., Liverpool
Conroy, Mr. and Mrs. M., Liverpool
Cooper, F. A., Manchester
Coul, G., Edinburgh
Cross, W. G., Shrewsbury
Crowden, S. G., Edinburgh
Cruckshank, J., Aberdeen
Davies, R. H., London
Davies, W. A., Edinburgh
Dewar, F. L., Edinburgh
Dott, D. B., Edinburgh
Duff, W., Edinburgh
Duncan, W., Edinburgh
Durley, W., Edinburgh
Ewmbank, J., Bedale
Fairburn, H., Northallerton
Fairley, T., Leeds
Farnworth, W., Blackburn
Fisher, J. H., Dunfermline
Forbes, M., Bolton
Forret, J. S., Edinburgh
Fowler, G. R., Forfar
Fraser, A., Forres
Fraser, J. J., Edinburgh
Fryer, C. A., London
Furness, J. M., Sheffield
Garth, E. J., London
Garvie, A., Leith
Gerrard, A. W., London
Gibson, A., Edinburgh
Gill, Mr. and Mrs. W., Nottingham
Grierson, G. A., York
Grose, N. M., Swansea
Groves, T. B., Weymouth
Hall, H. E., London
Harvey, R. K., London
Harvie, G., Helensburgh
Hendry, R. L., Edinburgh
Henry, C. F., Edinburgh
Hill, J. R., Edinburgh
Hills, W., London
Hoare, W. R., London
Hodgkin, J., London
Hoseason, J. H., Manchester
Howie, W. L., Eccles
Hughes, J., Swansea
Humphrey, J., London
Hutton, H., Leamington
Hyne, H., London
Jack, J., Arbroath
Jaques, L. V., Mauritius
Johnson, M. K., London
Johnston, J., Aberdeen
Jones, W., Birmingham
Keith, S., Edinburgh
Kemp, H., Manchester
Kemp, Mrs., Manchester
Kinninmont, A., Glasgow
Komple, F. R., Mauritius
Laird, W. H., Edinburgh
Lambert, R. M., London
Layman, C. N., London

Layman, F. A., London
Leath, A., Dunfermline
Lunan, G., Edinburgh
Maben, T., Hawick
Macadam, I., Edinburgh
Macadam N., Edinburgh
Macdonald, D. F., Edinburgh
Mackay, G. B. D., Edinburgh
Mackay, G. D., Edinburgh
Mackenzie, J., Edinburgh
Mair, W., Dundee
Marie, L. R., Mauritius
Martin, N. H., Newcastle-on-Tyne
Martindale, W., London
Martindale, Mrs., London
Mason, A. H., London
McEwan, Mr. and Mrs. London
McGibbon, G. L., Edinburgh
McGregor, D., Calcutta
McKay, J., Aberdeen
McLaren, D., Edinburgh
McMurray, J., Helensburgh
Milne, A., Edinburgh
Moss, J., London
Naylor, W. A. H., London
Naysmith, A., Arbroath
Nesbit, J., Portobello
Park, W., Broughty Ferry
Parry, E. J., London
Paterson, J., Aberdeen
Payne, Mr. and Mrs. J. C. C., Belfast
Pettinger, Mr. and Mrs., Hampstead
Puckey, W., London
Purves, S., Edinburgh
Rait, R. C., Partick
Ransom, F., Hitchin
Reynolds, R., Leeds
Richardson, W., Edinburgh
Riddle, T. E., Hexham
Robertson, J. M., Arbroath
Robertson, W. P., Clapham
Russell, J., Dundee
Russell, J. A., Lord Provost, Edinburgh
Sangster, A., London
Sharp, W., Newcastle-on-Tyne
Shepherd, J. W., Settle
Shepherd, T., Chester
Siebold, L., Manchester
Simpson, A. H., Forfar
Simpson, H. D., Louth
Smith, J., Liverpool
Smith, J. T., Radcliffe
Smith, W., Edinburgh
Squire, F. R., San Remo
Stanford, E. C. C., Dalmeir
Stephenson, J. B., Edinburgh
Stephenson, S., Liverpool
Stockman, R., Edinburgh
Storrar, D., Kirkcaldy
Strachan, A., Aberdeen
Strachan, A. L., Aberdeen
Strother, C. J., London
Sutherland, J. W., Dumfries
Swan, W., Edinburgh
Tanner, A. E., London
Taylor, G. S., London
Thompson, J. A., Lochie
Thompson, T., Edinburgh
Thomson, J. W., Edinburgh
Thomson, Mr. and Mrs. J. H., Lochie
Tocher, J., Dunfermline
Tyrer, T., London
Walker, J. H., Norwich
Want, W. P., London
Ward, J. S., Liverpool
Ward, W., Sheffield
Weld, C. C., London
Wellings, W., Liverpool
Wells, Mr. and Mrs. W. F., Dublin
White, E., Putney
Williams, W. G., Conway
Williams, W. Lloyd, Dartford
Wright, T. R., London
Young, J. R., jun., Edinburgh
Young, R. F., New Barnet

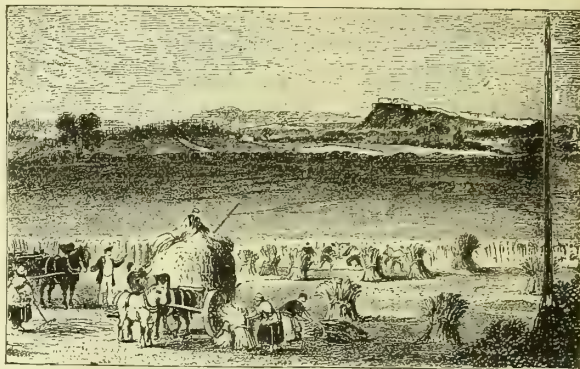
THE EXCURSION.

THE excursion was by no means the least successful feature of this very successful Conference. The sun shone brightly early in the morning, and throughout the day the party—numbering 260 all told—enjoyed magnificent weather. A pleasant surprise was prepared in advance of the excursionists by the distribution among them of an elegant booklet containing a full description, written by Miss Dott, of the places of interest to be visited, and prettily illustrated.

No untoward incident marred the pleasure of the glorious day. At Finlarig three pipers marched ahead of the column of now perfectly enthusiastic excursionists to Finlarig Castle, where, on a field surrounded by pretty greenery, the party were photographed. . . But we are anticipating, and therefore hasten to retrace our steps, and commence our account of the day's doings in orderly sequence.

Shortly before 9 o'clock, wires our correspondent, the members and their lady friends assembled on the platform of the Princes Street Station of the Caledonian Railway, where they embarked upon a well-appointed train of first-class carriages which was to take them through some of the wildest and most romantic scenery of Scotland. The sight-seeing commenced at once, for, on getting clear of the railway-works, a fine view was obtained of the extreme West-end of Edinburgh. On the right was Donaldson's Hospital, a scholastic edifice, once envied by the Queen, who thought of making it a second Holyrood; on the left, Craiglockhart Hill, the seat of a hydropathic establishment; and in the distance the bold outline of the Pentlands. In turn, Corstorphine and the Convalescent House there; Ratho, where a huge stone viaduct carries the line across some fields and the river Almond, were passed. A magnificent bird's-eye view was obtained of the Forth Bridge—that modern world's wonder which unites

where King Edward is supposed to have resided in 1301, and where the train stopped was close to the scene of the Battle of Falkirk—one of the few spots in the district



FIELD OF BANNOCKBURN.

which the Sassenach can look on with pride, as here the English fought and conquered in 1293. But on resuming the journey, and passing the Forth and Clyde Canal and Larbert, another spot was pointed out which is dear to the heart of the Scot—the Field of Bannockburn, "Where," said an enthusiast, "though handicapped by three to one, our forefathers finally showed the sons of the South that Scotland was a nation that could never be conquered." Looking to the right the Abbey Craig was seen, on the summit of which a baronial tower has been erected as a monument to William Wallace. It was here that he mustered his troops when, in 1297, he went forth to battle with the English, from which he returned with the spoils of a glorious victory. As



WALLACE MONUMENT.

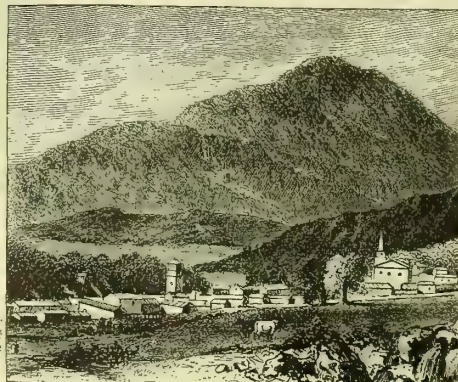
patriotism would have it, we now heard above the "clang-clank" of the carriages the strains of "Scots wha hae wi' Wallace bled," with which musical



LINLITHGOW PALACE.

the kingdom of Scotland with the kingdom of Fife. Emerging from Winchburgh Tunnel, on the right a glimpse was obtained of Niddrie Castle, an old baronial tower where, after her escape from Loch Leven Castle, Queen Mary Stuart rested and sent messengers to her kinswoman on the English throne for that succour she so much needed.

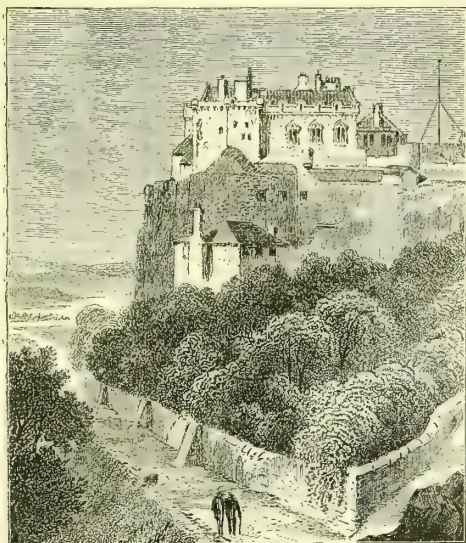
Linlithgow Palace and Loch soon came in sight, and, in passing though the station, the excursionists had a grand view of the palace and grounds. It was in this palace that Queen Mary Stuart was born. Until the train stopped at the Field of Falkirk for ticket-checking there was little else of note to be seen except the ruins of Emmanuel Priory,



CALLANDER.

honours the train steamed into Stirling Station, where a pharmaceutical contingent from the district joined the party.

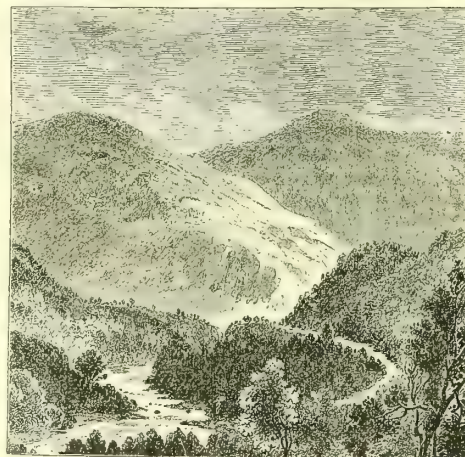
Once more resuming, Callander, the gateway to the Highlands, was the point aimed at; but before reaching it, and just after emerging from the station, Stirling Castle was seen;



STIRLING CASTLE.

Later, Bridge of Allan—the Bath of Scotland—a favourite resort for invalids; and, still later, Dunblane (the famed of Tannahill), where the train left the Scottish Central and

Ledi and Ben Venue (2,685 feet) rear their lofty heads, the excursionists saw on the east the high road to Killin, and there also Beinn Bhreac—a stately mountain. This is the MacGregor country, which a handful of MacGregors could, once upon a time, defend against an army. Strathyre, a pretty little hamlet, was shortly afterwards passed, and we



PASS OF LENY.

got a peep of the braes of Balquhider. In the kirkyard here lie the bones of the "bold Rob Roy," and it is difficult to imagine a more peaceful resting-place for one whose life was so turbulent and so full of daring, though lawless, adventure. The scenery was now of the grandest description. Rich



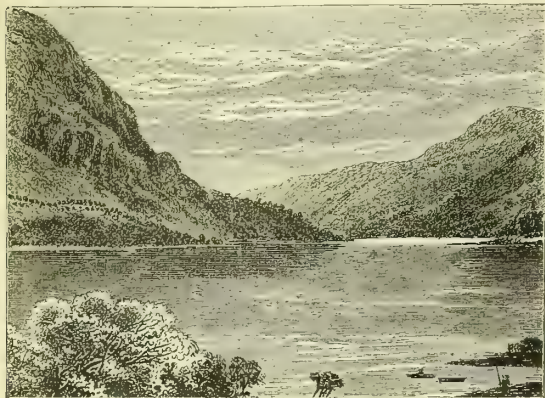
FINLRAIG CASTLE.

entered upon the Callander and Oban line. From the carriages a glimpse was obtained of Dunblane Cathedral, now restored to somewhat of its pristine grandeur. At Callander the excursionists were in the very heart of "Scotland's hills." Creeping up through the Pass of Leny by the side of the river Teith, on the left passing the base of Ben Ledi and catching a glimpse of the summit, 2,875 feet up, and, on the right, the village of Kilmahog, with its pretty kirkyard, Loch Lubnaig, or the Winding Lake, was reached. Creeping along its western shore, where Ben

green pastures threw into bold relief the bare and rugged mountains, toned down here and there with the warmth of purple heather.

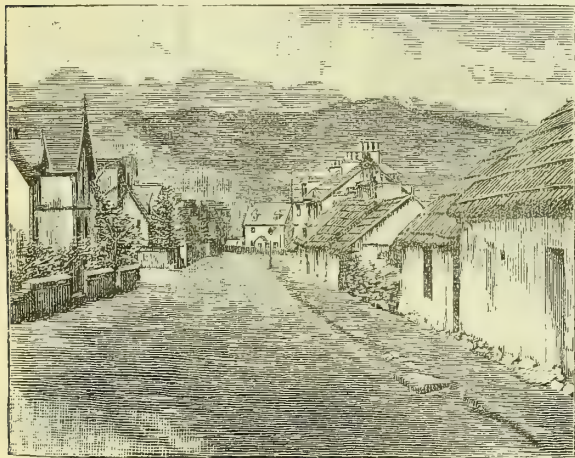
Soon Lochearnhead Station was passed, and about a mile farther on we caught our first glimpse of the loch nestling in the valley below, its banks here and there dotted with whitewashed cottages surrounded by trees and shrubs. The wild and rocky Glenogle was here entered upon. On the one side the hotel lying in perfect peace, some 200 feet below the railway track. The ascent from this point to

Glenogle siding is very steep. On our left we passed a pretty little loch with a most unpronounceable Gallic name, and shortly after a halt was called, the engine was sent to the rear, and slowly the train slid down the slope till Killin Station was reached about noon. Now on foot to Finlarig Castle, where Mr. John B. Strachan, of the Abbotsford, Edinburgh, had his marquee erected and tables set with tempting viands. On the road, across the quaint bridge, up the noble avenue, and near the ivy-clad pile one could hear expressions of unalloyed pleasure at the scene around. The description of Dr. McCulloch when he writes, "Killin is the



LOCH LUBNAIG.

most extraordinary collection of extraordinary scenery in Scotland—unlike everything else in the country, and, perhaps, on earth, and a perfect picture-gallery in itself, since you cannot move three yards without meeting a new landscape. Fir-trees, rocks, torrents, mills, bridges, houses—these produce the great bulk of the middle landscape under endless combinations; while the distances more constantly are found in the surrounding hills, in their varied woods, in the bright expanse of the lake, and the minute ornaments of the distant valley, in the rocks and bold summit of Craighaileach,

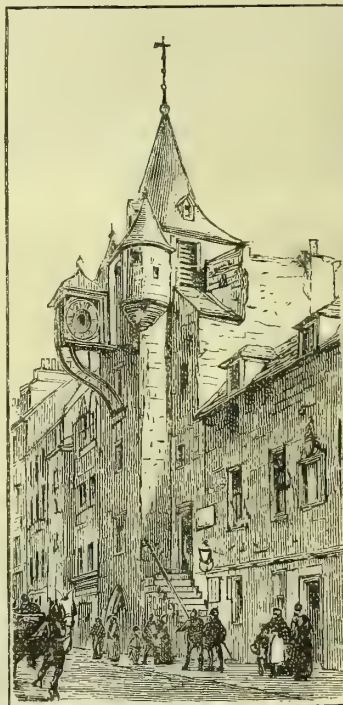


KILLIN.

and in the lofty vision of Ben Lawers, which towers like a huge giant to the clouds, the monarch of the scene." These words well express the thoughts and feelings of many who on their way from the station to Finlarig kept their eyes open.

After justice had been done to the excellent luncheon provided by Mr. Strachan, the caterer, Mr. Ewing proposed the customary loyal toasts, followed by that of "The Marquis and Marchioness of Breadalbane." All these were responded to with much enthusiasm, the pipers playing the tune of "The Campbells are Coming" to the latter. Mr. Ewing next proposed "Prosperity to the Conference," coupled with the name of Mr. Stanford. He observed, amidst

cheers, that it was Mr. Stanford who had made a long career of usefulness for the Conference possible. He had been one of the most excellent presidents it had possessed, and his conduct in the chair had been marked by courtesy and ability. Mr. Stanford, in replying, complimented the Edinburgh Committee, who had given the members such a splendid time. If anyone had been wanting to ask "Is the Conference going to live?" this meeting had decided the question for ever in the affirmative. Mr. Atkins then toasted "The Ladies of the Local Committee," thanking Mesdames Buchanan, George Mackay, and Brown, and Miss Dott, the compiler of the "Excursion Guide," for their part in the success of the meeting, and in associating the toast with the name of Mr. Allen, of Sheffield, who in a few humorous sentences said it was the Scotchmen who had introduced ladies to the Conference at Dundee. Mr. Martindale gave "The Local Committee," coupled with the names of Messrs. Boa and McLaren, who responded. Mr. Hill, was also thanked for his indefatigable services. Lastly, Mr. Reynolds said that a few



THE TOLBOOTH.

"Upon the north side of the street (Canongate) stands the Tolbooth, containing at once the Court Room and Jail of the Canongate—a well-built edifice of stone, of the time of King James VI."—Robert Chambers, 1825.

months ago the Conference was like a sick man, but now it was out of danger. The physician who had had charge of its case was Mr. Ewing, and he had given the Conference promise of another twenty years' vigour.

After luncheon it was a case of each one for himself until tea-time. Some sailed on Loch Tay; some scaled the heights and looked down upon their less-aspiring friends; some did the village—in fact, there were many things done. There were to be seen the pine-covered islet which is the burial place of the MacNabs; Achmore House, one of the seats of the Marquis of Breadalbane, with its famous vine; Finlarig Castle itself, with its strange stone carvings representing events in past history. The story of these ivy-clad walls and rooms, where revelry and riot in days of yore held sway, was told by Piper-Major Duncan Campbell. The Campbell "used to sit on that Hill of Judgment" and weigh out even, or, perchance, uneven, handed justice. There, under that noble holly-tree, now some 600 years old, he gave forth the verdict, "They must die!" and tens and fifteens at his words

were decapitated—the sort of thing done in Dahomey now. After tea there was a quick walk through the woody glade, by the banks of the Lochy, to the station, whence the train was timed to leave at 5.20, reaching Edinburgh at 8.15 P.M.

Immediately after the Conference proceedings terminated on Wednesday, a similar party to that which started for Rosslyn on the previous day again took to the carriages for a visit to Dalmeny and the Forth Bridge by way of the Queensferry Road. The weather was pleasant at the start, being a trifle cooler than the previous day, and those who undertook the trip were rewarded by a magnificent view of the vast structure which spans the Firth of Forth not far from Dalmeny, the seat of Earl Rosebery, through whose beautiful grounds the carriages passed. The party were entertained to tea by Mr. and Mrs. G. Duncan Mackay, at Inveralmond House. Unfortunately the enjoyment of the latter part of the trip was slightly damped by a fall of rain.

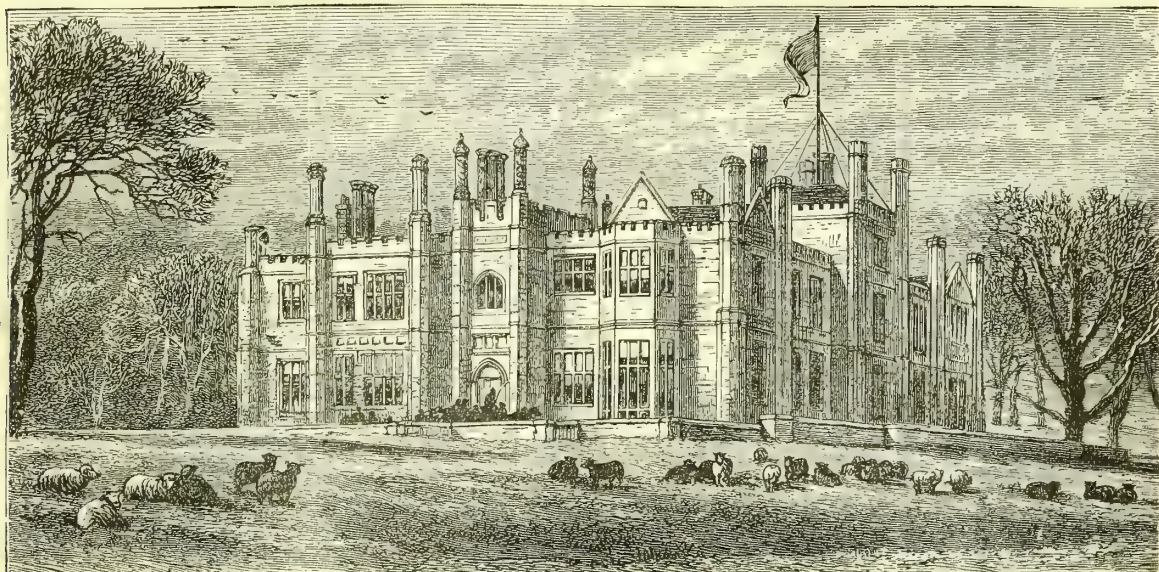
The “smoker” held in connection with the Conference is

Trade Notes.

COMPETITORS for the prizes offered in our Summer issue by Messrs. Fletcher, Fletcher & Stevenson for formulæ of medicines made from their concentrated liquors are reminded that the samples are to be sent in to us before August 31.

THE sale of the “culture of mouse-bacillus,” by means of which Professor Loeffler, of Greifswald, lately destroyed millions of mice in Greece, thus saving the cereal crops in many parts of the country, has been entrusted by him to a Berlin wholesale drug firm. The professor will continue to manufacture the material at his laboratory in Greifswald.

“I HAVE spent many pounds through the advertisements which appear in *THE CHEMIST AND DRUGGIST*, which in return has also put many pounds in my pocket.” So says a Demarara correspondent, in renewing his subscription this week. “This order is made up from *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1892, and the figures referred to will be



DALMENY: THE MIDLOTHIAN RESIDENCE OF THE EARL OF ROSEBERY.

always a success, and the enjoyment of pipe and glass by the jovial pharmacists at the Waterloo Hotel on Wednesday evening was of the topmost order, and running close for precedence with previous gatherings. A good musical programme was provided, and refreshments of the “special Scotch” order were on more than one occasion inquired for. Mr. Stanford presided, and showed that he excelled in the entertainment chair just as well as in the one of more serious character which he had vacated with so much honour in the afternoon. The proceedings were very jovial, and were kept up till a late hour.

NEW COMPANY

WALLIS CHLORINE SYNDICATE.—Capital, 75,000*l.*, in 12 shares. Objects: To acquire certain patents, and to manufacture chlorine, nitric, and sulphuric acids, bleaching-powder, &c. The first subscribers (who take one share each) are:—H. W. Appleby, 23 Quedsted Buildings, Brett Road, Hackney; T. H. Robinson, 16 Ockenden Road, N.; A. E. Way, 3 Crosby Square, E.C.; R. Morford, Ashcroft, Staines; W. H. Robinson, 33 Baxter Road, N.; A. E. Hill, 41 Baxter Road, N.; and W. Parkins, 46 Hempstall Road, West Hampstead. There shall not be more than seven nor less than three directors, and the first shall be appointed by the subscribers above named. Qualification, 250*l.*; remuneration to be determined in general meeting.

found therein.” Messrs. E. Breffit & Co. (Limited) show us a lengthy order from New Zealand, with order on a London bank for payment, to which the words we have quoted are appended. References of this kind to advertisements in the *Journal* and *DIARY* are much appreciated, and do good all round.

SPRATTS PATENT (LIMITED) have lately introduced a “Peptonated Puppy-meal,” which they recommend as a food for both young and old dogs whose digestive powers are weak or impaired. This is sold in 1*s.* tins. They also supply a cooked puppy-meal in bags, intended to feed very young puppies with, to gradually introduce them to the biscuit diet.

MESSRS. R. BARKER & SON, of Manchester, send us a new label they are now using on their “Atkinson’s Royal Infants’ Preservative,” the label bearing the announcement that “this medicine, containing along with its many other valuable ingredients a minute portion of morphine, is, in compliance with the Pharmacy Act, hereby labelled ‘Poison.’”

BARCLAY & SONS (LIMITED) wish to put chemists, particularly in London, on their guard against a man who is calling on the trade and representing that he is a traveller in their employ. His method is to get an order-form or a bill-head from the chemist, on some pretext, which he then makes use of with a wholesale house. He has already obtained goods by this means from Barclay’s and other firms.

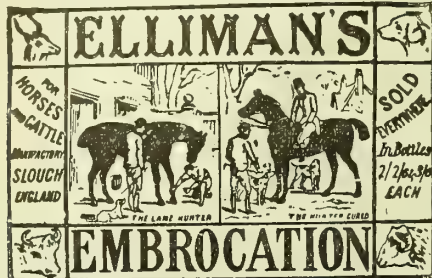
BE PREPARED!

CHOLERA is rampant in Eastern Europe, and has reached Paris. Here at home the mind of the public is already alarmed. "**SANITAS**" Disinfecting Fluid is the only Disinfectant that can be taken internally, and the "**SANITAS**" DISINFECTANTS and **APPLIANCES** have the Largest Sale in the World.

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SHOW CARDS, 24×17 or 17×12,
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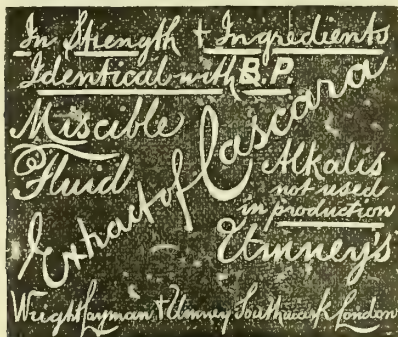


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

YOU CAN'T READ THIS WITHOUT YOUR SPECTACLES!

Day's Oil of the Night
Is an Embrocative Balm for the People, and a source of profit to the Retailer
1s. 1½d. and 2s. 9d. **NO CUTTING.**

DAY & SONS, CREWE.



SILICATED CARBON FILTERS

PATENT SELF-AERATING
MOVEABLE BLOCKS
WORKS, BATTERSEA LONDON. S.W.

ELLIS'S TABLE WATERS

Sole Address: R. ELLIS & SON, RUTHIN, NORTH WALES.
London Agents: W. BEST & SONS, Henrietta Street, Cavendish Square.

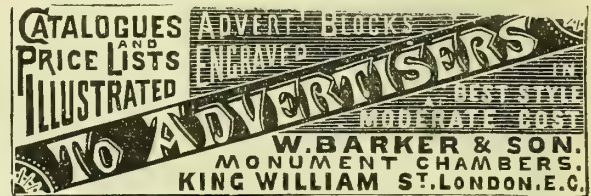
MEDICAL ELECTRICITY.



EVERY DESCRIPTION OF
Galvanic, Faradaic, and Electro-Magnetic
Machines and Electrodes, Galvano-Cautery and
Lighting Instruments.

Lists Free. Descriptive Catalogue, 100 Illustrations,
32 pages, 4 stamps.

GENT & CO., LEICESTER.



Fletcher's Concentrated Liquors

TEN-GUINEA

Prize Competition.

See page 5, August 6th.

Editorial Comments.

THE CONFERENCE PAPERS.

THE meeting of the British Pharmaceutical Conference in Edinburgh this week is one which will long be remembered in the annals of pharmacy. A cloud hangs over the body, for although the negotiations with the Pharmaceutical Council in regard to provincial meetings of the Pharmaceutical Society being held simultaneously with the meetings of the Conference have led to no result, it is an open secret that this is not an end to the matter. It will come forward again in another form, and if the younger body is not to be absorbed by the older one, the supporters of the Conference must come forward to its support promptly. There was evidence of that this week in the magnificent attendance, in the large accession to membership, and in the substantial amount of work transacted. Twenty-seven papers appeared on the programme, and of these seven only were taken the first day, leaving a score of them with much other business to be dealt with on Wednesday. The papers were quite up to the average standard, and elicited good discussions, which

Mr. Stanford directed and expedited with admirable tact. There is a week's good reading in the papers and discussions as we report them, and in accordance with custom we here summarise the more salient features of the proceedings in this department.

Digestion Mr. Grierson made his *débüt* at the Conference with a useful paper on the behaviour of of Starches.

starches towards amylolytic ferments—malt and pancreatic extracts. He showed in the first place that discrimination has to be exercised in the selection of a starch for testing these extracts. Root-starches (*e.g.*, potato and arrowroot) digest much more quickly, and are better suited for the purpose, than seed-starches (*e.g.*, maize and wheat). Several other minor, but useful, points were noted, and Mr. Grierson also demonstrated that amylolytic digestion is completely stopped by 0.3 per cent. of HCl, therefore that such digestion cannot occur in the stomach. An excess of alkali has the same effect. Little was added to these facts in the course of discussion, except that Mr. Groves pointed out that although potato starch and arrowroot may behave similarly with the tests described, they differ greatly in some respects. Mr. Gerrard also made a useful contribution to the discussion in which he drew a parallel between the digestion of proteids and carbohydrates, the former digesting more rapidly in dilute menstrua, and the latter having an opposite character.

Antidote to Strychnine. Mr. Mackenzie's contribution in regard to the use of the electro-magnetic current for the treatment of animals suffering from strychnine-poisoning did not appear to be taken quite seriously, the general belief being that apomorphine and chloral are the things to rely upon.

Lithium Salts. Some time ago Mr. W. H. Symons, in a note communicated to this journal, showed that commercial salts of lithium are not so satisfactory as they should be; they contain sodium salt, which Mr. Symons separated as chloride. The matter is still mentioned in the Conference Blue List, and Mr. W. Mair, of Dundee, took it up. He came to the conclusion that lithium carbonate and citrate of trade are "reasonably pure." He converted the salts into sulphate, and separated any sodium present by the U.S.P. process. This paper, as a "maiden" contribution, was received favourably, and Mr. Tyrer pointed out that purity is altogether a matter of price.

Valerianate of Zinc. A paper of a similar nature was next taken—viz., that by Mr. W. A. H. Naylor on "Zinci Valerianas, B.P." From careful analyses of commercial specimens the author showed that the valerianate of zinc used in medicine is not of uniform composition, and that it does not meet the requirements of the official tests; also that the valerianic acid used in the manufacture of this salt is prepared from an imperfectly purified fusel oil. The latter point, as one speaker pointed out, was the *crux* of the whole matter, the discussion mainly travelling round the vileness of German fusel oil and the superiority of the British. It is scarcely possible to expect, from what was said, that we may get a fusel oil which is amyl alcohol; but, with proper precautions, there appears to be no reason why manufacturers should not, by careful selection of the basic substance, ensure better quality of a valuable though almost effete medicine.

Carbo Animal. Purif. Mr. John Hodgkin had a decidedly good find in purified animal charcoal. The British Pharmacopœia gives a process for making this, the object being to remove from the charcoal from 70 to 75 per cent. of ash, and leave "about 2 per cent." in the purified article. But, as a matter of fact, the purification process takes out about 2 per cent., leaving the larger percentage in. Mr. Hodgkin reviewed other pharmacopœial

processes, showing that the American one is decidedly the best, because it requires the use of most hydrochloric acid; but by no process whatever can a charcoal with 2 per cent. of ash only be obtained at a price which will permit its use in medicine. Mr. Hodgkin recommends the bone-black to be treated twice with hydrochloric acid (a suggestion taken from the recently published Italian Pharmacopœia), whereby a charcoal containing from 13 to 15 per cent. of ash is obtained. His paper contained very full particulars of the quality of the commercial and various pharmacopœial charcoals, and he also submitted proof that the charcoal, when properly purified, does decolorise. This turned out to be the important paper of the first day, and it led to a good discussion, in the course of which one chemist after another corroborated from experience all that Mr. Hodgkin had said about the inadequacy of the Pharmacopœia process. Much was said also regarding the decolorising property of charcoal containing a minimum amount of calcium phosphate, but the point was left in doubt.

Strychnine Salts. At an evening meeting of the North British Branch last session, the solubility of strychnine acid sulphate in water was discussed by Mr.

George Coull, who showed that 1 in 44.5 at 15.5° C. is the figure. Mr. Dott, taking up from this point the solubility of strychnine salts generally, informed the Conference that the hydrochloride is the most soluble salt—viz., 1 in 35.5—the tartrate being 1 in 52, and the citrate 1 in 37. Mr. Martindale initiated the discussion on this paper. He said that he still gave preference to the acid sulphate of the alkaloid because it dissolves in water by a simple shake, upon which Mr. Coull somewhat ironically pointed out that Mr. Martindale missed the point of the whole matter—viz., that the acid sulphate dissociates into the neutral sulphate and sulphuric acid on being treated with water. Mr. Dott corroborated this, and the hydrochloride was left in possession of the field.

Eucalyptol. The day's proceedings concluded with a paper by Mr. R. H. Davies and Mr. Pearmain on the properties of eucalyptol. They have obtained it in a bright state of purity, and have definitely determined its specific gravity (.927) and optical properties, and add some other useful information regarding eucalyptus oil.

Tuesday ended with a protest from the manager of the local excursions against taking more scientific business on the stroke of four. Roslin Chapel was to be visited, and there was barely time to do the visit comfortably, so Mr. Gerrard, who had taken the platform, retired.

Wednesday began vigorously, but there was by far too much work in hand. Some authors appeared to have no conception of the fact that five hours only were available for the business of the day, and three of them succeeded in taking up a third of the time.

Red Precipitate Ointment. The ointment of red oxide of mercury (Mr. Frederick Davis calls it "ung. hyd. nit. oxyd. B.P.") is apt to be lumpy, because it is made with hard and soft paraffin—the hard, on

cooling, congealing more rapidly than the soft paraffin. That is the condition of most of the samples obtained in trade; and Mr. Davis suggested that the pot containing the melted paraffins should be placed in a pan of hot water, and stirred intermittently while it cools. So made, the ointment is not lumpy. As Mr. Gerrard pointed out, there is nothing new in all this; it had been discussed in THE CHEMIST AND DRUGGIST a few years ago. Mr. T. F. Abraham deprecated the use of hard and soft paraffins for ointments, on the ground that the soft paraffin exudes and

leaves a hard mass on the skin; but this opinion was not endorsed.

Podophyl- resin prepared from the Indian podophyllum-root, in which he showed that the resin is deficient in podophyllo-toxin, and contains an excessive percentage of podophyllic acid, these and other characteristics inducing him to deprecate the introduction of this podophyllum resin into the Pharmacopœia. Mr. John Moss agreed with that opinion.

Estimation of Grape-sugar. Mr. A. W. Gerrard described, and gave a demonstration of a new method of estimating grape-sugar in urine and the like. It is an adaptation of Fehling's test, the object being to overcome its disadvantages. Mr. Gerrard finds that by doubling the quantity of copper sulphate in that solution, and adding a certain amount of potassium cyanide immediately before operating, the copper is not acted upon—*i.e.*, is not precipitated until the amount equivalent to the percentage of sugar in the solution is passed. The commencement of precipitation is, in short, the end point of the reaction. The process is ingenious, and the meeting appeared to think so, although some doubts were expressed as to its accuracy.

Potassium Bromide. Commercial potassium bromide seems to be of poorish quality. Mr. D. B. Dott reported that he had examined three samples, and of these one contained 1 per cent. and another about 4 per cent. of potassium chloride. The remarkable point is that these samples passed the Pharmacopœia test for chlorides. In consequence Mr. Dott suggested that the salt should be tested by passing chlorine over a known weight during fusion, and determining the loss when all the bromine has been driven off. Mr. Stanford, commenting upon this paper, said that it was impossible to get potassium bromide absolutely free from chloride.

Jambul. Mr. Thomas Stephenson, of Bombay, communicated a note, in which he showed the effect of jambul in retarding the conversion of starch into sugar, he apparently being of opinion that this is the reason why the drug is of benefit in the treatment of diabetes. This assumption was questioned by several speakers, but there was a fair agreement that jambul is beneficial in the treatment of the disease, especially when used as Mr. Stephenson indicated—*viz.*, fresh seeds freed as far as possible from pericarp.

Caffeine. Mr. A. H. Allen made a statement regarding experiments which he has made on the behaviour of the caffeine of tea towards solvents. Generally, his results show that, owing to the presence of tannin in tea, it is exceedingly difficult, after treatment of the tea with alkali, to remove all the caffeine with ether, benzine, chloroform, or alcohol. As a method of assay, he suggests that a weighed portion of the tea be boiled with water for six hours, the decoction then treated with lead acetate (to precipitate colouring-matter), evaporated, and the alkaloid dissolved out with chloroform. Dr. Paul disagreed with Mr. Allen on many points, and freely criticised the communication.

Chloroform. Quite a lively controversy next depended on a paper by Mr. David Brown, on "Tests for the Purity of Chloroform." Mr. Brown considered the colour-test with sulphuric acid and the smell-test of the B.P. to be inadequately described, and suggested improvements, also recommending that Professor Ramsay's baryta-test for decomposition products should be adopted in the Pharmacopœia. The discussion was a repetition of much that has been said during the past year regarding chloroform fatalities, and there was general sympathy with Dr. Clark's statement that doctors and chloroformists have lost their heads about chloroform, for the impurities, if they exist, are compara-

tively innocuous bodies. In the course of the discussion the statement was elicited that the only sample of chloroform which Mr. Brown found to be pure was one made from acetone.

Test for HCN. Mr. H. Bowden, of Patricroft, a "Corner for Students" prizeman, gave the Conference a taste of his analytical ability in a note on "Vortmann's Test for Hydrocyanic Acid," which was suggested by the blue list. The test consists in adding a few drops of potassium nitrite solution to the solution containing the acid, then three drops of ferric chloride solution. The brown precipitate which forms is dissolved by sulphuric acid, the mixture boiled, cooled, ammonia added to it to precipitate the iron, from which it is filtered, and to the filtrate ammonium sulphide is added in very small quantity. In the presence of hydrocyanic acid a pink-purple colour is now produced, which changes from blue and green back to pink-purple. Mr. Bowden determined that as small a quantity as 0.0001 gramme of HCN can be detected in this way.

Aloes. Mr. E. M. Holmes communicated some very interesting particulars regarding the manufacture of Curaçao aloes, and described the appearance which the drug presents when prepared under certain conditions.

Chemical Manuf- turers. Mr. George Coull's notes on "Quinine Phosphate, Barium Hypophosphite, and Phosphoric Acid" were very useful contributions to the large mass of information communicated at the meeting regarding the quality of commercial chemical products. In regard to quinine phosphate, he showed that the English article differs in composition from the German, the latter containing more quinine. Barium hypophosphite he considered to be almost anhydrous, and in syrupy phosphoric acid he found a trace of silica, which is separated on dilution, and is found to be troublesome when making the solution of ferrous phosphate. The discussion upon these notes was long, and the members apparently resented the manner in which the technical chemists took up their time with commercial questions. It is not impossible that the Conference will have to take more decided action in regard to the purity of medicinal chemicals, with special reference to the disposition of retail buyers to purchase cheap and professedly B.P. articles. One could not help feeling, in the course of the discussion, that if every dispensing chemist made daily use of Proctor's "Manual of Pharmaceutical Testing" such discussions as this one would seldom be heard.

Melting-points. Mr. Proctor's colleague-partner, Mr. Clague, then had the ear of the meeting for two very useful papers on "The Melting-point of Cacao-butter" and "The Determination of Melting-points by Capillary Tubes." In the former subject the author showed once more that the commercial article by no means conforms strictly to the Pharmacopœia requirements, and this is in part due to the degree of heating to which the butter is subjected. His observations in regard to the second subject were of great interest, and clearly demonstrated the impropriety of using capillary tubes of indefinite standard for taking melting-points.

Tincture of Cinchona. Messrs. E. H. Farr and Robert Wright presented a paper in continuation of the work on tincture menstrua, which they first reported upon separately at Leeds two years ago, and have since carried on conjointly. The present paper dealt with tincture of cinchona, and after glancing at the literature of cinchona galenicals in pre-1885 B.P. days, which has not much bearing upon red-bark preparations, the authors showed that aqueous preparations of the bark do not and cannot represent the full alkaloidal value of bark. Their present work comprises,

first, the selection of an assay process, which is to dilute a measured quantity of the tincture with water, adding an excess of soda, washing out the alkaloids with chloroform, converting the alkaloids into salts with acidulated water, again adding soda, extracting with chloroform, drying and weighing. Second, determining what is the most suitable menstruum. This was found to be 70 per cent. alcohol, as a tincture made with this contained the maxima of extractive (6.14 per cent.) and alkaloids (1 per cent.). Thirdly, proving that the most suitable process for preparing the tincture is macero-percolation, maceration alone (which some consider to be better than the official process) being very far behind.

Analysis of Commercial Myrabalans Mr. A. Campbell Stark gave a very painstaking and elaborate paper touching upon the proximate analysis of myrabalans. He gave the result of his experiments with various solvents and reagents, tabulating them as he went along. It is worthy of note that he estimates the percentage of tannin at 20.6 per cent., being much lower than that given by Allen, which was from 20 to 40 per cent.

Filter for Mayer's Estimations Mr. Bird, as will be seen from the diagram given on another page, has devised an ingenious apparatus by the aid of which he can easily and quickly ascertain, without disturbing his alkaloidal solution, when precipitation is at an end.

Estimation of Phenol. Mr. Carswell contributed a paper full of equations and diagrams, but time did not allow of its being submitted in a form which rendered it instructive. Perhaps had the author been fortunate in coming on while his audience was fresh, he might have received attention commensurate with the time and trouble the paper must have cost him.

Oil of Lemon and Essence of Lemon. Two interesting, and to a certain extent practical, papers dealing with essence of lemon from the spot where it is produced, by Mr. Arthur A. Barrett, had to be taken as read. He referred to the distrust manifested by Englishmen in respect to the concentrated oil, and mentioned that he had met with certain oils containing as much as 15 per cent. of turpentine which were superior to pure oils. His statement that the worst qualities of essence of lemon all go to London, Manchester, and Glasgow, is worth noting, but needs confirmation.

Lycopersicon Esculentum. Mr. Fred. Davis wound up the papers with a note upon a volatile oil which he has found in the tomato, but this was also one of the papers which was crowded out.

Place of Meeting. Among the concluding business of the Conference was the discussion of the motion of which Mr. J. C. C. Payne, of Belfast, had given notice last year, to the effect that in future the Conference should not meet in the same town or at the same time as the British Association. The advantages connected with the separation of the rival attractions had been so keenly experienced by the visitors at Edinburgh that Mr. Payne's motion had an exceptionally favourable breeze to carry it through. It was shown that there was nothing in the constitution of the Conference linking it to its more imposing relative, and having added a few words which left the Conference free to do as it pleased, the meeting adopted the resolution unanimously, and immediately after accepted a cordial invitation to Nottingham next year. Mr. Octavius Corder, of Norwich, was selected as the next President, and the business-part of the proceedings ended with several votes of thanks, which have never been better deserved.

The generous hospitality of the Edinburgh pharmacists, and the charms of the excursion into the Highlands, which wound up the meeting, cannot be adequately dealt with at

the fag-end of this long article, but several scores of Southern trippers will never forget them.

KEEPING STEP.

THE eminent men who founded the British Pharmaceutical Conference at Newcastle in 1863 may be very fairly asked to let that achievement rest for a while at any rate. We should think everyone present on that memorable occasion has by this time contributed his pebble to the heap which is to mark through history that notable event. We are quite willing to dignify that heap with the title of an Ebenezer, which is apparently the latest method of describing it, if we can thereby purchase a little respite from the almost too persistent iteration of the importance of the occurrence. We apologise to Mr. Stanford for making these observations on the occasion of his presidency, for he can hardly be said to have egotistically referred to the inaugural meeting. He has been so long separated from direct association with pharmacy proper that he may well claim to regard it and its interests from an independent standpoint.

But for that very reason, perhaps, he is inclined to gaze on it a little too admiringly. He sees in it an Association which has grown more rapidly than its best friends could have anticipated—a view somewhat ironically emphasised by the report of the Executive Committee which had immediately preceded the delivery of his address. The twenty volumes of its "Year-books" are evidence of its success in encouraging pharmaceutical research, and its five meetings in Scotland seem to be suggested as the proofs of its success in "the promotion of friendly intercourse among pharmacists." The testimony strikes us as a little thin, but we have no desire to challenge it. The Conference has been a queerly managed organisation, and the wonder is that its nurses have not suffocated it before this. If there is any real desire for its health and longevity, its well-wishers should substitute criticism for laudation for once in a way.

Among the most valuable of the assets of the Pharmaceutical Conference may be reckoned the now long series of Presidents' addresses on record. These offer an abundant variety of samples to choose from. But the unhappy heir of the ages who finds himself planted for a twentieth or a thirtieth contribution of the kind may well survey the long series which confronts him with a feeling the reverse of thankful. The topics, the styles, the exordiums, and the perorations must have all been pretty well used up by this time, so that with a knowledge of the strict, if unwritten, limitations which custom prescribes for these exercises we watch with an almost painful interest the supply of the demand. Just as in the acrobatic business the new as pirant for popular favour must attempt some new and more daring feat than that which any predecessor has accomplished, so the new President must catch our jaded fancies with some new ideas, some novelty in the way of compliments, some fresh form in which to clothe the instruction which it becomes his duty to convey. A great part of the interest in the performance centres in the anticipation of the ingenuity with which this task will be fulfilled.

Mr. Stanford hit on a very happy thought. He set himself the problem, Has our pharmacy kept pace with the general advancement? An ideal text for a Presidential address. The possibilities of development in discussing it are obvious. The wide field of advancement in every department of science and industry are open to the speaker, and all are made cognate with pharmacy.

It should be at once admitted that Mr. Stanford used the advantage which his tactics had secured for him mercifully. His address is one of the longest we have printed, but in view

of his opportunities it might easily have been twice the length. Moreover, its length is disguised by its perpetual variety. No one in the Conference can touch with a lighter hand the topics broached, or can remind us of facts which we ought to know but do not, in a more pleasing manner.

May we add, with due reverence, that no one more skillfully than he can avoid the grip of the argument which he had himself suggested? As Shakespeare left future generations to contend over what he meant by "Hamlet," so this year's President of the Pharmaceutical Conference leaves us in the dark as to the answer to the riddle which he has propounded. Is pharmacy keeping step with other arts, with other occupations? We may form our own opinion, but the most patient reader will not ascertain Mr. Stanford's from his speech.

But the question is an interesting one. A generation has about passed by since the Conference was founded, and during that period vast material progress has been made all around us. "The parcel-post, the sixpenny telegram, the telephone, the phonograph, the microphone, and the type-writer have all been added since our birth-year," says the apologist of the Conference. We hardly suppose he wishes to suggest any other connection than coincidence, but there is a certain complacency about the form of expression which reminds one of Sir Wilfrid Lawson's belated passenger, who, jumping on a steamer as she left the pier, fell stunned for a few minutes on the deck, but looking back when he recovered, saw the distance between the steamer and the pier, and remarked, "Jehoshaphat, what a jump!" The President shows that within this generation the trade of this country, as well as it can be estimated, has about doubled. He does not even venture to inquire whether the trade of pharmacy has doubled in that same period. A President may refer to trade in bulk, but it would never do to narrow the inquiry down to the groove in which his hearers themselves move. It may be that not many individual pharmacists—or "pharmacians," as Mr. Stanford not too euphoniously calls us—would assert that their businesses, or, at any rate, their profits, have doubled in the past thirty years, but that argument would be hardly to the point. In a survey of this kind we cannot trouble about the individual. "So careful of the type she seemed, So careless of the single life." There would be, however, we think, plenty of evidence in support of the theory that in bulk of trade, or at least in the amount of turnover, pharmacy has well kept step with the general progress. We judge this from the evidently much larger and more numerous wholesale and manufacturing businesses closely connected with our business now in existence as compared with those in the fifties and sixties. Educationally, we have had a hard fight to keep up with our customers. The nation has been educated systematically in this generation, and so have chemists; and, comparing bulks, it may, we think, be fairly said we maintain our relative position with the public. In inventions and research, we do not believe pharmacy can claim to compare with other industries in which applied science is the moving factor. Pharmacy has done something to make human life happier, by making its medicine less repulsive; but this credit is due exclusively to private enterprise. The bodies organised "to promote pharmaceutical research," have had no part nor lot in this labour.

Then, on the whole, has pharmacy been justified of her children, these twenty-nine years past? We will not venture to rush in with a dogmatic opinion where a President fears to tread, but we may thank him for offering us that puzzle, and join with him in raising (not putting down, as he inaccurately expresses it) our Ebenezer, and hoping, as he does, for the possibility of greater achievements than those

which even the British Pharmaceutical Conference has yet accomplished.

COMMENTARY.

PHARMACY IN INDIA.—The *Indian Medical Gazette* deplores the condition of pharmacy in India as compared with what it is in Great Britain. There are a great many in the former country who have had no proper pharmaceutical education and have passed no examination of any importance. The *Record* thinks, however, that, looking back into the history of pharmacy in India, there is reason for congratulation and hope of reform. Only a decade ago there was no restriction on the practitioners of pharmacy, and no guarantee was required by Government from the keeper of a drug-store or chemist's shop of his fitness to carry on such trade. But now there is a Compounders Act and a meagre form of examination. There is, however, a very prominent and barefaced defect in the present system of Governmental examinations for a dispenser's certificate of qualification. The men who are examiners on this Board are all hospital assistant-surgeons: there is not a single practical pharmacist on the Board. The whole thing is an anomaly and a burlesque, and Indian pharmacists complain of the incapability of the holders of Government certificates in all matters relating to general pharmacy. As the fault lies in the constitution of the Board of Examiners, the Government should take up the consideration of the following reforms:—

1. A preliminary examination in English, Latin, and arithmetic up to vulgar and decimal fractions, including a proper knowledge of the British metrical systems of weights and measures.
2. A proper system of registration of apprentices to obviate fraudulent certification and to ensure a three years' education in pharmacy, materia medica, botany, and chemistry.
3. A Board of Examination consisting of four Government medical officers and four independent pharmaceutical chemists, with an official as president.
4. An Act making it compulsory for none but certificated pharmacists in all places where medicines are compounded.

We cordially support these suggestions generally, but the whole question of the dispensing and sale of poisons in India requires to be thoroughly looked into by the Government. The *Record* speaks about "medicines," which is a somewhat wide term for India.

THE POISONOUS PRINCIPLE OF YEW.—Writing to the *Times* in regard to the poisonous properties of yew-leaves from Downton Agricultural College, Lieut. Stuart Wortley states that, owing to a suggestion by Mr. E. P. Squarey that male yew-leaves are poisonous and the leaves of the female plant not so, he had submitted both kinds to chemical examination, with the result that he had obtained from an alcoholic extract of the male leaves an alkaloidal residue which was (1) of a bitter taste; (2) gave with ferric chloride a deep green colour (tannin or protocatechuic acid); (3) gave with iodine an immediate precipitate; (4) with litmus-paper the liquid was slightly acid; (5) a few drops of ammonia were added to the main solution and caused a slight precipitate. The liquid turned dark at the surface, showing the presence of pyrogalllic acid or some similar compound; and (6) the ammoniacal liquid was shaken with benzine and the benzine pipetted off. On evaporation it left a bitter residue, which dissolved in pure sulphuric acid with a deep-red colour, thus agreeing with the recognised character of taxine. Reactions 3, 5, and 6 were obtained, only very feebly, with the female leaves, and Lieut. Wortley concludes "from the experiments that taxine, whether or not it is the poison affecting cattle, is contained chiefly or entirely in the male yew, and that if it is the poison, the female yew may safely

be planted as an ornamental tree in parks and pastures where cattle are turned out." This, we think, is a somewhat unwarranted conclusion. That yew-leaves contain an alkaloid is true, for Amato and Caparelli isolated one ten years ago, but the toxicity of that alkaloid has not yet been demonstrated. It is doubtful if the body called "taxine" is an alkaloid. Opinion is in favour of the statement made by Mr. John Williams many years ago that it is simply an irritating, resinous body, perhaps of the nature of a glucoside. Before Lieut. Wortley's suggestion is acted upon more satisfactory proof of the non-irritating properties of the leaves of the female plant should be given. It is worthy of note that infusion of yew-leaves is non-poisonous, which is rather against Lieut. Wortley's theory, for the infusion would contain the alkaloid but not the irritating, resinous body.

Legal Report.

THE IRISH PHARMACY ACT.—THE PHARMACEUTICAL SOCIETY OF IRELAND *v.* GORMAN.

AT the Bangor (Co. Down) Petty Sessions, on August 17, the Pharmaceutical Society of Ireland sought to recover penalties against Thomas B. Gorman, Bangor, for that he (a) on April 30 and July 20, at Bangor, did unlawfully keep open shop for retailing, dispensing, or compounding medical prescriptions, and did sell a certain medical prescription to one Andrew Downey, contrary to the provisions of the 38 and 39 Vic., cap. 57, sec. 30, he not being a person qualified in that behalf according to law; and also (b) that, on July 20, at Bangor, he did assume and use the title of dispensing chemist, contrary to the provisions of the 38 and 39 Vic., cap. 57, sec. 30, he not being a person qualified in that behalf according to law.

Mr. M'Grath, B.L., appeared on behalf of the Society, and Mr. Andrew M'Erlean defended.

Andrew Downey, in reply to Mr. M'Grath, said he called at the shop of Thomas B. Gorman on April 30 last. He had the prescription produced, which he had got from Dr. O'Connell.

Mr. M'Erlean objected to the prescription being put in as evidence, contending that Dr. O'Connell should be produced to say whether he wrote it or not.

After some discussion, the examination of the witness was proceeded with by Mr. M'Grath.

Witness said he asked to have the prescription filled. He had to wait about half an hour for it. While it was being made up he paid 1s. 3d. for it. The bottle of medicine (produced) had been in witness's possession ever since. The label the bore address "John Gorman, Pharmaceutical Chemist, Bangor." On the windows of the shop witness saw printed "Dispensing Chemist," and above the door was "Gorman, Druggist and Chemist."

Mr. M'Grath, at this stage, read a letter from the defendant, in answer to a communication which he had received from the Registrar of the Pharmaceutical Society, informing him that he was proprietor of a drug establishment in Bangor, and that his brother, Mr. John Gorman, occupied part of the same premises, where he compounded prescriptions entirely on his own account, being a duly qualified pharmaceutical chemist.

Cross-examined by Mr. M'Erlean: Might I ask you where you were born?—In Belfast. What part of it?

The Witness: Have I a right to answer that question?

Mr. M'Grath: Answer all these questions.

By Mr. M'Erlean: Where were you born, Mr. Informer?

The Witness: I was born where Lombard Street now stands. Formerly Caddell's Entry?—Yes. Have you lived in Belfast since you first saw the sunshine in Caddell's Entry?—No, sir. Then where have you lived?—In other parts of Ireland, England, East India, and America. You would not tell a lie?—I do not think I would.

Mr. M'Erlean: Well, it is a bad thing to do, my man.

The witness: There is very little to be gained by it.

Mr. M'Erlean: Did you ever live in Comber?—No. When

you called for this bottle did you say you lived in Comber?—No. What was wrong with you when you got this prescription from Dr. O'Connell?—The same that is wrong with me at the present time, and that is a cold. Did you get it with the object of entrapping chemists and druggists?—Partly, I may say I did. It was entirely to entrap them?—Of course. Were you ever a member of the Pharmaceutical Society of Ireland?—No, sir; but from my being employed by chemists and druggists I became acquainted with the Society. What business, besides that of informer, do you carry on?—I am a grocer in Belfast? What street?—Sandy Row.

Mr. M'Erlean: "Oh, Sandy Row, my heart is thine where'er I go!" (Laughter.) To witness: What number?—130 Sandy Row. Have you ever appeared as a witness in such cases before?—Yes. For the mere love of justice?—Well, I am doing it now for the love of money. Who is to pay you—the Pharmaceutical Society?—I get my money from Mr. Galway. Are you swearing now for the love of money?—No. Did not you swear a moment ago that you were not swearing for money?—I spoke of the prosecutions, and not of the money. Are you aware that you are entitled to a part of the fine as an informer?—Yes. How long have you assumed the rôle of informer?—About four months. Is that the first time you commenced to act the part of an informer?—That is the first time I acted as an informer for money. Years ago I attended in other prosecutions. Was that in Belfast?—No, sir. Was it in Ulster?—Yes, sir. And did you get a conviction then?—Yes. Was it in Ballymena?—Yes. Was it against the Messrs. Beattie?—Yes. Is this the only department of the Government of this country that you are engaged at present in giving information to?—Yes. What did Dr. M'Connell say to you?

Mr. M'Grath objected.

Mr. M'Erlean: Had you any conversation with Dr. O'Connell about the use you were to turn this to?—No. Are you better of your cold yet?—No. Is it still sticking to you?—Yes. I see you were with Mr. Lyons, the chemist, in Royal Avenue, with this prescription?—Yes. And you were with Alexander Boyd & Co., Lisburn?—No, sir.

Mr. M'Erlean: I see you had it in Elliott's medical hall, Royal Avenue, Belfast, also?—It was a man named Hogg that had it there. In fact, you had it actually in Grattan's?—Yes, sir. And you got medicine in all of these places?—Yes.

Mr. M'Erlean: I think you ought to have a stomach like Vulcan's bellows after all the medicine you took. (Laughter.)

The Witness: I did not take it all. (Laughter.)

Mr. M'Erlean: You are a bad case. (Laughter.) Tell me, did you ever see Thomas B. Gorman in your life?—I do not know. Do you know who filled the prescription for you?—I would know the man if I saw him. Do you see the gentleman in court that filled it?—I do, but I do not know who filled it on the second occasion that I went to Gorman's.

Mr. Ferrall, Registrar of the Pharmaceutical Society, said defendant was not on the register which qualified him to compound medical prescriptions. He had written to him on June 7 asking to be furnished with the names of the *bonâ-fide* proprietors of the shop. Mr. Gorman replied on June 23 to the effect already stated, and subsequently stated that his brother, John Gorman, had ceased to compound medicines as he was studying for the medical profession.

Mr. M'Erlean asked the Bench to dismiss the case. After consultation the Chairman said they would like some evidence as to whom the premises belonged to.

John Gorman, examined by Mr. M'Erlean, said he was a pharmaceutical chemist. He was going on for the medical profession, and had only another examination to pass. Since being admitted into the Society he had taken part of the premises at Bangor occupied by his brother, Thomas B. Gorman, who was a chemist and druggist since July of last year. On both occasions witness himself received the prescriptions and compounded them.

Cross-examined by Mr. M'Grath: He paid his brother 12l. a year for the portion of the shop which he occupied. He (witness) gave up business about a week ago, as he had to prepare for his final examination. The words "Dispensing Chemist" were still on the window.

This closed the case, and their Worships, after consultation, dismissed all three summonses on the ground of insufficient evidence, and ordered Mr. Gorman to have the word "Dispensing" taken off the window.

THE IRISH PHARMACY ACT.—THE PHARMACEUTICAL SOCIETY OF IRELAND v. COSGROVE.

At the same Court, on the same day Mr. Samuel Cosgrove, also of Main Street, Bangor, was sued for compounding medical prescriptions on April 30 and July 30. Mr. McErlean also defended in this case. Mr. J. S. Mahon appeared on behalf of Mr. William Hanna, an interested party.

Andrew Downey was the witness for the prosecution. He visited the defendant's shop on April 30 last, and asked to have a prescription made up. So far as witness could see there was no assistant in the shop at the time. He paid 9d. for the bottle. The defendant did not put any label on the bottle, but left on it that of Grattan & Co., of Belfast. On the second occasion witness was charged 10d. for the bottle.

Cross-examined by Mr. McErlean: Did you represent in this case that you lived in Comber?—No. Was it Mr. Galway that gave you the money to pay Dr. O'Connell for his prescription?—No, sir. From whom did you get it then?—From Mr. Lyons, chemist, Royal Avenue, Belfast. Do you mean to swear that Mr. Lyons, of Royal Avenue, gave you money to entrap his brother chemists and druggists?

Mr. McGrath: I must object to such mode of cross-examination.

By Mr. McErlean: Very well. How much money did Mr. Lyons give you?—Half-a-sovereign. And did he tell you to go Dr. O'Connell?—Yes, sir. And get a prescription from him?—Yes, sir.

Mr. McErlean: I think you are not as bad as somebody else, my poor fellow, for perhaps you wanted the price of your dinner. (Laughter.)

To witness: How long were you away until you came back again to Mr. Cosgrove?—From April 30 till July 30. Did he then tell you that he could not fill up that prescription?—He did not. Did he say anything like that?—No. What did he say?—He wanted to make up medicine himself which, he said, would be much better. (Laughter.) After that you got the bottle?—Yes. It was on the first occasion that Mr. Cosgrove had offered to give me something himself. He had, at that time, read the prescription. When I said I would prefer to get what was in the prescription he gave me the bottle.

The Chairman: On the second occasion he filled the prescription with that remark?—Yes.

Mr. A. T. Ferrall gave formal evidence as to the qualifications of the defendant, who, he said, was not a pharmaceutical chemist, and consequently had no authority to compound medical prescriptions.

Mr. McErlean having addressed the Court for the defence,

The magistrates retired, and after a few minutes returned into court, when

The Chairman announced that they were unanimously of opinion that the defendant had committed two breaches of the Pharmacy Act; they would, therefore, fine him 5*l.* in each case, with a recommendation that the penalty be reduced to 2*l.*s. in each case.

A GLYCERINE TRANSACTION.

In the City of London Court, on Monday, before Mr. Julian Robins (sitting as deputy for Mr. Commissioner Kerr) and a jury, an action was brought by Messrs. Fuerst Brothers, chemical-merchants, 17 Philpot Lane, E.C., to recover 49*l.* 9*s.* 3*d.* for glycerine, &c., supplied to the defendants, Messrs. George Hearn & Co. (Limited), of Hearn Street, Curtain Road, E.C.

Mr. Cannot, for the plaintiffs, said a company had been formed to carry on the business of George Hearn & Co., which formerly belonged to one William Collinson. The plaintiffs had supplied the defendants with glycerine, castor oil, &c., since 1885, the defendants supplying the plaintiffs with various chemicals. In February last, Mr. William Collinson owed the plaintiffs nearly 500*l.*, for which judgment was obtained. Mr. Collinson then sold the business of George Hearn & Co. to a company, with which the plaintiffs continued their dealings. It was in respect of goods furnished to this company that they were now suing.

Mr. Cohen, counsel for the defendants, said he should not dispute the delivery of the goods; but he could not adopt

the plaintiffs' figures, because they had not allowed for 12*s.*, to which the defendants said they were entitled as discount.

Mr. Cannot said the defendants were not entitled to that, because it was only allowable for cash, and the defendants took three months' credit. The defendants had raised a counter-claim, and that was where the real dispute which the Court would have to determine came in. The present defendants had purchased William Collinson's book-debts, and now they said that the plaintiffs owed them 81*l.* after deducting the 49*l.* which was claimed. But the fact was that the plaintiffs had nothing whatever to do with William Collinson's debts. They did not know them in the matter. All they as plaintiffs knew was that William Collinson owed them 500*l.*, and that if the defendants wanted to raise any account due from the plaintiffs to Collinson, then the plaintiffs would have to set up their 500*l.* debt.

Mr. William Gilchrist, assistant secretary to the defendant company, was called in support of the counter-claim. He said they took over Mr. Collinson's debts by an assignment, of which notice was given to the plaintiffs, and it was upon that that they based a greater portion of their counter-claim. They paid 60,000*l.* for Hearn's businesses as from January 1, the company agreeing to fulfil all uncompleted contracts and engagements then current.

Mr. Cannot objected to the evidence of what was alleged to be due under the assignment. They never had any notice of it.

Mr. Cohen admitted he had not the assignment. He did not know that the other side would object to take a copy as evidence; but contended that the assignment had been proved, and that it was admitted by the plaintiffs.

Mr. Cannot said in April they wrote telling the defendants that their 20 tons of glycerine ordered were ready, and would be delivered in fourteen days. No admission of the assignment was ever made.

Eventually, the Deputy Judge said as the counter-claim could not be proved strictly, he must reserve it so that the defendants could bring an action for it, and he must find for the plaintiffs on the claim, with costs. That was the best thing he could do under the circumstances. He did not like the way in which the plaintiffs had met the defendants on the counter-claim.

The jury were therefore discharged, without giving a verdict, and judgment entered for the plaintiffs on the claim, with costs, the counter-claim being reserved.

SELLING METHYLATED SPIRIT WITHOUT A LICENCE.

JOSEPH FLOYD, chemist, Soham, was charged at the New-market Police Court, on August 18, with having sold methylated spirit to an Excise officer at Soham, on May 25 last, without holding a licence for the sale of same. From the evidence of William Henry Wells, an officer of the Inland Revenue, it appeared that on the day in question he visited defendant's premises, and paid 4*d.* for half a pint of methylated spirit. He was served by defendant's son. L. W. Lowenthal deposed that he had warned defendant against selling the spirit. The defendant stated that the act of his son was unintentionally wrong, and he deeply regretted it. He had no wish to evade the law; but he did not purchase much methylated spirit at a time, and what little he did buy was only for his own purposes. His son had sold it without his knowledge and consent. The Bench inflicted a fine of 1*s.*, and 2*l.* 2*s.* costs.

DANDELION COFFEE.

At the Swansea Police Court, on the 20th inst., Richard Francis Bennett and Timothy Jones, grocers, were summoned under the Sale of Food and Drugs Act for selling some "dandelion coffee" alleged to contain no dandelion. The mixture was sold in tins, with the Government stamp thereon, and one sample was manufactured by Messrs. E. & J. Williams, and the other by Messrs. Jas. Lewis & Son, Cardiff. The analysis by Dr. Morgan stated that the mixture contained 75 parts of chicory and 25 parts of coffee in 100 parts, and consequently no dandelion. It was sold at 5*d.* per $\frac{1}{2}$ -lb. tin. Mr. Rhys Edmunds defended, and cross-examined Dr. Morgan upon his analysis.—Dr. Morgan said he had applied the specific-gravity and colour tests. He

had not subjected the alleged chicory to microscopical examination; he took the other tests as sufficient. He analysed it for chicory because it was well known that all dandelion coffees were chicory and coffee, and this was allowed at Somerset House. He knew that there was an appeal pending from this decision at Somerset House. The fact of it being roasted did destroy the organic structure so as to make it very difficult to distinguish between chicory and dandelion. He would not swear positively that the article in question was chicory, but he would swear to the best of his knowledge and belief it was. He had never analysed dandelion, but was looking for an authentic sample for the purpose.—The Bench dismissed the summonses, but did not allow costs, on the ground that there was sufficient reason for bringing the case forward.

THE IRISH PHARMACY ACT.—THE PHARMACEUTICAL SOCIETY OF IRELAND v. BOYD.

ON the 23rd inst., in the Southern Division of the Dublin Police Courts, Messrs. Walter Boyd, Samuel Boyd, and Samuel Parker Boyd, trading as Boyd & Goodwin, 6 Merrion Row, were summoned at the instance of the Pharmaceutical Society of Ireland for having on July 7, 1892, sold and kept open a shop for compounding medical prescriptions, and for that they did on that and subsequent dates compound medical prescriptions for one Thomas Farrell at 6 Merrion Row, contrary to the Pharmacy Act of 1875, they not being persons properly qualified in that behalf according to law. They were also summoned for having used the title "Dispensing Chemists," contrary to the Pharmacy Act, they not being persons registered as pharmaceutical chemists.

Mr. Robert Clay, of Messrs. Casey & Clay, prosecuted on behalf of the Pharmaceutical Society; Mr. Wiley, instructed by Mr. Blood, appeared for the defendants.

Mr. Clay said the action was brought under the Pharmacy Act of 1875, which was to prevent deaths occurring from misadventure. That was one of the objects of the Society, and, in bringing these actions, they were only discharging a public duty. The defendants were one of the most respectable firms in the city of Dublin, but that did not entitle them to any immunity if they committed an offence, which he had been instructed they had done. The Council of the Society had some time ago prosecuted a number of small traders in the city, and they were compelled to prosecute the present defendants in April last. On that occasion they had apologised for the infringement of the Act and had paid the full penalties and costs, and each of the defendants had signed an agreement not to repeat the offence. The Council of the Pharmaceutical Society were under the impression that the defendants would keep faith with the public, but they had not done so. If an unqualified person compounded in an unqualified proprietor's shop the danger to the public in the shape of misadventure would be serious. The Act was passed for the protection of the public. Mr. Clay then read the summonses against the defendants.

Thomas Farrell was then examined by Mr. Clay.

Mr. Clay: Have you a prescription in your possession which you presented to the defendants?—No, sir; but I have the bottle which I got on July 7 [bottle produced]. I gave it in and asked the Messrs. Boyds to repeat it.

Mr. Clay then asked for the entry of that prescription in the books of the defendants to be produced.

Mr. Wiley: There is no entry of such prescription—we have not got the entry which Mr. Clay mentioned.

Mr. Trevor Wright was next examined. He was called upon by Mr. Clay to produce his books.

Mr. Wiley: I decline at the present to expose our books. This prosecution has been got up purposely to affect our trade, by other traders.

Mr. Clay: I am not a rival trader. I am here for the Society.

The witness produced books, and showed that no entry had been made in reference to the compounding of the prescription. He denied that they had any prescription in the name of Farrell in the books except in February.

Mr. Clay said that in consequence of the action of the defendants, the Society could not, by their own inspectors, get convictions, and they had to get strange men. This inspector had brought in an empty bottle belonging to a Mr.

Young and they had made up the medicine, and it was proved that it had been made up on a previous date.

Witness: I never make up a prescription.

Mr. Clay: I know that, you are not a qualified gentleman; but a prescription is made up, which is an internal prescription, and you make no statement about it.

To Mr. Wiley witness said that the date of the prescription in reference to the bottle was February 10.

Thomas Farrell was recalled, and said that when he entered the shop he saw a gentleman whose name he believed was Best. He told him if he called back in half an hour it would be made up for him. He called back for it, and received it sealed up, and paid for it.

Mr. Clay: You see "Dispensing Chemists" marked on the bottle?—Yes. I paid 1s. 6d. for it; I then gave it to an inspector of the Society.

Mr. Wiley: Who was it put you on this job? Was this the first time you were in Boyd & Goodwin's?—No. I had been there the previous day, but I did not get the bottle made up that day; I said I was in a hurry.

Mr. Wiley: Did you go there to entrap these persons?—No: the inspector asked me to go there.

Were you not told that they were not compounding medicines?—No. Did you not go there for the purpose of getting this made up to show that they were evading the Act?—Yes. I did not examine the shop to see about the labels. Had you any other prescriptions made up there?—Yes; and they were made up in my presence.

The witness gave further evidence as to the defendants entitling themselves "Dispensing Chemists." He proved that he had had a draught made up in the place, and he had also the bottle referred to repeated. He had also got in the shop a "pick-me-up" which he drank and paid for.

Some bottles were then submitted in evidence which bore on the labels the words "Pharmaceutical Chemist."

Do you remark on one bottle the name Furlong?—Yes.

His Worship (to Mr. Wiley): Do you dispute the making-up of the prescriptions?—Certainly; but we do not dispute making them up in Mr. Furlong's.

Mr. Clay (to the witness): What did you get in addition to the bottle?—A box of ointment.

Mr. Clay: Now, I hold they keep open their shop for the sale of medicine.

Witness: I purchased it for 2s. 2d.

Mr. Clay then produced an envelope on which Messrs. Boyd & Goodwin were described as pharmaceutical chemists, which was also an offence.

The witness further said that on another occasion he handed in an empty box, and then he saw one of the gentlemen looking over the leaves of a book, and he told him to return in half an hour, and then he paid 2s. 4d. for the ointment.

His Worship: Is it not the case that they were made up in Furlong's?

Mr. Wiley: Yes.

Mr. Clay: Then we will get Mr. Furlong.

Mr. Wiley: We got them made up in Furlong's, and nowhere else.

Mr. Wiley said the firm had used bottles or bills with the words "Pharmaceutical Chemist" upon them, but after the last prosecution the system was discontinued, and Mr. Boyd had given instructions that no label with "Pharmaceutical Chemist" should be used, and what had occurred was owing to an oversight, and he did not think his clients could be held responsible for it.

Mr. Thomas Furlong, 17 Upper Merrion Street, was then examined, and, in reply to Mr. Clay, said he was in the habit of making-up prescriptions for the defendants, who received a profit from them of 20 per cent. It was one of his assistants who was not qualified that made up some of the prescriptions. He first compounded for them in April, 1892. He had no entry of making-up a bottle in the name of "Young" on July 7.

His Worship said that the witness Farrell had proved that he had a bottle made up in the name of "Young."

To Mr. Wiley: Mr. Furlong said that the medicines ordered by the firm had been made up in the ordinary way.

Mr. Clay: How much did you charge Messrs. Boyd & Goodwin for the bottle?—1s. 8d.; I allow them 20 per cent.

Dr. Evans proved that the prescriptions referred to were of a medical character.

Mr. Wiley said that some of their assistants had acted contrary to instructions.

The summons against Mr. Samuel Parker Boyd was withdrawn, as it was stated that he had no connection with the firm.

The summonses were amended by the words "sell" and "retailing" being struck out.

Mr. Best was examined for the defence. He had been eighteen months in the employment of Messrs. Boyd & Goodwin, and was a pharmaceutical chemist. He had directions from Messrs. Boyd not to compound or label medicines, and they had got labels to cover those which had been on the old bottles and boxes before the conviction in April. He could not say if he had compounded medicines in July, but admitted making up a mixture on July 11.

Mr. Clay said that the labels issued by the defendants held out to the world that they were pharmaceutical chemists.

Witness said a lot of the labels had been cancelled.

Mr. Wright proved that the defendants had given instructions that the words "Pharmaceutical Chemist" should be scratched off bottles and boxes, and that had been done, the words being covered with new labels. What had happened had been due to oversight and haste.

After some further evidence, his Worship fined the defendants 5*l.* each and 3*l.* 3*s.* costs for compounding on the 7th and 11th July, and the summonses for compounding medicines on the 14th, 23rd, and 26th July he adjourned for a fortnight, to read the decision of the Queen's Bench Division upon the point, as ruled some months ago in the case of the Pharmaceutical Society *v.* Fee Brothers.

BANKRUPTCY REPORTS.

Re A. G. E. MARTIN (trading as G. E. Martin & Co.), 14 Fenchurch Street, E.C., Importer of Essential Oils.

THE creditors under this failure met on Friday, August 19, at the London Bankruptcy Court, before Mr. E. Leadam Hough, Official Receiver. The debtor has filed accounts showing gross liabilities 2,074*l.* (unsecured 1,570*l.*) and assets 3*l.* only.

The Chairman said the failure was attributed by the debtor to trading losses, bad debts, and law costs. No dividend could possibly be declared, and in the absence of any offer, the estate would be wound up by the Official Receiver, and the debtor would have to attend the Court on September 27, for his public examination.

The following are the principal creditors:—

Unsecured.

	£	s.	d.
Bertie, F. H., London	15	0	0
Botolph & Nicholson's Wharf, London	10	0	0
Candery & Co., London	18	0	0
Corso, P., Agira, Sicily	23	0	0
Deutsche Gelatine Fabrik, London	19	13	0
Fisher, B., London	50	0	0
Fisher, W. F., London	15	0	0
Greco fu Vito, Sicily	22	0	0
Lewig, M., Manchester	18	0	0
Meyer, Spaul & Co., London	15	0	0
Osment, —, London	10	0	0
Prosser, —, London	42	0	0
Salvadore, Alessan & Co., Messina	18	0	0
Steele, —, London	10	0	0
Stubbs, Wilson, & Pollard, London	31	19	10
Townsend & Co., London	12	10	0
Treant, R. C., London	40	0	0
Trombetta, F., Messina	400	0	0
Winter, A. F., Norwood	127	0	0
Zur Medden, —, Norwood	400	0	0

Partly secured.

Benporath, G. H., London	30	0	0
Meyer, Spaul & Co., London	29	0	0
Parsons, Lee & Holmes, London	483	0	0

It appears from the observations of the Official Receiver, issued on Saturday last, that the debtor states that since June, 1891, he has carried on business as importer of essen-

tial oils, &c., having previously been in partnership with two other persons, to whom he is stated to owe 400*l.* and 450*l.* respectively, these amounts representing his share of the losses sustained during the joint tradings. The debtor's household furniture was seized and sold last January, and his office furniture and stock (the latter consisting of sample drugs at a warehouse at 18 Dionis Yard, Aldgate) were recently taken possession of by the respective landlords for arrears of rent.

Re A. E. WORFOLK, Wandsworth, Chemist.

THE adjourned public examination of Alfred Egbert Worfolk, chemist and druggist, lately and now residing at 15 Beauchamp Road, Wandsworth, and formerly residing and carrying on business at 28 Galveston Road, Wandsworth, was held on the 18th inst., at the Wandsworth Bankruptcy Court, before Mr. Registrar Willoughby. Full particulars of this matter have already appeared in our columns. The examination was closed.

Re MR. COWL, Derby, Chemist.

AT the Derby Bankruptcy Court, on Tuesday, Mr. J. T. Wykes applied for the discharge of Mr. Cowl, chemist, Derby.

Mr. Wykes stated that the debtor became bankrupt in 1880, and since that time he had paid 20*s.* in the pound to all his creditors, except two—viz., the London Dental Manufacturing Co. and Messrs. Ritchie & Co., London, who refused to accept the amount of their claims, 160*l.* in all, unless it was remitted through the Official Receiver.

His Honour Judge Kenelm Digby granted the discharge subject to the money being remitted to the creditors by the debtor through the Official Receiver.

Personalities.

MR. JOHN WHERRY WILLSON, son of Mr. Stephen Willson, chemist, of Peterborough, has obtained the degrees of M.R.C.S. Eng. and L.R.C.P. Lond.

MR. W. J. BARNES, chemist and druggist, 54 Biggin Street, Dover, has been appointed by the Lord Chancellor a Justice of the Peace for the borough of Dover. Mr. Barnes is also a member of the Dover Town Council, and president of the Dover habitation of the Primrose League.

MR. JOHN COOPER, pharmaceutical chemist, has purchased the chemist and druggist business of Messrs. Pinch & Co., Waterloo Street, Weston-Super-Mare.

MR. F. W. GOODMAN, who has been for some years with Messrs. Corbyn, Stacey & Co., 7 Poultry, E.C., has purchased the old-established business of Mr. E. R. Smith, Ecclehall, Staffs.

DEATHS.

EDWARDS.—August 17, at sea, on board the *Lake Winnipeg*, for Montreal, Henry Edwards, for many years in the employ of Evans, Sons & Co., Liverpool. Much regretted by his employers.

KENDRICK.—On August 17, Mr. J. Kendrick, sen., chemist and druggist, Birmingham.

THORNTON.—At Whitby, after a short illness, on August 16, Mr. H. Belcher Thornton, F.C.S., analytical chemist, of Liverpool. Mr. Thornton was the second son of Mr. Francis Thornton, solicitor, of Whitby, and was on a visit with his wife to his father. He was one of the founders of the Liverpool Pharmaceutical Students' Association, and was formerly assistant in Mr. Ward's School of Pharmacy. He was the inventor of the disinfecting tablets which bear his name, and had lately been appointed analyst to the Liverpool and District Dairymen's Association. He had also contributed articles, sketches, and poetry to the local journals.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 25

The London Markets.

THE drug and chemical markets keep fairly active, considering the time of year and the general depression in business. In several important departments there has even been an unusually active trade, and altogether the tendency of prices has been upwards. There is no alteration in the Bank rate, which remains at 2 per cent. Bar silver is worth 38 $\frac{1}{16}$ d. per oz., and the Bombay and Calcutta exchanges stand at 1s. 2 $\frac{1}{2}$ d.

The following notes sum up the principal alterations in price:—

London. The principal feature of the week has been the run upon opium, which closes much dearer. There has also been a strong advance in ergot of rye, and raw camphor closes higher. Cantharides are reported a little dearer from Russia. Cinchona is firm and tending higher. Ipecacuanha has advanced about 15 percent. Otto of rose, menthol, and Japanese oil of peppermint are dearer. Sassafras oil is also reported higher from New York. Genuine Soudan gum arabics are again offering cheaply, and Mogadore gums are also lower. Malta cumin and canary seed have had a fresh advance. Belgian chamomiles have declined in price, for cocculus indicus lower rates would also be accepted, and Socotrine aloes are again cheaper. In pure chemicals we have to report a slightly firmer market for quinine. Citric acid, morphia, and codeia have been advanced. Carbolic acid is again higher, permanganate of potash unchanged, and cream of tartar a little easier. Quicksilver has had a heavy drop; ginger, cloves, and pepper are also easier. There has been a rise in shellac; gambier, bleaching-powder, and olive oil are also dearer. Sticklac is obtainable at lower rates. Good and fine kowrie gum realised better prices to-day; animi was firmly held, and higher for bean and pea kinds. Copal flat, and olibanum lower.

Liverpool. Our Liverpool correspondent writes that Chilean bees'-wax has been in fair request during the week, while several inquiries have been going about for ordinary Chilean honey. Guinea grains have also been in demand. Quillaia is a little firmer, but castor-oil remains dull and neglected. The rise in canary-seed has received a check, and there have been further heavy arrivals of old-fashioned Soudan gum-arabic.

New York. Our New York correspondent, under date of August 17, reports a general improvement in the jobbing trade since the cessation of the extremely hot weather. The improvement is one rather of tone than volume, however, as the orders are for the most part small. Quinine had sold down as low as \$16 in large bulk about August 12, but improved a little later, and there are now buyers, but no sellers, at \$17. The demand for opium has also improved somewhat, and some orders for case lots are being accepted at \$1.57 $\frac{1}{2}$ to \$1.60. for good jobbing quality. Cascara sagrada is neglected but steady at 5c. to 6c. Balsam copaiaba shows an upward tendency both in export kinds and

in Central American. Angostura and Pará in original packages are worth 35c and 37c., while Central American brings 32 $\frac{1}{2}$ c. The supply on the spot is limited, and the general indications are favourable for a decided advance, though with all Spanish-American goods appearances are not always to be trusted. Guarana is on the down grade, and no interest is felt in it at \$1.20 to \$1.25. Menthol keeps firm at \$3 to \$3.10 for Japanese. Good Angostura tonquin beans continue firm and fairly active at \$2.25 to \$2.50 as to quality, age, and holder; Pará's bring 40c. to 50c. Mexican vanillas are worth from \$4 to \$7, and present no feature of special interest. Quicksilver is lower, reflecting, as usual, the conditions of the London market. Nitrate of silver has declined to 54 $\frac{1}{2}$ c. for 1,000-oz. lots, in sympathy with the fall in metallic silver. Nitrate of soda continues to improve in tone under a good demand and strong advices from the source of production on the West Coast of South America. For spot goods \$1.87 $\frac{1}{2}$ to \$1.90 is wanted, and for forward shipment \$1.85 to \$1.90. Domestic oil of pennyroyal has been advanced to \$2.25 for favourite brands, while \$2 will buy in some quarters. Peppermint is dull, and HGH brand has been offered at \$2.75, without takers, though \$2.70 is bid. It is reported that local stocks have been lightened by shipment to London. Stocks of Mexican sarsaparilla have been much reduced, and less than a dozen bales are said to constitute the visible supply, all in the hands of one wholesaler, who wants 17c. for single bales. Jalap is jobbing at 33c. to 35c., with only moderate stocks in hand. Mandrake-root is totally neglected. Honduras sarsaparilla is fairly active, at 30c. to 40c. as to brand. Senega is quiet at 35c. to 40c. Texas snake-root is dull at 21c. to 23c. Ipecac has declined to \$1.50 to \$1.55. Morphia has been reduced all round, hydrochlorate in bulk being now quoted at \$1.45 for American and \$1.35 for English. Benzoic acid has advanced to 50c. in bulk, while bromine keeps steady at 15c. per lb. for quantities. The ergot market is well maintained, at 48c. to 50c. for German and 60c. for Spanish. The *Oil, Paint, and Drug Reporter* of August 15 has the following with respect to the sudden rebound in the position of quinine in the States from 16c. per oz. to 17 $\frac{1}{2}$ c. per oz. "The 16c. sales were the action of tired speculators, and when once the market reached that figure the trade generally came to a full realisation of the situation, and as a result a natural reaction set in. Little is now obtainable under 17 $\frac{1}{2}$ c., some even asking a half cent. higher for their holdings. The action of the American manufacturers in reducing the price of domestic quinine has to a certain extent damped the ardour of the holders of the German product, but as the foreign and domestic makes always run in independent courses, this decline in the domestic is not likely to have any material effect upon the foreign. The trade generally feels assured by the turn in affairs, and it is generally expected that the market from now on will rest on a firmer footing."

What is our Stock of Quinine?

This is a question which has often exercised the minds of speculators. Estimates have been put forth from time to time with some show of authority, but they have generally found little credence, because there is a wide discrepancy between them, and the secret of the stock is pretty closely kept by the Dock Company, in whose Crutched Friars warehouse the bulk of the supply is held under lock and key. The following figures may, perhaps, serve to throw some light upon the question. When the drugs stored at the old Fenchurch Street warehouse were removed to Crutched Friars in January, 1890, the total quantity of quinine transported was 2,829 cases, weighing 125 tons 16 cwt. 1 qr. Since then the supply has been slowly diminishing, until at the present time our supply may safely be assumed to amount to about 2,550 cases, weighing 250,000 lbs. gross, or, say, 220,000 lbs. net. Our present stock of quinine in the Dock warehouses is therefore a little over 3,500,000 oz.

ACID (CARBOLIC).—After having been decidedly quieter during the last fortnight, this article again shows much more firmness this week, and it is very difficult to obtain liquid acid for immediate delivery. Liquid acid, 90 per-cent., is held for 1s. 9d. to 1s. 10d.; crystals, 34°-35°, for 5 $\frac{1}{2}$ d. to 5 $\frac{1}{4}$ d.; and 39°-40° ditto for 6d. to 6 $\frac{1}{2}$ d. per lb.

ACID (CITRIC).—The B.P. acid has been advanced to 1s. 5½d. by the makers; other brands are held for 1s. 5d. per lb. This shows a higher market, but there is not much business.

ACID (TARTARIC) shows no improvement. English (B.P.) is quoted at 12½d. per lb., not guaranteed ditto at 11½d. to 11¾d., foreign crystals and powder at 11¼d. per lb.

ALOES.—A parcel of fair brown *Socotrine* aloes from Bombay, of very good flavour but rather soft, sold cheaply last Thursday at 70s. to 75s. per cwt. This shows a fall in value.

ANTIMONY.—Crude Japanese steady, but quiet, at 26l. per ton on the spot.

ANTIPYRIN.—The price has been raised 1d. per oz.

ARSENIC.—Fairly steady, at 12l. 5s. for best white powder.

BLEACHING-POWDER has advanced this week, and is becoming very scarce on the spot. In London 8l. 10s. has been paid; and between that figure and 8l. 15s. may be called to-day's quotation. On rail Lancashire 7l. 10s. is quoted; and on the Tyne 7l. 12s. 6d. net.

BORAX.—Without alteration. Crystals may be had at 29s. to 30s. per cwt., while for powder an extra shilling must be paid.

CALUMBA is firmly held. Of 93 bags offered last Thursday 20 sold at 20s. per cwt. for dull brown dusty and wormy, offered "without reserve."

CAMPHOR (CRUDE).—Fair China has sold privately at 130s., and Japan at 135s. per cwt. on the spot. There has also been some business in China at 118s. c.i.f., and in Japan at 127s. c.i.f. These are higher rates, and holders are sanguine of still dearer prices.

CAMPHOR (REFINED).—Firm, but unchanged, at 1s. 6½d. per lb. net for foreign brands.

CANARY-SEED.—The position remains very strong. At auction 354 bags *Turkish* seed were bought in at 100s. As the high prices now obtainable have failed to draw supplies, it is supposed that no substantial stocks are kept back anywhere. Old *English* seed is quoted at 70s. to 75s., *Morocco* at 82s. to 85s., and *Spanish* at 87s. to 92s. per cwt. For good *Turkish* 80s. has been paid.

CANTHARIDES.—Russian flies of last year's gathering, but described as "of very excellent quality," are being offered at 3s. per lb., c.i.f. terms.

CARAWAY.—Speculators have taken a great part of the Dutch seed out of the market, and high prices are asked for anything worth having.

CARDAMOMS.—Between the January and the August of this year, 218,553 lbs. of cardamoms were exported from Ceylon, against 185,444 lbs., 196,059 lbs., and 165,772 lbs., respectively, in the corresponding periods of 1891, 1890, and 1889.

CHAMOMILES.—The new Belgian crop is now arriving freely. Prices are rather lower this week—good pale flowers, first pickings, offering at 72s. 6d. per cwt., and rather smaller and yellower at 62s. 6d. to 67s. 6d. per cwt.

CINCHONA.—Tuesday's cinchona auctions were again light, the total quantity of bark offered consisting only of:—

	Packages	Packages	
Ceylon cinchona	911 of which	849	were sold
East Indian cinchona	111	84	"
Java cinchona	30	30	"
W. African cinchona	40	40	"
S. Amer. Calisaya cinchona	435	284	"
Cuprea bark	323	—	"
	1850	1287	

The assortment was very poor, barks of high analysis being almost entirely wanting. There was also a noteworthy paucity of East Indian barks. Holders were very firm, while on the other hand there was a good deal of competition among the manufacturers, with the result that barks of fair quality realised a slight advance, while the poorer kinds remained stationary. The average unit remains 1¾d. per lb.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Brunswick factory	79,637
" Mannheim and Amsterdam works	40,239
Messrs. Howards & Sons	36,684
Agents for the Frankfurt and Stuttgart works	35,805
" Auerbach factory	30,810
" French (Paris) factory	14,233
" American and Italian works	11,112
Sundry druggists	21,391
Total quantity sold	269,911
Bought in or withdrawn	74,440
Total quantity offered	344,351

It should be well understood that the quantity of bark purchased affords very little clue to the quantity of sulphate of quinine represented by the purchases of each firm. The following prices were paid for sound bark:—

CYLON CINCHONA.—*Original.*—Red varieties: Ordinary woody to fine bright quilly stem and branch chips, 1½d. to 3½d.; dust, 2½d.; fair bright shavings, 2½d.; ordinary dusty to good bright root, 1½d. to 2½d.; broken to good bald quill, 3d. to 4½d. per lb. Grey varieties: Ordinary dull to good bright quilly stem and branch chips, 2½d. to 3½d.; fair to fine bright root, 3½d. to 5½d.; fine bold shavings, 6½d.; thin twigs, 1½d. to 2d. per lb. Yellow varieties: Chips, 3½d.; root, 5d. per lb. Hybrid, dull to good quilly stem and branch chips, 2½d. to 4d. per lb. *Renewed.*—Red varieties: Ordinary to fair bright quilly stem and branch chips, 1½d. to 4d.; fair spokeshavings, 2½d. to 2½d. per lb. Grey varieties: Ordinary to fine quilly stem and branch chips, 1½d. to 5½d.; fair shavings, 2½d. to 2½d.; root, 4d. per lb. Fair yellow chips, 4½d. per lb.

EAST INDIAN CINCHONA.—*Original* ordinary to fair red stem and branch chips, 1½d. to 2½d.; dull root, 2d.; Hybrid shavings, 4½d. per lb. *Renewed* shavings, 3½d. per lb.

JAVAN CINCHONA.—Yellow dusty and small branch chips, 3d. to 3½d.; good ditto stem chips, 4½d. to 5d.; good root, 6d. per lb.

WEST AFRICAN CINCHONA.—Red druggists' quills, fair but rather broken and irregular, 3d. per lb.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian *Calisaya*, irregular to good stout quill and chips, 4½d. to 7½d. per lb. Damaged ditto, 3d. to 6½d. per lb. Of *Cuprea* bark about 18 tons of 1883 import were bought in, bids of 1½d. to 1¾d. per lb. being refused.

"We have no advice" (say a firm of bark-brokers), "of any Guayaquil Crown bark coming forward, and there is no improvement in the low prices prevailing; but a consignment from Ecuador of 49 serons fine genuine *Huanoco*, *Lowa*, and *Silvery Crown* is on the way for this market. Fine heavy flat red South American bark is wanted."

The following are the exports of cinchona bark from Java during the years ending June 30:—

	Private Plantations	Government Plantations	Total
	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.
July 1, 1891, to June 30, 1892	7,181,075	605,792	7,786,867
" 1890 " " 1891	6,323,561	553,255	6,876,816
" 1889 " " 1890	4,679,787	541,481	5,101,268
" 1888 " " 1889	3,599,525	815,506	4,415,031
" 1887 " " 1888	3,124,934	617,101	3,742,025

The exports of cinchona from Ceylon during the period from January 1 to August 1, have been:—In 1892, 3,617,330 lbs.; 1891, 3,249,653 lbs.; 1890, 4,815,062 lbs.; 1889, 5,173,737 lbs.

CLOVES are again lower. At auction 600 bales *Zanzibar* cloves were offered, of which a part sold at from 2½d. to 2¾d. per lb. for fair to good quality. A parcel of 57 bags *Java*, fair quality, brought from 4d. to 4½d. per lb.

COCULUS INDICUS.—Very difficult to move. Holders bought in 41 bags at 9s. per cwt. at the last auctions, but lower prices would probably be accepted.

COPPER (SULPHATE).—Very flat, though quotations are nominally maintained. 14l. 10s. per ton is the spot quotation in London, 14l. 15s. in Liverpool.

CREAM OF TARTAR again lower. Sales of best white French crystals have been made at 83s. 6d. to 84s., and of powder at 85s. per cwt.

CUBEBS.—The following figures relate to the exports from Java during the last four years (July 1 to June 30):—1888-89, 883 piculs; 1889-90, 1,353 piculs; 1890-91, 1,378 piculs; 1891-92, 2,207 piculs.

CUMIN.—*Malta* cumin is again dearer, 45s. having been paid this week for old seed. The new crop is of very inferior and dark quality. *Mogadore* seed is somewhat neglected, with sales at from 19s. to 21s. per cwt., according to quality.

ERGOT OF RYE.—There has been a sudden run upon this drug during the last two days. Yesterday fair to good Spanish sold at 2s. to 2s. 3d. per lb., and since then 2s. 3d. has been refused for good new crop, holders now asking 2s. 6d. per lb. There is no Russian of new crop offering at all, and it is said that we need not expect any supplies from that country this year, nor from Hungary or Germany. Fine old Belgian ergot sold at 2s. 4d. per lb. to-day.

FENUGREEK-SEED is firmly held at 8s. 9d. to 9s. per lb.

GALLS.—We hear of a small business in good blue *Turkey* galls at 60s. per cwt.; for good *China*, from 50s. to 52s. 6d. per cwt. is asked. To arrive the quotations are 46s., c.i.f., for usual size, and 53s., c.i.f., for plum shape.

GINGER.—*Jamaica* ginger is dull of sale and tending easier. Of 135 barrels offered at auction 20 sold at from 54s. to 59s. for low to good bright medium. *Cochin* remains quite neglected.

GUM ARABIC.—The Soudan gum which is now arriving rather freely in Liverpool consists principally of fine white sorts, quite genuine, but which have apparently been stored up for some time. Holders would probably sell at 75s. to 80s. per cwt., though they are nominally asking a little more than that. A parcel of *Ghezirah* gum lately shown here is believed to have been sold at 40s. per cwt. The price of *Mogadore* gum has been much reduced lately; fine white may now be bought at 75s. to 80s. per cwt., and ordinary kinds at as low a price as 60s. per cwt. There is no excitement whatever in the market, but a fair amount of business is being done at steady rates in some East Indian gums—notably *Ghatti*.

GUM MYRRH.—For fair Aden sorts, 85s. per cwt. would still be the nearest price. It is arriving more freely. There have been 61 packages from Aden by the *Java* this week.

GUM TRAGACANTH.—The limits have been raised by many of the holders, but the trade are unwilling to pay the advance, hence business is almost at a standstill. Good pale druggists' gum has been sold, it is stated, at 10l. 10s., and now 10l. 10s. to 11l. is asked.

IODINE shows no alteration, 9d. per oz. for crude being still the Convention price.

IPECACUANHA.—There has been quite a sudden demand for this root, mainly, we believe, from the States. It is said that for ordinary lean *Rio* ipecacuanha 6s. per lb. has been given, an advance of 7d. since last Thursday. Pretty nearly all the *Cartagena* root has been bought up at prices running to 4s. 6d. per lb., and re-sales have since been made at a considerably higher figure.

ISINGLASS.—The periodical auctions, in spite of the heavy quantity offered, showed a rather steady tone. *Brazil* lump sold with good demand at an advance of about 2d.; ordinary to fine, 2s. to 2s. 11d.; common brown to good pale tongue, 1s. 10d. to 3s. 9d. per lb. *Penang* is quiet and generally lower; low to good leaf at 1s. 7d. to 4s.; common dark to good tongue, 1s. 3d. to 3s. 1d. *Saigon* leaf is firm, at 3s. 5d. for ordinary to 5s. 11d. for good. *Bombay* and *Kurrachee* kinds are very irregular; ordinary to good purse, 6d. to 1s. 3d.; low to fine leaf, 8d. to 2s. 8d.; dark gelatinous to good pipe, 11d. to 2s.; ordinary grey to good bladder, 10½d. to 2s. 9d. per lb.

LITHIA.—Although prices were officially raised last week, we understand that it is still possible to buy at from 6d. to 1s. per lb. below the new official quotation.

LYCOPodium.—The first parcels of the new crop are being offered now at 165s. per cwt., c.i.f. terms.

(OIL CASTOR)—Reports from Calcutta, dated August 2, state that business in castor oil was dull. The weather had improved, and the production, consequently, increased somewhat, but the arrivals of castor seed for crushing were much smaller, and the raw material, therefore, cost more money. Holders of oil, for the sake of obtaining business, were willing to make small concessions, but not large enough to suit would-be purchasers. First pale Calcutta is quoted here at 3d., fair to good pale seconds at 2½d. to 2¾d. per lb.

OILS (ESSENTIAL).—We hear that the recent sale of *Star-anise* at the auctions at 5s. 11d. per lb. (which was "subject to approval") has not been confirmed by the owner, who refused to take less than 6s. per lb., and that sales have actually been made at that price since then. As regards the delivery market, offers of 5s. 5d. per lb. c.i.f. terms for *Star-anise* oil shipment were wired out to China this week, but the answer came that nothing less than 5s. 7½d. per lb. c.i.f. terms would be accepted. American oil of *peppermint* (H.G.H.) is held here for 13s. per lb., but cables from America quote lower rates—viz., 12s. 3d. per lb. c.i.f. It is expected that the price of this article will be affected by the cholera epidemic. Japanese oil is firm at 6s. per lb.; *Menthol* is also dearer at 10s. (perhaps still 9s. 9d. per lb., at which sales are reported) for native brands and 12s. 6d. per lb. for Cocking's. *Sassafras* oil is cabled higher from New York, at 1s. 10d. per lb. c.i.f. terms.

OIL (OLIVE).—There has been an advance in Italian eating-oils at the rate of about 3l. to 4l. per tun. The present quotations are from 4s. to 5s. 6d. per gallon for good to fine (sublime) Bari and Lucca eating-oils. The prospects for the new crop, which is due for shipment from Italy in December, are described as very poor, and the stocks of eating-oils in London are thought to be small. Nevertheless, trade is exceedingly slack. As regards common oils, we hear that the markets in Italy and Sicily have advanced considerably. From the Ionian Islands no oil is being offered, and it is now said that in that quarter, also, the crop (hitherto looked upon as promising well) has suffered damage from excessive heat and damp. In the Levant, Tunis, Morocco, and Spain prices are also tending higher, and everywhere it is said that it does not pay to ship to England at the prices now ruling in London and Liverpool. Our home quotations are: London—Spanish and Sicilian oils, 33l. to 34l.; Levantine, 32l. Liverpool—Spanish, 35l. to 36l.; Candia, 34l. to 35l.; Messina, 34l. to 34l. 10s.; Levant, 32l. 10s. to 33l., with some business at those figures.

OPium.—The London market has been exceedingly active lately. Last week the total sales amounted, it is said, to about 180 cases, at an advance of 1s. per lb. upon *Druggists'* kinds. This week the amount of business transacted has not been quite so heavy, but prices are fully maintained at the recent advance. For fine druggists' opium up to 7s. 6d. per lb. has been paid, and for seconds from 6s. 6d. to 7s. per lb. The demand for soft *Shipping* qualities has not been so active, but these also have somewhat advanced in price, 8s. 6d. per lb. being the highest figure yet paid. In *Persian* opium there has been a good deal of business this week at 9s. per lb., according to quality, and now 9s. 6d. per lb. is asked for fine. Of new-crop opium only some lots of Guévé (Constantinople pats) have as yet come to hand here. The quality is described as very "chaffy," but 7s. 6d. per lb. is nevertheless asked for it by the importers. Our Smyrna correspondent writes, under date of August 13:—"Since our telegram of August 10 purchases have continued and a further advance has taken place. The total sales since my last communication amount to about 90 cases, at the following quotations: New Yerli opium, including loss in weight, 7s. 9d. to 7s. 10d. per lb., f.o.b.; new Yerli talequale, including loss in weight, 7s. to 7s. 2d. per lb., f.o.b.; new current talequale, including loss in weight, 6s. 8d. to 6s. 9d. per lb., f.o.b.; old Karahissar opium, 6s. 10d. to 6s. 11d. per lb., f.o.b.; old manufacturing talequale, 6s. 8d. to 6s. 9d. per lb., f.o.b. Should purchases continue our market will be maintained, but in the event of buyers withdrawing for a couple of weeks or so, we may have a slight reaction on above quotations. Meanwhile the market remains very firm. The arrivals to date of the new drug are 1,421 baskets against 1,372 at the same time last year."

OPIUM SALTS.—*Morphia Hydrochlorate* has been advanced 3d. per oz. by the makers, who now quote 3s. 3d. per oz. for powder, and 3s. 6d. per oz. for crystals. *Codeia* is also dearer—viz., 11s. 6d. per oz., but it is possible to buy slightly under these figures.

ORANGE-PEEL.—The market appears to have been almost, if not entirely, cleared of good thin cut *Malta* peel. The nominal quotation is now 1s. 6d. per lb.

OTTO OF ROSE.—The price for the leading brand has just been fixed at the rate of 29s. 6d. f.o.b. Constantinople, which is equal to about 30s. 9d. to 31s in London. Other brands are quoted at from 26s. to 29s. per oz. in London.

PEPPER remains very weak, and sales have been made for delivery at lower rates. Fair to good *black* Singapore sold at auction at 3d. to 3½d. per lb., and fair *white* Singapore at 4½d. per lb.

PERMANGANATE OF POTASH.—The price remains 77s. 6d. per cwt. for small, and 82s. 6d. for large crystals, with a very firm market.

POTASH SALTS.—The prices of *Saltpetre* remain unaltered, British refined in kegs being quoted at 21s. 9d., German at 21s. 3d. per cwt. For barrels the quotations are respectively 20s. 9d. and 20s. 6d. per cwt. *Prussiate*: Yellow British steady at 10½d. to 10¾d. per lb. *Bichromate* quiet at 4½d. per lb.

QUICKSILVER is flat and lower. The importer's price is still nominally 6l. 15s. per bottle, but second-hand holders offer at as low a price as 6l. 7s.

QUININE.—A slightly firmer tendency has been displayed this week. On Friday last there were buyers but no sellers at 8¾d. per oz., and to-day 9d. per oz. is the quotation in second-hand. The total quantity sold during the last fortnight is estimated at 15,000 oz. on the spot at 8¾d. to 9d. per oz. for second-hand German bulk, and 5,000 oz. for October delivery at 9d. per oz. Some of the makers have revised their quotations, the following being the official prices:—*Howards*, in bulk, 1s. 1d. to 1s. 2d.; in vials, 1s. 2d. to 1s. 3d.; *Whiffen*, in bulk, 12¾d.; in vials, 1s. 2d.; *Pelletier* in vials, 1s. 7d.; *Milan*, in bulk, 11d.; in vials, 1s. 1d.; *Zimmer & Jobst* in bulk, 11d.; *Brunswick* ditto, 10¾d.; *Monnheim* and *Auerbach* ditto, 10d. per oz. The imports of quinine and other cinchona salts into the United States during the fiscal year ending June 30 have been: In 1891-92, 2,853,871 cz.; in 1890-91, 3,332,173 cz. Of cinchona bark the imports during the two periods were respectively 3,434,875 lbs. and 2,901,783 lbs.

RHUBARB.—Still arriving freely. There were 52 cases in the *Ningchow*, and 78 in the *Diomed*, which came in on Monday.

SAL AMMONIAC is still offering at 35s. per cwt. for best, and at 33s. for second-quality crystals.

SENNA.—The first consignment of new-crop *Tinnevelly* senna, consisting of about 150 bales, sold at the end of last Thursday's sales with good competition, at prices ranging from 1d. per lb. for common specky yellowish and small to 3½d. per lb. for good medium to bold bright green.

SHELLAC.—The market opened with a rather steadier feeling this week. On Monday there were buyers of garnet lac, AC, on the spot, at 75s., cash terms (sales had been made at 74s. 6d. last week); and 200 cases TN orange for November delivery sold at 84s. per cwt. Subsequently 75s. was accepted for garnet AC, and 81s. 6d. to 82s. for orange lac, with short prompt. Fine button lac is inquired for, and full prices are offered on the spot; but holders do not care to sell, and at the auctions they held for extreme rates. A total of 838 cases of shellac was offered at the public sales, and of this 606 cases sold at an advance of about 1s. per cwt. on common orange kinds, while good orange was firm. The following prices were paid:—*Orange*—Fair bright to pale curly, unworked, 81s. to 85s.; fair pale to good red flat ditto, 80s. to 81s.; dark to reddish livery, 78s. to 80s. per cwt. *Button*—Unworked ordinary seconds, 85s.; fair thirds, 78s. per cwt. The market closes very firmly. TN orange is not offering below 84s. 6d. for October, or 85s. for November delivery. About 400 cases September have been sold to-day at 83s. 6d. per cwt. Garnet AC is held at 75s. to 76s. per cwt.

SILVER (NITRATE).—Pure 90-per-cent. in crystals is now offering very cheaply. The price varies almost from day to day, according to the silver value, but the nearest quotation now is 2s. 1d. per oz.

SODA SALTS.—*Bichromate* is now worth 3¾d. per lb. *Bicarbonate* in kegs at the warehouse is held for 7l. 5s. per ton, and at 6l. 5s. to 6l. 15s. f.o.b. Liverpool, according to packing. Crystals are 67s. 6d., ex ship, or 70s. landed terms; the London makers ask 68s. 6d. at the works. *Nitrate* is held at 8s. 6d. to 9s., according to quality. *Caustic* is held at 10l. 10s. for 70-per-cent. on the spot, London, and at 10l. 5s. in Liverpool; 60-per-cent., at 9l. 2s. 6d. in Liverpool; 70-per-cent., on the Tyne, at 10l. 5s.; 76 to 77-per-cent., ditto, at 11l. 10s. per ton.

SOY (CHINA) is selling quietly on the spot at 1s. 1½d. to 1s. 2d. per gallon.

STAR ANISE.—The nominal price is 110s. per cwt. for genuine China star anise, but there is practically nothing offering. In China there is said to be no stock either, and the season is over. Old crop Russian anise is still selling at 19s. per cwt.

TAMARINDS—There have been sales of Calcutta tamarinds privately at 8s. 6d. per cwt.

TURMERIC.—The market is steady, but there is very little business passing. Bright *China* finger has been sold at 17s. 6d. per cwt.; fair *Bengal*, 20s. per cwt. At auction 376 bags were all bought in; dull lean and damaged *China*, bulb and finger mixed, at 17s. to 18s.; dull *Cochin* finger at 24s. per cwt.

WAX (CARNAUBA).—Very difficult to sell; the nominal value is from 50s. to 60s. for fair to fine pale yellow, and 35s. to 45s. for more or less grey mixed.

WAX (JAPAN).—Very flat, and obtainable at 37s. per cwt. for good pale squares.

THE LIVERPOOL MARKET.

CANARY-SEED.—The rapid rise has experienced a slight check; but the article is in a firm position, and sales of good bright seed have been effected at 78s. 9d.; 80s. is asked by many.

GUINEA GRAINS.—Several parcels have been sold at 22s. 6d. for good quality, and the last sale was a small lot at 22s. 3d.

GUM (ACACIA).—The old-fashioned sorts continue to arrive freely, but are now held much more firmly.

HONEY.—There is considerable inquiry, especially for the lower grades of Chilian. The arrivals continue steady, and stocks are large.

THE AMSTERDAM CINCHONA SALES.

(Telegram from our Correspondent.)

AMSTERDAM, Thursday night.

Of about 5,100 packages Java cinchona offered here to-day, 3,274 packages sold (the rest being held for too high limits) at 6½c. (= 1½d. per lb.), a price which very nearly corresponds with that obtained at the London auctions of this week. The following prices were paid: Manufacturing barks, in quills, broken quills, and chips, from 8c. to 174c. (= 1½d. to 2s. 1½d. per lb.); ditto root, from 18c. to 35c. (= 3½d. to 6½d. per lb.). Druggists' barks, in quills, broken quills, and chips, from 5c. to 35c. (= 1d. to 6½d. per lb.); and ditto root, 13c. to 19c. (= 1½d. to 3½d. per lb.). The principal buyers were the Brunswick works, the Auerbach works, and the Amsterdam factory.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

OUR opium market remains very firm, but quiet; the prices are stationary at our last quotations. Fifteen cases have been sold this week at the previous parity.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

Assay of Laudanum.

SIR,—Will you allow me a small space for a comment on the letter of Messrs. Farr & Wright in *THE CHEMIST AND DRUGGIST* in re "Tinct. Opii and the Nottingham Prosecutions"? I do not presume to question the correctness of their analysis as I think the B.P. method of making tr. opii would fail to exhaust the opium, but by the process I have used for many years I believe the opium is practically exhausted, not only of the morphia but of all soluble matter.

I take the opium (say $7\frac{1}{2}$ lb), and, having estimated the morphia, heat it in a steam-pan with 4 gallons of water till all soluble matter is dissolved; put it into a can, and add $4\frac{1}{4}$ gallons of S.V.R. and shake well. In a few days the liquid is poured off, and the bottoms put in a filter-bag and the liquid poured on them and filtered through them, the bottoms pressed, and the quantity made up with proof-spirit to the number of gallons corresponding to the percentage of morphia—10 per cent. to 10 gallons.; 11 per cent. to 11 gallons, &c.

I have lately examined four samples from our customers (two at Nottingham) with the following result:—

A.—	726	per cent.	morphia.
B.—	724	" "	" "
C.—	729	" "	" "
D.—	790	" "	" "

Another sample, a customer's own make, gave me .896 per cent. This must have been made of an opium containing not less than 12 per cent. morphia.

I think these samples prove that the opium can be and by this process is practically exhausted.

The method of analysis was to take 60 c.c. of tincture, evaporate to an extract, add 2 gr. calcium hydrate and 60 c.c. aqua, filter out 52 c.c., and test as in the B.P. I believe the B.P. process gives results rather in excess; but as you are required to use it in estimating opium, it was used in estimating the tincture.

The analyst at Nottingham found no morphia in one specimen, some of which nearly poisoned a woman!

Market Place, Hull,
August 22.

Yours truly,

JOHN S. LINFORD.

SIR,—The letter from Messrs. Farr and Wright on the percentage of morphia actually found by them in tinctura opii., B.P., deserves the most careful consideration.

It is a serious matter indeed if a chemist who loyally follows the directions of the Pharmacopœia, and spares no pains to stock drugs of standard quality, is yet liable to be branded as a criminal because the process he is bidden to follow fails to secure the transfer to the galenical preparation of all the active principles of the crude material. Can no better method be devised of ensuring that the marc shall be exhausted of its active principles? Probably the great majority of pharmacists have never suspected the existence of this difficulty.

The physical condition of the marc, as it is left upon the filter, suggests none. Since good opium is said—in Royle and Headland's "*Materia Medica*"—to yield about two-thirds of its weight to water and as much as four-fifths to rectified

spirit, it would seem more difficult to avoid than to attain its exhaustion by a proof-spirit menstruum. Would it be an improvement to macerate the opium in three-fourths of the spirit, then to transfer to a percolator, and to complete the process by pouring the remaining fourth, or *quantum sufficiat*, over the drained marc? Or is there any evidence in favour of a plan which I have sometimes known to be followed, which is to take fresh opium one-sixth more than the specified quantity, so as to allow for moisture—*i.e.* for a pint of the tincture, $1\frac{3}{4}$ oz.; this is sliced and macerated in $7\frac{1}{2}$ oz. of boiling distilled water for twelve hours, stirring frequently until it is thoroughly pulped, then $12\frac{1}{2}$ oz. of rectified spirit are added, and the maceration finished in the way prescribed by the Pharmacopœia.

These prosecutions will probably set most chemists thinking how they may test their laudanum for its percentage of morphia. My own experience is confined to one attempt to assay the liquid extract of poppy-capsules—which is sold for the extemporaneous preparation of the syrup—and that was a complete failure.

Passing on to consider the letter of "Anglo-Indian" on the use in India of the native-grown drug, it puzzles me to understand how Malwa opium, yielding only 2 per cent. of morphia (Royle and Headland), can be substituted for Smyrna opium, containing 10 per cent., without disastrous failures in its clinical use and endless trouble to both prescriber and dispenser. On the authority above quoted, Malwa opium contains 30 per cent. of moisture, while "Anglo-Indian" states that it loses 23 per cent. by evaporation; but this is a minor point.

That the soil and climate of India present no insuperable difficulty to the production of opium satisfactory as to its morphia-content is shown by the assay of the Saharunpore Garden opium, first cultivated by Dr. Royle, which, in the hands of the late Professor Daniell, reached 8 per cent. The Patna Garden opium, cultivated, prepared, and selected exclusively for the dispensaries, yielded to Dr. Christison as much as $10\frac{1}{2}$ per cent. Why has not the production of this quality been extended so as to supply the pharmacists in India who now, "Anglo-Indian" tells us, universally use Malwa?

It is hardly a complete answer to Mr. Dott's assertion—that Indian opium was unsuitable for making morphine—to bring forward instances of morphia and other alkaloids obtained from "the waste of the opium factories" having been actually made and sold. The expression I have quoted is a curious one. Why should the most valuable constituent of the drug and the measure of its value be found in any quantity in the "waste"; and if it is, what is likely to be the therapeutic value of the factory-made drug which nevertheless, according to "Anglo-Indian," yields high-class solid and liquid extracts?

From an economical point of view "Anglo-Indian's" own figures show the entire unsuitability of the drug for morphia-making. A manufacturer who would pay for it 13s. per lb. when raw material containing three times as much can be bought for 7s., must be sadly wanting in "gumption." The whole question abounds in interest.

Yours obediently,

Dover, August 23.

J. F. BROWN.

SIR,—Although the difficulty experienced in completely exhausting opium of its alkaloids with proof spirit is not a new one, nevertheless, the letter of your correspondents, Messrs. Farr and Wright, in your last issue is interesting, inasmuch as it shows what kind of laudanum a pharmacist is likely to produce if he makes a tincture from opium of the low alkaloidal standard of the British Pharmacopœia, and does not subsequently standardise his tincture to the 0.75 per cent. of morphia, which it is stated in the Pharmacopœia the tincture should contain.

As I understand the matter, there are errors all round, of which cognisance must be taken in order to determine what are the practical difficulties that prevent the easy production of a tincture by the pharmacist, who may have the opportunity of operating on small quantities only, which should contain the official percentage of morphine. Some of the errors are these:—

(1) The British Pharmacopœia standard of the alkaloidal value of opium is much too low; this has been freely ac-

knowledge, and will, no doubt, be amended in future editions.

(2) It has been presumed that the assay process (given under the head of opium) for morphine will give a like morphia value when proof spirit is the solvent. In other words, the Pharmacopœia statement is based upon calculation rather than upon actual observation of laboratory production of tincture followed by estimation of the morphine.

Practically, I have found when working on a large scale that it is more convenient to prepare a tincture of a greater strength than the Pharmacopœia orders, and from an opium of higher alkaloidal value than the Pharmacopœia directs (say, from 12 to 14 per cent. of morphia in the powdered opium), and then, after assay, to reduce such tincture by dilution with proof spirit to such a strength that 1 fluid oz. shall contain 3·3 grains of morphine or 75 per cent. By this slight deviation I obtain a result aimed at by the editors of the British Pharmacopœia in producing a standardised tincture that shall not be of less alkaloidal value than they direct.

August 23.

JOHN C. UMNEY.

Water-analysis.

SIR,—I fancy the letter from Mr. Wanklyn in your last issue will give rise to a deal of misapprehension, and trust you will allow me space for a few remarks. In the first place, it is a great pity that the old quarrel between the two processes should be revived. No one who looks at the matter from an unbiassed point of view can fail to see that both processes have their merits. As a water-analyst of some experience, I should never dream of omitting Wanklyn's albuminoid-ammonia process, but I consider that the Frankland-Armstrong process should also be applied if any way possible. It must be remembered that Wanklyn's process does not give you any true estimation of the amount of organic matter present, for a definite substance will yield up one proportion of its total nitrogen to the action of the alkaline permanganate and another substance a different amount. This at once, I think, invites a more definite method of analysis—such as is Frankland's—where we have in black and white the actual amount of carbon and nitrogen present. Of course, this latter is a tedious process; but from an experience of nearly 600 samples, analysed in both ways to a great extent by myself, one is driven to the conclusion that (unless the history of the water tells a special tale) the two methods together condemn or together approve a given sample. It is very misleading to assume that most chemists do not prefer to use the combustion process, for it will be found that, amongst other doctors, Crookes and Odling (formerly, too, the late Dr. Tidy) report for the seven London companies on this method of analysis to the exclusion of the Wanklyn process. Professor Thorpe, Professor Smith, Dr. Angel, and many other chemists of repute use the combustion process, and in the laboratory in which I have the privilege of working often as many as forty samples a week are thus analysed.

I am, &c.,

10 Ascham Street, N.

ERNEST J. PARRY.

Suppository-pan.

SIR,—I have had a similar pan in use at least two years. There is one important mistake in your diagram. The handle of the top pan is put so that the spout is to the left hand. This necessitates holding with right, stirring with left whilst pouring out, which is very awkward except to "Benjaminites." I have also a much larger pan with three inner pans of different depths for ointments, &c., which I find most useful. I think Mr. W. Toogood sold similar suppository-pans, but not with round bottoms, and one or two other advantages.

Yours truly,

YORKSHIRE CHEMIST. (98/19.)

A Cream-of-Tartar Transaction.

SIR,—We ordered from a northern firm styling themselves "Drug Brokers, &c.," a cask of cream of tartar. On its arrival, the weight invoiced corresponding with that stated on the railway delivery-note—namely, 11 cwt. 1 qr. 14 lbs.—almost satisfied us, but, on second consideration, we did

weigh it and found it 2 cwt. 0 qr. 26 lbs. short, and on testing the cream of tartar found it to contain about 50 per cent of rice-flour, or fine granulated rice. This firm, after threatening to issue a writ and saying it was perfectly pure when it left them, have now removed the stuff from Birmingham and paid all charges. We find the railway company took the senders' weight; this practice opens the way to serious frauds. If any of your readers are prosecuted for selling adulterated cream of tartar, we will give them what information we have.

Yours faithfully,

Edgbaston Street, Birmingham,
August 23.

G. TURLEY & Co.

Irish Pharmaceutical Affairs.

98/65. *M.P.S.I.*, referring to the appointment of Mr. T. W. Robinson as examiner in pharmacy, would like to ask the Registrar of the Pharmaceutical Society of Ireland, "Did he accept an application for the post from Mr. Robinson whilst that gentleman was still Vice-President of the Society?" If Mr. Robinson had previously sent him his resignation, "*M.P.S.I.*" remarks that the Vice-President of a chartered corporation cannot divest himself of his office or of its responsibilities merely by writing a letter of resignation. The resignation must be accepted by the Council before it takes effect.

99/46. *L.P.S.I.* writes at some length in support of the comments on the Society's School of Pharmacy which were published last week from "A Student." "Your correspondent," he says, "wants a School of Pharmacy. So does every Irish student, and of botany and materia medica as well. The Society supplies a School of Chemistry of a sort, and the one Dublin 'grinder' does the rest for his own benefit. This is what the student, frequently living in Dublin for four or six months unemployed, has to look forward to for help."

"The prospectus of the Irish Pharmaceutical Society's School of Chemistry promises the student a thorough practical and theoretical training in qualitative work, water-testing, Nesslerising, volumetrics, recognition of alkaloids, a well-fitted laboratory, and the 'higher walks of analytical chemistry,' all for 6*l.* 6*s.* I attended two sessions and part of a third; got an elementary run through 'group'-testing (when desirous to practise on mixtures of salts I brought my own); the B.P. volumetrics—six burettes between twelve or fourteen men—simple tests for alkaloids; no theory, no physics, no air or water; the 'higher walks,' of course, a purely poetical flight. About one quarter of my time was spent hunting for reagents and apparatus. Yet the teachers claim that they give a training quite good enough for the examiners, which, unfortunately, though reflecting no credit on the examinations, is very nearly true."

"I could have got a better course for, I think, 30*s.* at the Kevin Street Technical Schools, and would have done so but for that prospectus; of the medical schools open I heard only poor accounts, and the Royal College of Science did not hold evening classes."

Our correspondent considers that what is wanted is that more scientific specialists should be appointed as examiners, and that a technical museum, reference-library, and reading-room should be established; and he urges Irish students to agitate without ceasing till these are obtained.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4*d.* each.

92/42. *Wales.*—To Attract Moths at dusk entomologists use a mixture of rum and treacle, smeared upon trees or posts.

94/59. *F. Rideal*.—Tomato-sauce:—

Ripe tomatoes ..	..	..	..	3 doz.
Chili vinegar ..	..	..	..	1 pint
Garlic ..	..	..	..	1 oz.
Shallots ..	..	..	..	1 "
Common salt ..	..	..	..	2 "
Cayenne pepper ..	..	..	..	$\frac{1}{2}$ drachm
Lemon-juice ..	..	..	..	5 oz.

Put the tomatoes in a jar, and warm in an oven until tender. Cool, skin, and pulp the fruit, and add to the liquor in the jar, along with the rest of the ingredients. Mix well, and bottle.

90/30. *Radix* (Bridgnorth).—We do not reply to anonymous questions.

98/24. *L. B.*—We cannot reprint a formula because your copy is missing. That would be hardly fair to several thousand other subscribers whose copies are not missing. They do not want their journals made up of reprints. If the formula is worth 4d. to you, you can get the back copy from the publisher for that amount. Questions on different subjects must be sent to us on separate sheets of paper.

99/55. *N. O. W.*—The specimen you send us is Mogadore beeswax, apparently adulterated to a considerable extent with goats' fat. It is worth, nominally, about 5l. per cwt., but the market is already overstocked at present. You will find references to this kind of wax in our issue of May 14 and previous numbers.

99/49. *Rheum*.—For answers to your questions see the Educational Number, September 19, 1891, which you can get from the publisher for 4d.

100/3. *Yorkshireman*.—We think the sale of "paregoric substitute" and such-like preparations is a mild sort of fraud on the public, and we consider it would be dangerous as well for you to sell the poisonous preparation and your apprentice the non-poisonous one. You must, therefore, excuse us if we pass over your questions. You will find plenty of non-poisonous cough-mixtures if you will look back a little. There was one published last week.

99/64. *B. C.*—Quain's "Dictionary of Medicine" is a most valuable work from a professional point of view, but we do not think it is the most useful obtainable book for a counter-prescriber. Can you not in your city see a copy in any library and judge whether it will suit you?

87/9. *Sugar*.—The sample powder which you send as a Colouring-food for Canaries is the usual mixture of mild chillies, turmeric, rice, and sugar, for which you will find various formulæ in back numbers. This one differs a very little from these in seemingly containing a small proportion of ground hemp-seed. It ought to give somebody a good profit at 4s. per lb.

99/63. *Inquirer*.—Dental Modelling Composition.—White wax, 2 oz.; almond oil, 1 drachm; resin, 20 gr.; colour with carmine and perfume with rose-geranium. See also April 6, 1889, page 495, and August 23, 1890, page 263.

81/69. *J. E.*—As the colouring-matter of annatto-seeds is soluble in spirit of wine, solutions of the alkalies and their carbonates, also in fixed oils, you should have no difficulty in obtaining a Fluid Annatto. Select any of the solvents to suit your purpose, if spirit, reduce it to proof and macerate for a week; if oil or alkali, macerate with a gentle heat.

91/53. *Cream Tart*.—Essence of Walnut-juice.—The only preparation we know of that would answer to this is one used as a vermifuge. It is made by evaporating the juice obtained from unripe walnuts, and is generally given with

cinnamon-water. There is a tincture also sometimes prescribed, but we do not know the formula.

99/42. *Inquirer*.—Hard Varnish, suitable for walking-sticks:—

Mastic ..	..	..	..	4 oz.
Gum juniper ..	..	..	..	3 "
Venice turpentine ..	..	..	..	3 "
Methylated spirit ..	..	..	..	2 pints
Pounded glass, to prevent the resin marring ..	..	..	..	3 oz.

Mix.

Or—

Gum juniper ..	..	..	..	8 oz.
Venice turpentine ..	..	..	..	4 "
Mastic ..	..	..	..	2 "
Spirit ..	..	..	..	2 pints

Mix.

95/61. *Radix*.—Magenta Dye.—The best substances to use are the aniline magentas, if for home or amateur work. They should be used by dissolving in boiling water, either alone or slightly acidulated with acid. They are not permanent; but in time bleach if exposed to strong sunshine. It is said that by using a small quantity of Epsom salts in the last rinsing-water, after dyeing, the colour is rendered more permanent. Very little is required. Ten grains of roseine are said to be sufficient for two yards of silk. Cough and Bronchitis Linctus:—

Liq. morphinæ hydrochlor. ..	..	..	℥xxiv.
Spt. chloroformi ..	..	..	℥xxiv.
Glycerini,			
Aque, aa. part. eq. ad ..	..	..	℥j.

Colour with liq. cocci.

℥j. occasionally.

Or a very effectual linctus may be obtained by dissolving 1 grain of codeine in 1 oz. syrup of lemons.

98/44. *Lincoln*.—The Safest and Best Depilatory is that quoted by Martindale. It will redden the skin occasionally, but does no permanent damage:—

	Parts
Sulphide of barium (in fine powder) ..	1-3
Starch-powder ..	3

M.

Make into a paste with water at the time of using, spread over the part required, and remove at the end of five or ten minutes.

Here is another:—

	Oz.
Lime ..	12
Starch ..	10
Orpiment ..	1

Mix, and make into a paste with white of egg when required for use.

In either case substitute powdered orris-root for part of the starch, or perfume with some essential oil, if you wish a superior article.

98/54. *T. B. B.*—The Best Treatment for Nervousness.—Plenty of exercise in the open air, regular meals, cold bathing (or, commencing slightly warm, gradually becoming cold), moderation in tobacco and alcohol, and a cheerful mind. For tonics—quinine, iron, and strychnine, generally in acid combination, viz.:—

Syr. ferri phosph. c. quiniâ et strych...	℥iv. to ℥j.
Aq. chlorof. ad ..	℥viij.

M.

℥j. ter in die.

In certain cases an alkaline treatment may prove beneficial then use:—

Ferri et am. cit. ..	..	..	gr. 160
Liq. strychninæ ..	..	..	℥ss.
Spt. ammon. aromat. ..	..	..	℥ij.
Aquam ad ..	..	..	℥viij.

M.

100/6. *Black Art*.—Black Varnish, inexpensive, for backing-up positive plates.—To a pint of methylated spirit add sufficient black sealing-wax to give the required body and colour.

LEGAL QUERIES.

Consult *Alpe's "Handy-book of Medicine-stamp Duty"* in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the *DIARY*, pp. 161-9.

99/65. *H. X.* asks: "What is it that a limited liability company can do which an individual cannot do?" [In regard to pharmacy, we presume. By associating themselves into a registered joint-stock company, limited or not, any seven persons, not one of whom need be a qualified chemist and druggist, may keep open shop for the sale of scheduled poisons, and may assume the title of chemists and druggists. As individuals they cannot do this. For the actual sale of the poisons, however, they require the services of a qualified man.]

100/1. *Waverley* asks: "If a stamped proprietary mixture contain in each dose 4 minims liquor strychninæ, which is less than the minimum B.P. dose, ought the said mixture to be labelled 'Poison' and the sale entered in the poison register with the signature of purchaser and witness?" [It is, of course, impossible for us to define how far a chemist may go in disregarding the law without risk. The Act says clearly enough what you are to do when you sell liquor strychninæ; it says nothing about the dose. If you think, however, that the infringement you suggest would be such a very little offence that no one could reasonably object, you must take your chance. But you can hardly expect us to endorse your law-breaking inclinations.]

98/56. *Students*.—We do not understand wherein you think we are mistaken. We were quite aware of the circumstance you mention.

96/11. *W. M. L. W.*—Any persons who lay down poisoned grain "on any ground or other exposed place," and any persons who sell such grain or expose it for sale, are liable to 10*l.* penalties. The Act does not say that it is unlawful to give away such grain, but the chemist who wants to avoid trouble had better not try to evade the law by such subterfuges.

98/58. *J. K.*—We have answered your point frequently, as far as it can be answered in the absence of an authoritative decision. Your cough-mixture contains some morphia. The Pharmacy Act requires that when you sell a poison you shall label it with "the name of the article, and the word 'poison,' and with the name and address of the seller of the poison." The makers of proprietary medicines containing poisons generally have assumed that it is necessary to give the name of the poison. They have, no doubt, been legally advised to that effect, and perhaps the advice is right. But we do not think the Act requires that construction. Take chlorodyne, for example. Surely "the name of the article" in that case is "chlorodyne." That name, the word "poison," and the name and address of the seller, seem to us to be all that the statute requires. You must, however, only take this opinion for what it may seem to you to be worth, as no Court has ever been asked to decide this point.

96/59. *E. F. F.*—Your label seems unquestionably to render the preparation liable to medicine-stamp duty.

92/65. *G. W. F.*—We cannot quite make out your case. Have you in any way, by circular or otherwise, advertised the preparation as beneficial in any ailment?

97/41. *W. W.*—We cannot give you decisions in interpretation of the Pharmacy Act. You must exercise your own judgment and take some risk. In your place we should not label an article "poison" when it would be manifestly absurd to do so, but we cannot guarantee that in so acting you would never be fined.

97/14. *R. T. M.*—We do not consider that salts of lemon or ointments of white or red precipitate are poisons within the meaning of the Pharmacy Act. If we are right, unqualified persons may sell them and they need not be labelled "poison."

101/7. *Q. K. A.*—Your only way of learning authoritatively whether your elixir is liable to Excise duty as a wine is to send a sample to the Board of Inland Revenue. Unless it is in their opinion so medicated as to be unfitted for use as a beverage they will require the vendor to hold a licence, and there is practically no appeal from their decision.

Two or three correspondents criticise our reply in this column last week to "Chlorof." We had been asked whether, in view of what was said in the circular issued by the Pharmaceutical Council, it was necessary to label as poison an iron and quinine tonic made up with aq. chloroform. We said, "Certainly it is if that document be read literally." Now "Phosphate" and others inform us that in the Schedule chloroform is named, but "its preparations" are not added. Therefore, say they, spirit and water of chloroform are not required to be labelled "poison." We are well aware of the fact thus brought before us, and we agree with the inference drawn from it. All we say is that the Pharmaceutical Council's circular declares that "proprietary preparations containing poisons must be labelled 'poison.'" A proprietary preparation made up with aqua chloroformi contains some chloroform, and therefore, if the document be read literally, must be labelled "poison." We think this interpretation of the Act is incorrect, but we were asked what the Council said.

100/63. *Caution*.—It is not usual to treat fly-papers as if they were preparations of arsenic; but we cannot say that they are not, or that some day somebody will not be prosecuted and fined for not registering the sale of them. There is no law limiting the age of persons to whom they may be sold.

96/44. *Pons*.—Compound syrup of the hypophosphites is a chemical food, and a chemical food, if recommended for the prevention, cure, or relief of ailments, is liable to duty (see "Alpe," pp. 61, 62, where examples, both of dutiable and non-dutiable descriptions, are given). The "extracts from the medical journals" printed upon your label are apparently the cause of liability, the statements that "the hypophosphites are specially used in weakly and rickety children," and that they "remove erratic pains," being, no doubt, those upon which the authorities rely. We are aware that syrup of the hypophosphites has been previously held to be chargeable with duty, but only by reference to the recommendation for prevention, cure, and relief, &c., and we have not heard of any case recently.

101/60. *F. T. P.*—It is not necessary to put medicine stamps on articles to be sold in Ireland. But if you sell the articles (wholesale or retail) in England, to go to Ireland or elsewhere, you must stamp them. You may consign your goods to a *bonâ-fide* agent.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

98/72. "Dulcine" for cotton-handkerchief dressing: maker wanted.

100/21. Patent "Wireine" socks: maker wanted.



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The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

IRISH correspondents address us in regard to the coming Council election.

WE give an account of the work of that well-patronised body, the Imperial Institute.

THE Southern Drug Company are prosecuting their Bournemouth manager for embezzlement.

THE opium questions are further discussed, in our Correspondence columns, by Mr. Dott and Mr. J. F. Brown.

TWO correspondents throw out ingenious suggestions as to the betterment of pharmacy, which we discuss editorially.

MR. COMMISSIONER KERR has given a useful lesson in regard to the evidence necessary to prove delivery of goods.

MESSRS. WOOLLEY'S new warehouses at Manchester were opened on Monday, and we give a description and sketch of them.

THE Magistrates at Ilkeston have dismissed a summons brought against a Norwich firm for the sale of alum baking-powder.

WE report the death of a Bath chemist's assistant by drowning, and of one at Harrogate by an overdose of a narcotic.

THE necessity of a pure water-supply always becomes accentuated when cholera threatens us, so that Mr. Parry's article on the biological examination of water is opportune.

A REPRESENTATIVE of this journal has had an interview with Dr. Thorne Thorne, chief medical officer of the Local Government Board, in regard to the threatened epidemic of cholera. In connection with this we give several pages of notes, which chemists may turn to useful account at the present juncture.

THE poison-roll is very lengthy this week, carbolic-acid fatalities being numerous. Carbolic acid seems to have a peculiar fascination for those persons who have been driven to suicide by the depression consequent to influenza. A very unusual poisoning investigation is taking place at Coleraine, where an infant is supposed to have died from the effects of tartar emetic taken by its mother before its own birth.

THE hearing of the summonses brought by the Pharmaceutical Society of Ireland against Messrs. Boyd & Goodwin was resumed in the Dublin Police Court on Tuesday. The Magistrate, who had avowedly adjourned the cases because he did not know as much of pharmacy law as he should know, had not apparently made good use of the interval, as he obviously had to finish his education while the case was proceeding. Ultimately two more fines were imposed.

Trade Notes.

THE Camden Pharmacy, 71 Camden Road, N.W., formerly carried on by the late Mr. Orpin, has been taken over by Mr. J. Mann.

MESSRS. FORD, SHAPLAND & Co., of 6 Great Tarnstile, E.C., are already in the field with calendars and almanacks for 1893. Those for pocket, purse, and household use are got up in good style and with appreciative knowledge of the wants of the trade. Chemists on the look out should get specimens.

AT the Tasmanian Exhibition just closed at Launceston, Messrs. Burroughs, Wellcome & Co. received three special first awards for medicine chests, Kepler extract of malt, "Lanoline" soap and other toilet preparations, and the four first awards for Kepler cod liver oil, compressed drugs, medicines, &c., eucalyptia soap, pinol and pinol soap.

FROM an announcement made by the proprietors of the "Musk-Baur" in our advertising columns this week, it will be seen that they have been successful in their suit against another firm who had placed upon the market a preparation which, it was alleged, that it infringed their patent rights. The manufacture and sale of the rival preparation has now been stopped by order of the Court, and "Musk-Baur" holds the field in the artificial musk line.

TO the person forming the greatest number of words of not more than four letters out of the following sentence, "Dr. Allinson's Natural Food for Babies," a five-guineas prize is to be given by The Natural Food Company, 9 Southall Place, Long Lane, S.E., and the company have handbills about the competition which they would like chemists to send for by postcard. The competition is a means of increasing the sale of the food, and it closes on the 30th of the present month.

English News.

Wine-licences

have been granted to Mr. James Williams, chemist and druggist, 38 Mount Pleasant, Tunbridge Wells; to Mr. Frederick Rossiter, chemist, Grand Parade, Hastings; to Mr. A. R. Rhodes, chemist, Moss Side, Manchester; and to Mr. E. Hughes, chemist, Blaenavon.

An Unqualified "Vet."

George Beart, who as "R. Beart" has been for some time past practising as a veterinary surgeon in Ramsgate and Broadstairs, appeared on a summons at the Ramsgate Town Hall on Monday, charged, at the instigation of the council of the Royal College of Veterinary Surgeons, with infringement of the Veterinary Surgeons Act, he not being in any way qualified or possessing a certificate of competency. Defendant pleaded guilty, and said he was sorry for what he had done. He was fined 7*l.* 1*s.*, including costs.

Disappearance of a Chemist's Assistant.

On Sunday, August 21, Mr. A. C. Burden, assistant to Mr. Partington, chemist, of Beauford West, Bath, left home, it was believed, with the intention of taking a short walk, but he never returned. He was about 28 years of age. He had only occupied his situation at Bath for three months. Mr. Burden had always been accustomed to take a walk on Sunday afternoon, and as, previous to his disappearance, Mr. Partington, his employer, had spoken to him of Hampton Rocks, and he was seen leaving home and taking that direction, it was supposed that this was his destination. On the following Sunday a body was taken from the Avon near Bedminster, which it was believed was the body of Mr. Burden, though a relative of his was unable to identify it as that of the missing man. This was doubtless owing to the discolouration and swelling of the body, which had resulted from immersion in the water for a week in such hot weather. The name on the handkerchief, and the fact that the deceased was wearing a chest protector, pointed to the conclusion that it was Mr. Burden. On her return from Bristol the lady who had failed to establish the identity visited Mr. Partington, who paid a visit to Bristol, and is quite certain that the body is that of his late assistant. He did not see the corpse, but the property found in the deceased's pockets he regards as conclusive evidence, especially two keys, belonging to Mr. Partington's shop, duplicates of which he himself carries, and a padlock which belongs to the back door of his premises. The clothing also is similar to that which his assistant was wearing. How deceased met his death is a mystery. He was not depressed in spirits at all.

Fires.

On Saturday last, the residence and stables situated at Solihull, of Mr. H. T. Done, chemist, of Coventry Road, Birmingham, were destroyed by fire. A pony kicked over a benzoline lamp on to some straw which was ignited, and the flames spread to the house. The damage is estimated at between 400*l.* to 500*l.*—A slight fire occurred on Monday on the premises of Mr. Alfred Wood, chemist, 41 Ecclesall Road, Sheffield, through the over-heating of two canisters of oil, which had been placed in the oven of the back kitchen to warm. When Mr. Wood opened the oven door there was an explosion, and the burning oil ran about the kitchen. The fire was put out without serious damage being done.

An alarming fire broke out on Wednesday at Mr. Matterson's pharmacy, 108 Oxford Street. It was confined to the basement, but the fumes occasioned by the burning of some of the chemicals stored there were so intense that the firemen had several narrow escapes from suffocation. A London evening paper refers to this fire as occurring at "Matterson, Davy & Knight's Pharmacy," which appears to be a development of the title "Matterson's Day and Night Pharmacy," which its proprietor adopts.

Alleged Embezzlement by a Drug Company's Manager.

At the Bournemouth Police-court, on August 25, Frederick Brooke Webb was charged with embezzling 42*l.*, the pro-

perty of the Southern Drug Company, Southampton. Mr. Trevanion prosecuted, and Mr. Dickinson defended. Mr. Trevanion, in opening the case, said it was a most painful one, as the accused had hitherto borne an irreproachable character. He had been engaged off and on for three years as manager of the Bournemouth branch. Among his duties he had to pay into the bank all moneys received on Mondays and Thursdays. A statement had to be sent to Southampton every night, and a general abstract every Monday. What he appeared to have done was to put a date on his paying-in sheet actually a week earlier than he really paid in, and as the sheet bore the initials of the bank clerk, his employers thought it was all right, but in consequence of some discrepancy, an investigation was made, which showed a deficiency to the extent of 41*l.* 18*s.* Mr. Thos. Batty, general manager of the Southern Drug Company, Southampton, detailed the duties of the accused, and proved finding the deficiency as stated. There had been small discrepancies before, and the prisoner had been cautioned. Cross-examined by Mr. Dickinson: Defendant had been in the employ of the company for about seven years, first in Poole. He was a capital manager, and was removed to Bournemouth on that account. His salary was 120*l.* a year, house-rent, and premiums of about 20*l.* a year, being commission on the takings. There was some commission due to the accused, but he could not say how much. Prisoner said he intended to pay the deficiency into the bank on Saturday. Witness did not say if that was the case it would be all right. He said "If you can raise the money and make up the deficiency it may have some weight with the prosecutor." The money had been several times offered and refused. The accused had put a cheque of his own in the cash book to cover a sum of 10*l.*, which had been "borrowed." Mr. Wm. Day, managing director of the company, corroborated the last witness. Prisoner received notice to leave on August 9, but not on account of any deficiencies. In cross-examination, witness said at times he had had cause for dissatisfaction with the defendant, but they were hoping that he was going on all right. He admitted that the money had been offered to him, but he refused to take it as he considered it his duty to the public to prosecute. Mr. John Tanner, ledger-keeper at the Wilts and Dorset Bank, proved the receipt of various sums of money, the dates showing considerable discrepancy. Mr. Dickinson, in his defence, said he could not help remarking that Mr. Day seemed to be of a rather vindictive spirit, for he had to admit that prisoner had been a good servant with the exception of one or two trifling discrepancies. He had been promoted from Poole to Bournemouth, and what had been done was certainly not a case of embezzling, but a question of account. He had merely anticipated his salary and commission. He had actually shown in his books the whole of the money he had received, and had merely neglected to pay the money into the bank on a certain date. There was no proof, in fact, of "the secrecy and concealment" necessary to constitute a charge of embezzlement. Mr. Dickinson concluded a most able address by appealing to the Bench to dismiss the case. The Chairman said it was a case that must be decided by a higher court, and prisoner was committed for trial at the Quarter Sessions. Mr. Dickinson: Will you grant bail? The Chairman: Oh, certainly. Prisoner was then admitted to bail in his own recognisances of 50*l.* and a deposit of 50*l.*

Sudden Death of a Chemist's Assistant.

Mr. Robert Kay Harland, an assistant to Mr. R. H. Davis, chemist, Harrogate, has died under somewhat sad circumstances. He had been ill for the past fortnight, but declined to see a doctor, and Mr. Davis made up a soothing mixture for him. This the deceased took for a few days, and had not since complained. Contrary to his usual custom he did not attend to his work on Monday morning, and he was called up. On knocking at his bedroom door there was no reply, and a doctor was sent for. On entering the room the deceased was found in an insensible condition. He died shortly before 11 o'clock. At the inquest, held on Tuesday, the father of the deceased, Mr. Davis, and a medical man, gave evidence, and the jury found a verdict that "the deceased died from the effects of an overdose of narcotic poison, taken to produce sleep, and that the death was through misadventure."

The United Alkali Co.'s Weights.

At St. Helens on Saturday last, the United Alkali Company were summoned for having unjust weights. Chief-constable Wood said he visited Messrs. Kartz & Co.'s works, belonging to the company, in Warrington Road, and found there 13 weights, all of which were light, the amount varying from $\frac{3}{4}$ oz. to 25 oz. In reply to Mr. Eccles, who defended, Mr. Wood said the salt which passed over the machine determined the wages of some of the men. He admitted that the weights being light was in favour of the men. Mr. Eccles said the weights were not used for trade purposes, and therefore did not come under the Weights and Measures Act. Mr. Davison (Magistrates' Clerk): It has already been determined that weights used to determine colliers' wages are used in the course of trade. If they are used for wages at all I must advise the Magistrates that they are used for trade purposes. Mr. Hammill, the manager of the works, said the scales were used more for the apportionment of the charges to each furnace than for other purposes, but he admitted that four men's wages were determined by those weights. The Magistrates' Clerk: There is another side to the question. If the men gain by light weights the shareholders lose by it. The Magistrates imposed a fine of 20s. and costs.

Police-court Items.

Stealing a Chemist's Spectacles.—A boy named William Doyle, in the employ of Mr. Goodliffe, chemist, Rendezvous Street, Folkestone, has been charged before the local Magistrates with stealing a pair of gold-rimmed spectacles from his employer's shop. The boy took the spectacles home and told his mother he had found them on the Promenade. He was ordered to pay 5s. fine, and to receive six strokes with a birch.

Assaulting a Constable.—At the Brierley Hill Police Court on August 25, Joseph Bloomer, chemist and coal merchant, and his father-in-law, were charged with assaulting a constable. The defence was that the constable was the aggressor. The Stipendiary said he believed the officer's account of the affair, and he fined the defendants 5l. each, with costs, including solicitor's and doctor's fees, with the alternative of one month's hard labour.

5l. or 50l.—Francis Becker, of 47A Portland Place, and carrying on business as a manufacturer of chemical apparatus at Hatton Wall, prosecuted an "equestrian artiste," named Renée Myer, at the Guildhall on Tuesday, on a charge of forgery. He had stayed with her for several days, and she had sold him some gold-rimmed spectacles, and he said he had given her a cheque for 5l., which she had altered to 50l. The girl said she did not alter the cheque, but that he gave her one for 50l. The Alderman discharged the girl.

Irish News.

The Dublin Horse-show Week.

During last week Dublin has been the scene of much business and excitement owing to the large number of visitors who arrived to witness the annual horse-show held under the auspices of the Royal Dublin Society at Ballsbridge. The show was an unprecedented success, and lasted over four days, during which the hitherto large receipts of previous years was exceeded by a sum of more than 600l. The following drug and chemical firms occupied stands, which were tastefully arranged with their various exhibits:—Messrs. Wm. Hayes & Co., pharmaceutical chemists, Grafton Street, Dublin, veterinary medicines and stable requisites; Samuel Boyd, chemist and druggist, 46 Mary Street, Dublin, oils, varnishes, and cattle medicines; Day, Son & Hewitt, London, their well-known specialties; Jeyes' Sanitary Compound Company (Limited), London, their various disinfectants, sheep-dip, &c.; McMaster, Hodgson & Co., Capel Street, Dublin, fluid annatto, hayspice, calf-meat, and feeding stuffs; the North of Ireland Chemical Company (Limited), Belfast, a varied collection of the many products, sheep-dips, and cattle requisites manufactured by them.

A "Medical Prescription."

A very important portion of the proceedings taken against Messrs. Boyd & Goodwin, druggists, Dublin, by the Pharma-

ceutical Society of Ireland, did not receive the attention or decision of the police magistrate last week, owing to his suggestion that the summons for the offence on July 14 should be withdrawn in order to expedite the hearing of the summonses for the other dates. Mr. Clay, the solicitor for the prosecution, accepted this suggestion and thus a point which is the subject of much discussion and possibly future litigation is left unsettled. The summons for July 14 was one "for selling and keeping open shop for retailing, dispensing, or compounding a medical prescription," and the charges were based on the fact that Messrs. Boyd & Goodwin did on that date sell and dispense a medical prescription (Dr. Swan's) which prescribed a bottle of Henry's magnesia, and a bottle of Hunyadi Janos Water, and ordered directions for the use of same.

A charge was also made for using the title pharmaceutical chemists and dispensing chemists, on the labels on which the directions were written on these bottles.

Messrs. Boyd relied on the absence of any compounding being necessary in connection with this prescription, but the prosecutor insisted that a medical prescription was not the piece of paper on which the doctor wrote, but the medicine with directions which are ordered by a doctor. In fact, the whole matter resolves itself into the correct definition of "a medical prescription," and whether labelling a proprietary or patent medicine with the directions as given under the hand of a medical practitioner is dispensing or compounding, and that the sale of such articles (they being ordered by a doctor) constitutes the offence of keeping open shop for selling medical prescriptions. The charge of using the title "pharmaceutical chemists" was not pressed either.

Chemistry at Queen's College, Cork.

The President of this College in his annual report, states that among the most pressing wants of the college, that of a new chemical laboratory stands foremost. The professor of chemistry complains that not half the requisite number of working benches are available for the students who attend the practical classes, and that the arrangements for ventilation were very defective. As the rooms occupied by this department are required for the physical laboratory and the technical museum, the president urges that an excellent site for the establishment of a new chemical laboratory might be found in the materia medica garden.

Another Indian M.P.

As a good deal has been said about the return of Mr. Dadabhai Naoroji to Parliament it is worth noting that a Eurasian, Mr. J. C. Flynn, is member of Parliament for North Cork. He is the son of Mr. Apothecary Flynn of the Madras service, and was a student of the Doveton College and joined the Military Accounts Department, afterwards qualifying in England as a barrister.

Drug-contracts.

Tenders for drugs, medicines, medical and surgical appliances, for the workhouse and seven dispensaries, are invited by the guardians of the Lurgan Union, for one year commencing September 30; and also by the Union at Navan, September 14. Tenders must be lodged not later than September 8 and 7 respectively.

The Dublin Prosecutions.

The interest evinced by the trade in the prosecutions lately instituted by the Pharmaceutical Society was manifested by the large attendance of chemists in the police-courts when the cases came on for hearing. There were present in court: Mr. Hayes, President of the Pharmaceutical Society, with Messrs. Merrin and Grindley, members of the Law Committee, as well as Messrs. Samuel P. Boyd and Walter Boyd. Mr. Samuel Boyd, J.P., was unable to attend through illness. The Magistrate simply astounded his audience when, after dismissing in most unmistakable and determined fashion the summons for the alleged offence on July 26, he, a couple of minutes later, in giving his decision, inflicted a penalty for that offence; also in the charge for July 14 for compounding Dr. Swan's prescription for Hunyadi water and Henry's magnesia, which charge was withdrawn

by Mr. Clay. The Magistrate afterwards allowed 2l. 2s. expenses to Dr. Evans, who was a witness in only the withdrawn summons. Magistrates must be imperious in their own courts, but Mr. Byrne was, perhaps, unusually dictatorial. Moreover, no one could understand why he insisted on having the summons for July 14 withdrawn, as a most important point was involved—namely, whether relabelling a patent or proprietary medicine with the directions prescribed by a medical man constitutes compounding a medical prescription.

Tartaric Emetic for Tartaric Acid.

It was recently reported that the Rev. Dr. Irwin, a Presbyterian minister of Castlerock, Coleraine, and all his family had suffered severely from the effects of tartar emetic which had been supplied by a local shopkeeper in mistake for tartaric acid, and which had been used in the concoction of a summer drink. All the members of the family recovered, but among those who partook of the beverage was a Mrs. Gardiner, who was at the time serving as a charwoman in the house. She ten days subsequently gave birth to a child, which, when about five days old, became unwell and died the next evening. After interment, owing to reports in circulation, an order was obtained for the exhumation of the body. An inquest was held, and a *post mortem* examination was made by Dr. Steel, Articlave, and Dr. Rawlinson, of Edinburgh. The Coroner has ordered the stomach and intestines of the child to be sent to Dr. Hodges, Belfast, for analysis, and the inquiry is adjourned until September 12.

Scotch News.

The Conference.

By some strange slip we omitted the chief item from the list of toasts given at the dinner in the Central Hotel, Edinburgh, last week—viz., "The British Pharmaceutical Conference," by Mr. Ewing; response by the President, Mr. E. C. C. Stanford.

The photograph taken at Finlurig Castle has turned out very successfully, we understand.

In the journey back to Edinburgh one of the carriages took fire and a coupling broke, but the excursionists did not know it.

Mr. Babbie (Dumbarton), Messrs. W. Burley and G. H. Laird (Edinburgh), and Mr. A. Seath (Dunfermline) were amongst the Conference visitors. Their names appeared incorrectly in the list on page 331.

Mr. Forbes, of Bolton, shut up his shop in order to attend the Conference. He put this notice on his door: "Gone to attend the British Pharmaceutical Conference at Edinburgh. Will be back on Friday."

Mr. Kunz, who acted as accompanist at the smoking-concert, is a highly accomplished musician, and received the special thanks of those present. He travelled from Strathpeffer that day in order to fulfil the engagement. Both the smoking-concert and the ladies' concert were highly pleasurable affairs.

Glasgow Pauper Medicines.

At the monthly meeting of the Govan Parochial Board, Glasgow, this week, it was reported that payments of 15l. 11s. 9d. and 10l. 2s. had been made to Mr. John Nicol, chemist, Partick, and the New Apothecaries Company, respectively, for the supply of medicines to the Board. During the past quarter there were dispensed in connection with the outdoor poor 1,297 recipes at an estimated cost of 44l. 8s. 5d., an increase on the corresponding quarter of last year of 177 recipes and 10l. 8s. 1d. in the estimated cost. Instructions were given to get the next order of medicines required for the outdoor department from the New Apothecaries Company. The Govan Board have increased the salary of Mr. John Lockhart, their dispenser, from 95l. to 105l. per annum.

Presentation.

Mr. Wm. Hunter, chemist, of Rothesay, is leaving that town for America after a residence of twenty-five years. At

a special meeting the congregation of the West Free Church, of which Mr. Hunter had been session clerk, presented him with a handsome silver tea and coffee service, silver salver, and purse of sovereigns, with many cordial wishes for his happiness and prosperity in his new home, and with warm expressions of respect.

Doctors' Shops.

Commenting on Mr. Stanford's presidential address last week, the *Scottish Leader* says:—"The most interesting point brought up at the British Pharmaceutical Conference was the President's suggestion of the need for an increasing division of labour between the doctor and the druggist. It has again and again been urged by the reformers of our medical school that the inclusion of *materia medica* to its former extent in the medical curriculum was a mere survival from the days when every doctor had to compound his own drugs. Nowadays this can certainly be better done by the specially trained chemist, and in a town at any rate there seems to be no need for medical men to keep drug-shops. Whether such a course should be forbidden by law is another question; it is hard to draw a distinction between the doctor in Glasgow and in a Highland parish thirty miles from a shop. We have seen that a medical man can make a most excellent Lord Provost; why should he not, if he so chooses, make an apothecary?"

The *Glasgow Evening News* remarks:—"The pharmaceutical chemists assembled in conference in Edinburgh would like to clip the wings of the doctors in Glasgow and other parts of the country, who not only practice medicine, but run a drug-shop as well. This attempt of the doctors to butter both sides of their bread is due, no doubt, primarily, to the stress of competition; but the pharmacists think they have good cause to complain, as the greed of the doctors altogether prevents them from earning bread, let alone butter. The doctors are also charged with leaving ignorant boys and girls in their drug-shops, thereby nullifying the efforts of the pharmacists to raise the standard of education among medicine dispensers, and jeopardising the lives of the lieges. The more honourable members of the medical profession should join hands with the pharmacists for the redress of these grievances."

POISONING TRAGEDIES.

AMELIA BRADBURY, the wife of a Blackburn weaver, had lived uncomfortably with her husband, and it is alleged that one day last week he said she would have to leave his house. The deceased was greatly disturbed by the threat, and going out early in the morning purchased a number of fly-papers which she soaked in water and then drank the liquid. The poison quickly took effect, and she died in a few hours.

Miss Amy Lowe, of View Park, Fox Rock, Kingston, near Dublin, in endeavouring to assuage the pain of toothache, took an overdose of chloroform, which caused her death. Miss Lowe was only 20 years of age.

A curious case of accidental poisoning occurred in Newcastle last week. On Sunday, August 21, a well-known gentleman sat with his family and a visitor at dinner. During the meal the visitor became somewhat severely indisposed, and shortly afterwards all who dined off the same food were very ill. Since then the head of the house has succumbed to supposed poisoning, while his wife and the visitor became very ill. The cause of the fatality was said to be that the meat, before cooking, was prepared in a dish which had been used for mixing a poison to kill grubs. The vessel was carefully washed, but is said to have contained cracks, which must have harboured some of the deadly matter.

Sarah Jane Pike, aged 26, a Brixton dressmaker, was found in Brockwell Park with a bottle which had contained carbolic acid by her side. She was taken to a doctor in a comatose state but died soon after. In her possession was found a slip of paper upon which was written:—"30 Nursery Road. I cannot stand my head any longer. Please look after father." Also a jar of vermin-killer and a bottle of laudanum.

Jane Rankin, the wife of a Batterssea carpenter, took the same poison last week under sad circumstances. She had

been depressed for some time after the loss of her baby. One morning she said she thought she would take some of the poison. Her husband remarked, by way of a joke, "Have you got enough for both of us?" and she made no reply. Later on she rushed into the room, and her husband said, "Jenny, you have not taken it?" She replied, "Yes, Jim, I have; look after the children." She died before a doctor could be summoned. She had taken about 2 oz. of crude carbolic acid.

Sarah Richards, aged 62, wife of a cottage farmer at West Drayton, also died from carbolic acid. Her story repeats the curious sequence we have several times reported this year—namely, influenza, and long depression, finished by a fatal dose of carbolic acid.

A similar case is reported from Blackburn, where Mrs. James Whittaker, who had been suffering from the after-effects of influenza, during her husband's absence drank a quantity of carbolic acid. She was only 25 years of age.

Sarah Jane Jones, the four-months infant child of a shepherd at Aston-on-Clen, near Ludlow, began to cry, and her little brother, aged 2 years and 9 months, gave her to drink from a bottle which contained carbolic acid. A doctor was called in, but his efforts were of no avail.

Last Saturday afternoon Janet Alexander, or Haughes, 60 years of age, committed suicide in her house at Padarnam, near Forfar, by drinking carbolic acid. While her daughter was asleep the old woman secured a bottle containing a quantity of carbolic acid, which was used for disinfecting purposes, and swallowed about four ounces. The deceased was of unsound mind, having been confined in a lunatic asylum some time ago.

French Pharmaceutical News.

(From our Paris Correspondent.)

ANOTHER TRICK ON PHARMACISTS.—M. Victor Baille, pharmacist, 123 Rue de Paradis, Marseilles, had a new experience one evening last week. Towards 10 o'clock, two young men came into the *officine*, and one asked to be allowed to speak to the pharmacist in the shop parlour about a secret disease from which he suffered. The request was granted, but after both had gone the pharmacist noticed that the till had been relieved of some 50f. His only consolation was to report the case to the police.

AN UNPLEASANT SURPRISE.—M. Triéyon, whose pharmacy is situated at 71 Rue Ste. Anne, had an awkward visitor a few days since. A driver coming down the narrow thoroughfare managed to collide his van in an awkward manner with a cart from which goods were being delivered at the pharmacy. The result was that the last-named vehicle was tilted right through the plate-glass front of M. Triéyon's premises. The whole contents of the shop-window, including the carboys, were shot into the middle of the pharmacy, which presented a lamentable scene of wreckage. The damage is estimated at 900f.

THE DEPOPULATION.—Under a flaring headline bearing the foregoing words the *Courier Populaire* of Lille, falls foul of pharmacists in a recent issue. This sort of thing is not a novelty and has ceased to attract attention. The indictment in the *Courier* is to the effect that the Lille pharmacists frequently prescribe, especially for infants, without seeing the patients. They are said to supply soothing medicines of a dangerous character, which cause considerable mortality amongst children. The amount of abuse in the article in question is liberal; but it terminates by saying that in France a great curse is that mothers commence too early to feed their offspring on solid foods which cannot be digested, and when the mischief is done the aid of the pharmacist is sought.

LIQUEFIED CARBONIC ANHYDRIDE.—M. Troost has recently reported that the successful manufacture of carbonic acid gas in France is mainly due to the large demand for the gas in the manufacture of salicylic acid. The "*Compagnie générale des produits antiseptiques*" has works near Hermes (Oise), directed by M. Gall. Pure carbonic acid is there produced very economically by combustion of coke; is collected in a gasometer, from which it is drawn, to

be dried and compressed with pressures of 5, 25, and 70 atmospheres, and stored in iron bottles. Most of the acid is used for making salicylic acid; but other applications occur, and M. Gall is increasing the power of manufacture. At present 300 kilogrammes are produced daily, but it will be possible ere long to produce 1,000 kilogrammes. The liquid is now supplied in Paris at 60 c. the kilogramme (say 6d. for 2½ lbs.). Thus the French production is in a condition to compete with the German. Among other uses besides those already mentioned are the manufacture of aerated waters, the filtering of wine, cooling by virtue of the great absorption of heat in vaporising, and solidification of fused metals under high pressure, whereby the quality is greatly improved.

IS PHARMACY A TRADE OR PROFESSION?—In the journal of the Association of Pharmacists of the Seine et Oise, Professor Dupuy maintains that pharmacy has a right to be considered a profession. As far back as 1777, a Royal proclamation ordered that pharmacy should be separated from commercial enterprise. This was supported by a meeting held the 17 Germinal, year XI. Dalloz, Mougier, and other well known authorities on jurisprudence, say that the value of pharmaceutical preparations consists in the science of the pharmacist, which science is a profession, not less liberal than that of medicine. The opinions of judges differ on the subject, and opinions in the law courts have been given both ways. M. Dupuy says:—"If a pharmacist is to be declared as a trader, he should, at least, be treated on a special footing. Having in France many more restrictions placed on his operations than ordinary shopkeepers, he should be granted certain privileges as compensation. The question is of great importance for pharmacists, and it would have been very desirable to introduce in the new law on pharmacy, now before the Chamber of Deputies, an article to the effect that pharmacy is not a trade. It is to be hoped that the public authorities will end by understanding that the scientific training needed by aspiring pharmacists places them on the level of members of the liberal and learned professions."

A SUPPOSED PLOT.—Information was recently given to the Paris police that the Anarchists had another plot in preparation, and that a large box of explosive chemicals had been stored by a man named Ferdinand. This man, a painter by trade, was promptly arrested with his wife. After a long and difficult search, the box was found hidden 3 feet down in a cellar of the house. The box contained nearly 140 different kinds of chemicals and pharmaceutical products in small phials or bottles. The whole seemed to have been specially prepared for experiments. On closer examination it was found, however, that the chemicals were principally of a pharmaceutical nature. They included aloes, pepsin, borax, tartaric acid, bicarbonate of soda, cocaine, &c. Soon afterwards the police received a long and argumentative letter from London supposed to emanate from a Frenchman named Louis Bertgues, styling himself an electrical engineer. This party claimed the box of pharmaceutical products as his property, and stated that he had confided the box to his friend Ferdinand, until he should find a permanent address in London, where he intended settling. The police were somewhat sceptical about that communication; but subsequent inquiries apparently convinced them of its genuineness. Consequently, Mr. and Mrs. Ferdinand have recently been released from custody, their willingness "to oblige a friend," having cost them several days' imprisonment. The next time they are asked to take charge of a box of adjuncts to pharmacy they will probably decline the honour.

THE CHOLERA.—The reports of cholera from Hamburg and elsewhere have naturally placed the Paris city authorities on the alert against a possible serious outbreak of cholera. The *Municipal Official Bulletin* has just published a series of instructions concerning the spread of contagious diseases. The first mention is that the germ of cholera nostras is contained in the dejections of the patients. It is transmitted by water, linen, and clothing, but not by the air. Then the following preventive measures are given:—Very special attention should be paid to drinking-water; water recently boiled gives absolute security. This water should be used for making bread and washing vegetables. The hands should always be washed before eating. Excesses

of all kinds, especially as regards the use of alcohol, are dangerous. Every possible precaution should be taken against taking cold. Diarrhoea or intestinal disorders of any kind are dangerous; a doctor should be called immediately they are apparent. The treatment of a patient is recommended as follows:—1. For arresting diarrhoea: Administer every three-quarters of an hour three dessert-spoonfuls of a lemonade consisting of lactic acid, 10 grammes; simple syrup, 90 grammes; tincture of orange, 2 grammes; with a litre of water. 2. For preventing vomiting: Give the patient small pieces of ice, or gaseous drinks; also, every hour, 20 drops of paregoric elixir. 3. For warming the patient: Hot and alcoholic drinks, weak black coffee with brandy, hot tea with rum, grog, energetic dry massage, wrap in blankets, place hot bricks and water-bottles round the patient. Notice must be given at the Prefecture of Police immediately a case of cholera nostras shows itself in Paris. The Administration undertakes to remove patients, and to disinfect their rooms and effects without charge.

Foreign and Colonial News.

THE DANA SARSAPARILLA BUSINESS has been sold to a syndicate of Boston (U.S.A.) gentlemen for \$300,000. Among the purchasers are Messrs. James E. and William R. Whitney, who before held a portion of the stock, and West & Jenney, wholesale druggists. Other parties are also interested. The medicine was started by Mr. G. C. Kilgore in 1836, and has been pushed vigorously until now, the sales for six months of this year amounting to between 500,000 and 600,000 bottles.

POISONOUS PROPRIETARIES IN CANADA.—The council of the Ontario College of Pharmacy has decided to push the prosecution of the T. Eaton Company for selling patent medicines which contain poison, thereby infringing the Pharmacy Act. Similar prosecutions will be begun against all other persons not druggists who sell these articles. The Quebec Courts have recently applied the English chlorodyne case ruling to a similar case there, and the Ontario druggists now wish to follow suit.

THE INTERNATIONAL PHARMACEUTICAL CONGRESS is expected to commence its deliberation at Chicago on Tuesday, August 22, 1893, a day or two after the meeting of the American Pharmaceutical Association. The pharmaceutical bodies of all countries are entitled to send five delegates. The American Pharmaceutical Association has set aside the sum of \$1,000 towards paying the expenses of the convention and publishing its proceedings. The British Society spent as many pounds in the same way.

JAPAN DRUG ITEMS.—Brett & Co., the wholesale and retail druggists, of Yokohama, have converted their firm into a limited liability company, with Mr. Arthur T. Watson as manager. The prospectus declares that 17 per cent. profit has been made of late, and 10 per cent. dividends are guaranteed for three years. Langfeldt & Co. (Limited), importers and dealers in provisions, shipchandlers, navy contractors and coal merchants, Yokohama and Kobe, are reported to have added a drug department to their business.

UNITED STATES TRADE-MARKS.—The following were registered at Washington on August 9:—"Pond Lily," for baking-powders, by Clemens Amann, Sidney, Ohio; "Floretta," for absorbent pads, by J. D. Allen & Co., Boston, Mass.; figure of a peacock for baking-powder, by the Potter Parlin Company, Cincinnati, Ohio; figure of a giant with bull's head, for nervous disorders remedy, by W. H. Gannett, Augusta, Me.; "Glovine," for preparation for cleaning gloves, by Glovine Manufacturing Company, Ashley, Pa.; the representation of a Roman shepherd carrying a lamb on his shoulders, with ewes following, for veterinary medicines and preparations, by Stephen Pettifer & Son, Crudewell, near Malmesbury, England; figure of Cupid sitting beside a pond lily, for catarrh remedies, by O. P. Smith, Auburn, Nebr.; "Madam Maurice's Complexion-cream," and portrait on label, for a complexion-cream, by Martin van Buren, Philadelphia, Pa.; representation of an English pointer dog, the capital letters "A. K. C. S. B.," the number "24,000,"

and the word "Vanquish," for remedy for dog distemper, by Taylor & Severance, Middleville, Mich. The following were registered on August 16:—"California fruit syrup," on label, for a laxative, by P. Steinhardt, Los Angeles, Cal.; "S.I.R.C.," for a rheumatism remedy, by H. S. Searle, Tacoma; "Balm of Lily," for a complexion lotion, and "Satin-skin," for toilet-soap, by Sylvan Toilet Company, Port Huron, Mich.; "Eirrol," for a nose and throat douche, by W. C. Downey & Co., Washington, D.C.; "Lintine" and "Cottonoid," for medicated cotton, by James W. Johnson, New Brunswick, N.J.; "Rheumo," for compound for cure of rheumatism, by R. T. Lassiter, New York; "Saved," for a skin medicine, by Eleanor McFarland, Columbus, Ohio; "California Liver Tonic," on label, for liver tonic, by H. W. Henderson, Chicago, Ill.; "Malto-cream," over device of barley and hop, for tonics, by E. Salbey, Milwaukee, Wis.; "Vapo-Cresolene," for throat and lung medical compounds, by The Vapo-Cresolene Company, Stanley, N.J.; "Seminole," for medicinal syrups, by W. H. Winslow, Pittsburg, Pa.

ONTARIO PHARMACEUTICAL ASSOCIATION.—In response to a circular issued by a committee of the Council of the Ontario College of Pharmacy about 120 druggists from all parts of the Province assembled at Toronto, on August 4, to discuss their difficulties and form an association for mutual advancement. Mr. Hall, the President of the Council, was in the chair and opened the proceedings in a speech based on the time-honoured text that pharmacy is a trade as well as a profession, and that therefore it was desirable that its interests as well as its education should be looked after. Then the convention resolved itself into an association and the following objects were subsequently embodied in the draft of its constitution. (1) To improve and regulate the drug market, by preventing the importation of inferior, adulterated, or deteriorated drugs, and by detecting and exposing home-adulteration. (2) To encourage proper relations between druggists, pharmacists, physicians, and the people at large which shall promote the public welfare, and tend to mutual strength and advantage. (3) To improve the science and art of pharmacy by diffusing scientific knowledge among apothecaries and druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture in the several departments of the drug business. (4) To uphold standards of authority in education, theory, and practice of pharmacy. (5) To create and maintain a standard of professional honesty, equal to the amount of our professional knowledge, with a view to the highest good and greatest protection to the public. (6) To form a bond of union among the various associations established for the advancement of pharmacy, by receiving from them delegates to the annual convention. The report also recommended that active members of the association shall consist solely of legally qualified pharmaceutical chemists, and that the annual membership fee should be 50c. and that a convention should be held annually. The next meeting to be held on Wednesday and Thursday in the second week in September, 1893. This report was received and adopted. The following are the office-bearers:—President, W. Murchison, Toronto; first vice-president, L. W. Yeomans, Belleville; second vice-president, H. Watters, Ottawa; third vice-president, W. G. Smith, Guelph; secretary, G. A. McCann, Toronto; treasurer, H. Sherris, Toronto. Council—G. S. Hobart, Kingston; W. B. Sanders, Stayner; R. S. Muir, Port Elgin; W. J. Dyas, Strathroy; P. C. Blaicher, Hamilton; T. Stevenson, Orangeville; and N. A. Bosworth, Stratford. The Association had several sessions extending over two days, at which a number of papers were read on trade subjects. Steps were taken to secure the early amendment of the Pharmacy Act. Altogether the meeting was a very successful one, and the Association promises to be of practical value to the trade in Ontario.

THANKS!—"What the English do in the way of advertising is shown by the so-called 'Summer Number' of THE CHEMIST AND DRUGGIST, which contains over 220 pages of advertisements, and a countless number of extra supplements, many of which are produced in an artistic manner by chromo-printing, zincotype, &c. The journal in question is probably the largest and most diversified trade-paper in the world; the tertiary matter in the 'Summer Number' alone amounts to 6 pages."—*Drogisten-Zeitung*, Leipzig.

CHOLERA NOTES.

An Interview with Dr. Thorne.

Dr. Richard Thorne Thorne, the medical officer of the Local Government Board, is the Moltke of our cholera campaign, and his cheerful first-floor room at the Board's offices in Whitehall the nexus whence issue the threads that connect the Central Authority with the sixteen hundred odd sanitary districts, and the innumerable other sub-divisions of administrative power into which England is divided.

To Dr. Thorne, therefore, a representative of this journal sought access on Tuesday morning, in order to learn from him in what way chemists might make themselves most useful to their fellow-citizens during the threatened epidemic. The doctor was just finishing a conversation with one of his staff, and while he imparted his final observations to that auditor THE CHEMIST AND DRUGGIST representative cast a glance around the apartment, and observed that a large portion of one of the walls was covered with maps, showing, by means of small black flags stuck into them, the progress of the



DR. THORNE THORNE.

plague. There was, first, a map of Persia, covered with tiny black danger-standards along the Caspian border. A sombre line showed the track of the disease through Central Asia, past the mythical "roses by Bendemeer's stream." Then came Russia, all flags of desolation; Austria, with a few plague-spots dotted near its Russian frontier; and Germany, where you could follow at a glance the filthy black trail of the "destitute alien" to ill-drained Hamburg. Thence westward the course of cholera takes its way, with Dr. Thorne stalking it as it marches on. And even the spot of the wretch who now lies writhing in the hulk of his cholera-stricken vessel on the Scheldt was neatly marked, *absit omen*, with a black banneret.

LOOK TO THE LOCAL AUTHORITIES.

"Could we issue a special circular to chemists?" broke in Dr. Thorne, interrupting our representative's musings on the cholera-charts. "I am afraid not. We cannot interfere with the work of the local sanitary authorities, and any special recommendations of remedies or disinfectants for

their particular districts must emanate from them. Therefore it would be utterly impossible for us to issue a circular naming any particular preparations, or instructing chemists or others in the way they ought to go about to render first aid in urgent cases. We might recommend, say, corrosive sublimate or carbolic acid, and some local authorities, in the exercise of their discretion (for it is in them that the administration of the Health Acts is vested) might prefer something else. Here, for instance," said the doctor, passing his fingers over a small heap of papers to his right, "is a copy of a circular which has just been issued by the Medical Officer of Health for Chelmsford (I received it by this morning's post), in which he recommends chloride of lime and copperas. So that you see that the publication of such orders as have been issued in Russia and other countries ordering the use of specified disinfectants would be quite impossible under our own less centralised system of government. But I will tell you what we shall probably do if the epidemic should become acute. We should, in that case, apply to the Royal College of Physicians to specify the remedies and disinfectants they consider most suitable, and we should give to the recommendations of that body the utmost possible publicity."

SUBLIMATE: THE MOST POTENT GERMICIDE KNOWN.

"But," interposed our man, "you mentioned corrosive sublimate by name in your recent circular, dealing with precautions recommended by you for adoption against the infection of cholera. More; you gave a formula for its dilution, and stated the price you think it should cost."

"That is so," was the answer; "but you must bear in mind that that circular was not issued to the public, but to the medical officers of health. It is *they*, not the chemists or the public, to whom our recommendation of corrosive sublimate is addressed; it is *they* whom we wish to prepare its solution; and it is *they*, again, with whom the distribution should rest. We named corrosive sublimate because we believe it, so far as cholera is concerned, to be the most potent germ-destroyer known. But we are not practising physicians here, and we could not undertake to recommend any preparation which might, however remotely, suggest proprietary or individual rights. Moreover, the circular you refer to was not issued for the first time now, but as long ago as April, 1883, by our then Medical Officer, who is now known as Sir George Buchanan."

CHEMICAL-MANUFACTURERS SEEKING HINTS.

And then the Doctor began to talk, in his quick, decided manner, of the visits paid to the Department by enterprising chemical-manufacturers about to place upon the market new disinfectants or other goods, and anxious to impart to them as much as may be the characteristics which the Board considers most suitable for the object to which the goods are to be applied. "There was one man here from the North the other day," he said, "who appeared most anxious to get us to give him suggestions for a disinfectant he is just about to bring out. We are, of course, always glad to say anything that may be for the public good, but we cannot differentiate between one man's preparations and another." And with that our representative took his leave from Dr. Thorne, quite convinced that there could not be found anywhere a more energetic chief of the staff to direct the operations against the threatened invasion than that brisk, quick-spoken, middle-aged gentleman in the black frock-coat and with neatly-trimmed grey beard and grizzled hair in that quiet office in Whitehall.

PROPHYLACTIC REMEDIES.

Amongst the many drugs which are recognised as preventions and cures of cholera, camphor is one which modern research has proved to be based on sound principles. When Rubini experimented with it in Naples he literally saturated his patients with the drug, and out of 592 patients did not lose one. Koch's experiments show that camphor is but little inferior to carbolic acid in arresting or preventing the growth of the cholera-bacillus, so that in recommending camphor for general use we are on safe grounds. Five drops of a 1-in-5 solution (made with spirit of chloroform) every three hours, or camphor pilules, are the best form for administra-

tion. The solution should be taken on sugar. The following is a useful French prescription:—

Camphor	5i.
Acetic ether	3iss.
Tincture of opium	5ij.

M.

Dose: 10 to 15 drops every four hours.

As cholera attacks those who are suffering from gastric and intestinal disturbance more readily than those who are in sound health, it is highly important that any attacks of summer diarrhoea should be promptly checked. After the administration of a saline purge, such as a dose of Henry's solution of magnesia, follow that up with the Board of Health cholera-mixture, the formula for which we repeat here:—

Pulv. cretae arom.	5ij.
Spt. ammon. arom.	5ij.
Tr. catechu	3x.
Tr. carlam. co.	5vj.
Tr. oil	5i.
Mist. cretae a1	3xx.

M.

We quote the following label from Alpe's "Handy Book" as that permitted by the Commissioners of Inland Revenue to be used without stamp-duty:—

"*Diarrhoea and Cholera Mixture.*

"Dose: One to two tablespoonfuls.

"The following observations from the Board of Health deserve the most serious attention from every person.

"Looseness of the bowels, however slight, ought on no account to be neglected. It is by far the most usual forerunner of the disease (cholera), as well as the most important, because in its various degrees it constitutes the stage in which life may most easily be saved."

"Through not attending to this caution many lives have been absolutely thrown away, and, on the other hand, by a prompt and early use of such a remedy, thousands have been saved both in Europe and India."

Essence of peppermint is a good prophylactic, the oil being, according to Koch, about seven times more powerful than camphor in bactericidal power. Five drops of the essence on a piece of loaf-sugar may be taken three or four times a day, or the curiously-strong lozenges may be sucked frequently. The following drops have an anti-diarrhoeic influence:—

Essence of peppermint	
Spirit of chloroform	
Spirit of ether	
Tincture of opium, of each equal parts.	

Dose: 20 drops in a tablespoonful of brandy after each loose stool.

Brandy, by-the-way, should always be taken "neat" in such cases. When mixed with water it is not nearly so effectual.

Chloroform is of the greatest value in the early stages of cholera, and may be given in 5 minim doses every half-hour. The following is a formula which Dr. T. M. Lowndes, of the Bombay army, used with great success in the treatment of choleraic diarrhoea:—

Chloroform	℥xv. - ℥xx.
Tr. opii	℥x. - ℥xxj.
Spt. vini	5i.
Aque	3j.

Misce pro dose.

Drinking-water should be "medicated" with the following mixture:—

Acid. sulph. aromat.	3j.
Spt. chloroformi	3j.

M.

LABEL.

Anti-cholera Water Corrective.

Directions: 10 to 15 drops to be put into a tumbler before filling up with filtered or plain soda-water. This quantity may be taken as a drink several times a day.

Carbolic acid is beneficial, as a preventive, and the necessary physiological influence is obtained by taking a 5 grain salol tablet three or four times a day. Although salol has not fulfilled the expectations held regarding it in the treatment of Asiatic cholera, it is by no means useless, and its

portability and comparative innocuousness are greatly in its favour.

Quinine is one of the most successful prophylactics. See Dr. Hehir's statement quoted later on.

PRECAUTIONS IN ST. PANCRAS.

The great borough of St. Pancras, a community of some 270,000 inhabitants in the north-west of London, which has always led the way in Metropolitan municipal progress, has been prompt in adopting precautionary measures against the cholera. The Health Committee of the Vestry, which is the local sanitary authority, have instructed the Medical Officer of Health to devote his entire time to the direction of precautions against the epidemic. Among other measures the committee have decided that a medical practitioner and a qualified pharmacist shall be retained in every one of the twenty parliamentary polling-districts of the borough, the former to attend to any cases of cholera that may break out within his area, and the latter "to supply medicines and disinfectants" (presumably for public requirements); and further to appoint three additional sanitary inspectors and a number of disinfectors.

SULPHATE OF COPPER AND CORROSIVE SUBLIMATE.

The French authorities have decided to adopt as their official disinfectant in combating the cholera sulphate of copper in a 5 per-cent. solution (50 grammes to the litre of water) and, specially for the disinfection of rooms, a solution of corrosive sublimate and tartaric acid, in the proportion of 1 of the former to 3 of the latter.

OFFICIAL DISINFECTANTS IN GERMANY.

It is stated that within a few days of the outbreak of the cholera in Hamburg the supply of disinfectants in the city ran short. The *Pharmaceutische Zeitung* therefore calls upon all German pharmacists to replenish their stocks without delay. The Prussian authorities have prescribed the following disinfectants:—Chloride of lime, pure carbolic acid, milk of lime, and a solution of potash soap. For the disinfection of evacuations of cholera-patients chloride of lime or milk of lime is to be employed.

Kefir (koumiss) is reported to have given excellent results as a cholera-remedy in the City Hospital of Tiflis, in the Caucasus.

During the present cholera-epidemic in Russia the town of Schuscha, situated at an altitude of over 6,000 feet above sea-level, suffered severely. On no previous occasion has the disease been known to reach such a high altitude.

AT CONDY & MITCHELL'S.

"We are very, very busy," was Messrs. Condy & Mitchell's statement to our Traveller—"busier than ever within our recollection in August. And we are also looking out for a September that will beat the record, though September is not generally a busy month, as the chemists have bought their stock by then. We are still able, fortunately, to keep pace with the demand for our goods, but we are not without fear that there may be a breakdown in the bottle-supply. We get our bottles from Germany, and from what we hear we may have some difficulty in getting a sufficiency of them next month. I well remember," continued the speaker, "the epidemic of 1866, when there was such a sudden demand that we were compelled to send out our fluid in bottles and receptacles of any kind we could lay hold of. I don't think that, even if we get the cholera here, it will be so bad an attack as it was then, but, still, the demand has been excessively great since the beginning of last week. It comes mostly from the seaport towns, and the run is especially on gallon tins for the use of the local boards. Yorkshire is all alive, and our orders from that county have been doubled and trebled in many instances. And this influx of orders just comes to remind us how cramped we are for space here. We have long been looking for new premises, and I think it is really time for us to move now. We have five floors here, but, as you see" (indicating the narrow gangway heaped so full with bampers, cases, and bottles, as to leave barely passing-room), "we can hardly turn. What we want is plenty of floor-space.

I don't know that I can tell you anything else, except that we think that our recommendation to the public to use non-odorous in preference to strongly-smelling disinfectants is beginning to tell. There has always been a strong feeling in the public mind in favour of the diabolical stinkers so much affected by certain vestries. If these people would only reason they would admit how wrong they are. A horribly-striking compound not only gives you no clue whether the evil smell you wished to remove has actually been killed, but it positively dulls the sense of smell. With our goods it is different. We find a stink, but we leave none. That is our motto."

AN ANTI-CHOLERA ORANGEADE.

Mr. John Mitchell, of Royal Hill, Greenwich, calls our attention to the following formula for an orangeade which appeared in *The Times* in September, 1871, when an invasion of the cholera was feared:—"As a valuable adjunct against the epidemic, the following orangeade, suggested by Dr. Walter Lewis, has been extensively used with excellent effects:—

Concentrated compound infusion of orange-									
peel .. .. .	..	..	..	..	..	..	..	..	3 oz.
Simple syrup ..	..	..	..	..	..	..	..	..	12 "
Boiled filtered water ..	..	..	..	..	..	..	..	..	4 gal.

Mix well and add 3 oz. dilute sulphuric acid. A wineglassful may be taken for a draught, with the addition of more or less filtered water according to taste.

"Of this beverage 1,350 gallons were consumed with the best effects among the men of the London Post Office during the epidemic of 1866. Its cost is only 4½d. per gallon. The idea is excellent, as in hot weather men drink anything, and the fluid supersedes noxious waters."

CARBOLIC IN DEMAND FROM ABROAD.

"There has been such an extra demand from Russia for our liquid carbolic," Messrs. F. C. Calvert & Co., of Manchester, write, "that we have been obliged to place a limit upon our supplies to new or casual customers, in order to have a sufficient supply to meet the requirements of our regular customers, to whom we have not raised our prices. The utility of genuine carbolic-acid preparations for disinfecting and other purposes is being recognised more and more by the public, and, therefore, apart from the present abnormal inquiry, the demand for our goods, we think, is bound to grow steadily. From the colonies and India also we have received very heavy orders recently. Our tooth-powder, especially, is becoming a prime favourite there. We notice that in a recent issue you reply to a Hungarian correspondent on the subject of the disinfection of sick-rooms. The method which we recommend to be pursued if carbolic acid is the disinfectant chosen is this:—

HOW TO DISINFECT A ROOM WITH CARBOLIC ACID.

"Place an ordinary house-shovel over the fire until it become thoroughly (but not red) hot; then take it to the centre of the room, and pour on the shovel 1 oz. of liquid carbolic acid, the purer the better; lean the shovel so that no fluid can run on the floor, and the acid will be given off in the shape of vapour in sufficient volume to fill an ordinary room. This will thoroughly disinfect the air, and as genuine phenol is not a mineral corrosive acid, the vapour will not injure pictures, metals, or fabrics. It is highly beneficial in many infectious diseases, may be safely inhaled to a reasonable extent, and can be diluted with water if weaker vapour is wanted. This process, when infectious diseases are present or feared, should be resorted to daily. The vapour is not inflammable unless the shovel be made red-hot or held within 2 feet of fire or light, and the fluid will not injure carpets; but it should not be allowed to fall upon oilcloths, woodwork, or furniture."

A TALK WITH SANITAS.

Three Colt Lane is situated within the grimy purlieus of Bethnal Green, and as our Town Traveller, journeying that way, looked down upon the hideous back-yards of the dreary dishevelled dwellings that skirt the track of the Great Eastern Railway, and caught occasional glimpses of the filthy streets, crowded with unkempt youngsters surrounding barrowfuls of unripe or rotten fruit, he thought of the pro-

lific breeding-ground stray cholera-bacilli would find in this district. But if disinfectants can keep out the epidemic, there is one safe spot, at any rate, even in Bethnal Green. That spot is Letchford Buildings, the headquarters of the Sanitas Company. You approach Mr. Kingzett's domain by a yard traversing Allen & Hanburys' factory, and, judging from the bustle that prevails from one end of that *cul de sac* to the other, business is pretty lively all along the route. Mr. Kingzett looked as satisfied as a man can reasonably do who is making a good thing out of his fellow-citizens' tribulation. "Fortunately," said he, "we have anticipated the abnormal pressure that has overtaken us, but though we have put on extra hands, and our plant is taxed to its utmost capacity, we can only just manage to keep pace with the orders that are pouring in upon us every day. To-day has beaten the record for orders in the history of our firm. Bring me the order-book," he shouted, and, running his digit quickly over its pages, "thirty-one orders from local boards, hospitals, and corporations, to-day," he said—the total aggregating some 650 gallons of fluid Sanitas and 13 tons of powder. "You see, the orders come from all parts of the kingdom, and I'll warrant we shall execute them as promptly as if we had to cope with no unusual demand at all. And we are not going to raise our prices—no, not a penny; that's a point.

DRINK YOUR OWN HEALTH IN SANITAS.

"Now, I may tell you something else that will certainly interest your readers. From experiments which I have just been trying I am convinced that, taken internally, Sanitas fluid will act as a certain preventive of cholera. Anyone can take half a wineglassful of that fluid, mixed with an equal quantity of water, three times a day, with absolute safety to himself and be certain that the dose will kill any bacillus he may have had the misfortune to have absorbed into his anatomy. You know that we have never brought out a 'Sanitas' preparation for internal administration, and I don't think we shall do so now, but the wrinkle is well worth knowing all the same. If it were not for that miserable Medicine-stamp Act, I would probably put up a Sanitas medicine now, but our preparations cannot bear the stamp-tax. Don't you think, though, that I might circumvent 'em by stating merely that the draught will kill all bacilli, without mentioning anything of its effect upon the health of the taker?" And Mr. Kingzett smiled at the idea. "No, it is not a nice drink," he resumed; "for, as you know, our preparation is obtained from turpentine by oxidation in the presence of water. It also contains peroxide of hydrogen, so-called soluble camphor, and thymol, the latter generated incidentally in the process of manufacture. The bulk of our orders just now, as I showed you in the book, are from public bodies, who consume 'Sanitas' either for disinfecting streets, garbage, &c., or give it away to poor people in penny packets and 4-oz. bottles." "That does not look promising for chemists, does it?" "Oh, yes, for almost half of the orders for the boards are passed through chemists, to whom we allow a substantial discount, and who make a profit of from 15 to 30 per cent. upon the transaction as a rule, getting about 12½ 10s. per ton for powder that costs them 10½, and a corresponding profit on the liquid. We have just brought out a 'Sanitas' distemper for walls, containing 20 per cent. of our concentrated disinfectant. This is a novelty likely to sell well. Our recommendations for fighting the cholera are these:—Sprinkle with 'Sanitas' disinfectant all bedrooms, floors, and carpets, apply 'Sanitas' powder liberally in scullery, yard, and closets, whitewash all your walls with 'Sanitas' distemper, drink Sanitas in 50-per-cent. aqueous solution three times a day and you'll be safe." . . . "*Et omnia Sanitas est*," thought our representative, as he walked to the station, impregnated with the odour from Mr. Kingzett's works.

"THIOCAMF" BOOMING.

Messrs. Thomas Tyrer & Co., whose "Thiocamf," had an excellent lift when in the spring of last year the House of Commons was disinfected with it, report that the threatened epidemic is now giving their atmospheric disinfectant another filip. The demand has never been so great as it is now, and, considering that the disinfectant is barely three years old, its popularity must be pronounced extraordinary.

"Thiocamf" (*anglicé*, sulphur-camphor) is, as its name indicates, a combination, of which sulphur (in the form of dioxide) and camphor form the principal ingredients. Thus far the manufacturers have not yet put it up in bulk, but are selling it only in metal-capped bottles. It possesses the unique property of not only serving as a disinfectant and germicide by evaporation, but the powdery residue which is left after a bottle has been used to purify the air of a room may be used in hot water with washing-soda and soap to disinfect woodwork or clothes. There is also a run setting in on the shilling "Thiocamf" sprinklers, which contain a diluted fragrant solution of the disinfectant for sprinkling in rooms or adding to the water for the toilet. A dessert-spoonful of the solution suffices for a quart of water.

RUSSIAN CHOLERA-REMEDIES IN 1831.

The St. Petersburg correspondent of the Vienna *Pharmaceutische Post* gives an interesting account of the therapeutic treatment of cholera-patients in Russia during the great epidemic of 1831. We must, however, leave him all responsibility for the doses he mentions. First of all the unfortunate victim was bled, 16 oz. being the regulation weight of blood abstracted from a grown person. He was then dieted with beef-tea, hot tea, and a tisane of mucilaginous drugs, then known to therapy by the name of *Mucilaginoso* or *Remedia Blanda*. Sixty grains (*sic!*) of opium (at that time the morphia percentage of commercial opium was lower than it is now) were next administered *per os*, and repeated if thought desirable—this drug being given to attain the diminution of the irritability of the mucous membrane of the stomach and as an antispasmodic. Opium was the great pillar of the cholera-treatment, and, if the dose taken *per os* was vomited up from 135 to 225 grains (*sic!*) were again administered as an enema. If no good results followed the administration of either dose, dilute sulphuric or nitric acid in large doses was resorted to, many practitioners being loud in their praises of these drugs. A mixture of calomel and rhubarb (450 grains within six hours, something wrong with the doses surely!) was also a popular remedy. Persons in cholera-stricken districts were advised before leaving their houses to rub their bodies, or at any rate their hands and face, with a mixture of aqua vitæ and olive oil and to carry with them a vial of a solution of chloride of lime or of vinegar, with which hands and nose were to be rubbed frequently. Small bags of bleaching-powder suspended round the neck were also carried by many.

The lower classes ascribed the epidemic to the action of the Poles, who were then in a state of insurrection, and who, it was alleged had poisoned the spring and kitchen-gardens. They also maltreated passers-by in the streets by compelling them to drink the contents of their vials and forcing the bleaching-powder from the satchets down their throats.

The Imperial family fled in a panic to the summer residence of Zarskoe-Selo which was completely surrounded by a cordon of soldiers with loaded rifles. Everyone having business at the castle was fumigated before being allowed to pass the cordon and several persons who attempted to evade this fumigation were shot down and killed.

A SUCCESSFUL PROPHYLACTIC.

Surgeon-Captain Patrick Hehir, M.D., of Hyderabad, in the course of a paper on the use of "Salol in Cholera" communicated to the *Indian Medical Record*, states that he has been accustomed to administer drachm doses of sulphurous acid as a prophylactic for years. In every house in which the disease broke out all the inmates were dosed with this drug every three hours in drachm doses during the time the patient was in the house. He has given it in about 7,000 instances; and for the last four years has not seen cholera occur in any case in which it was used. During the last twelve months he has recommended the use of quinine prophylactic in 10-grain doses twice a day, dissolved in dilute sulphuric acid. Quinine is a prophylactic against cholera, and during Dr. Hehir's investigations he subjected this matter to experiment, and found that the cholera micro-organism could not live in strong solutions of quinine, and, as a matter of fact, the protective virtues of quinine were amply demonstrated.

CHOLERA-DROPS.

"A vial of so-called 'cholera-drops,' " says the *Pharmaceutische Zeitung*, "should be kept in all households, to be taken at the first sign of stomach-disorder. Here are two good formulæ:—

1.—Lorenz's Formula.

Tinct. valer. ether.	..	..	..	3 drachms
Vin. ipecac.	..	..	..	1 "
Tinct. opii croc.	..	..	..	90 minims
Ol. menth. pip.	..	..	..	30 "

2.—Wimderlich's Formula.

Tinct. valer. ether.	..	..	..	2½ oz.
Vin. ipecac.	..	..	..	3 drachms
Tinct. opii simp.	..	..	..	1 "
Ol. menth. pip.	..	..	..	15 minims

"German pharmacists," our contemporary adds, "should be permitted, during the prevalence of the epidemic, to dispense these drops to customers personally known to them as reliable."

JEYES TO THE RESCUE IN GERMANY.

The Hamburg agents for Jeyes' Sanitary Compounds Co. (Limited) are bombarding their London headquarters with postal and telegraphic orders for disinfectants, to be hurried onward on the principle of *his dat qui cito dat*. On Monday, Mr. Planner, the Secretary of Jeyes' Co., showed us a telegram he had just received from the stricken Elbe port, urging him to "send all creolin orders on hand, and 500 casks more at once, and further 20 tons white powder." The total quantity ordered at present is 38,000 gallons of Jeyes' fluid, and 35 tons of sanitary powder, red and pink, in 1-cwt. bags. The agents state that they are very much pressed by eager buyers, particularly for delivery of the "wood-preserving" preparation manufactured by the company. From other parts of the cholera districts orders have been received for 44,000 gallons of the fluid.

"LAURALINE"—VESTRY ORDERS DOUBLED.

The manager of Messrs. Adams, Webster & Co. was interviewed by our representative at the firm's storehouse underneath the railway arches at Hackney Downs. When asked what news he had to tell, the manager led the way to a workshop where a batch of pie-shaped, grey-coloured cakes was being turned out of the moulds. "That is lauraline, our new disinfectant," said our interviewee, knocking another of the cakes out of its saucer. "These cakes are composed of disinfectants, such as camphor and carbolic acid [with much naphthalene, we judge]. You will notice that they are provided with a small metal ring, by which they can easily be hung up against the wall of a lavatory, kitchen or workshop. The odour emitted from the cakes is not unpleasant and they certainly purify the air around. They last for three months, gradually dwindling away by natural evaporation." "Just brought out?" "Yes; it is only a few weeks since we placed the first batch on the market, and they have made a decided hit. That is a three-penny one you have in your hand there, and these sell wholesale at eighteenpence a dozen, but we also make them in larger sizes. A tidy profit to the retailer, is it not? And there is this advantage—that the chemist hasn't to fear grocers' competition in this line very much. Most of the grocers will not touch these goods unless they are put up in tins. They're too nosy for them. We just wrap them in paper—so. The Chelsea Vestry have just ordered a hundredweight by way of trial. They are going to hang about half-a-dozen of these cakes under every gully-trap in their streets, to sweeten the thoroughfares. We are doing a lot with the vestries. Islington is the biggest in London in the way of disinfectant orders. It takes about 10,000 gallons of liquid carbolic acid, and 90 tons of powder every year. We have not secured its contract, but we supply Marylebone (which takes about 1,200 gallons of liquid acid), Chelsea, and several others in the Metropolis. In the provinces, too, we do a lot. The Corporations of Portsmouth, Hartlepool, Grimsby, Gosport, and other towns buy their disinfectants from us. The London vestries have most of them doubled their orders this season, so that we are fairly busy. Time we were, too," he added, gruffly, "for trade's been awfully bad. Carbolic acid

had a good run till lately, but it is easier again the last week or two. It is the retailers who make the profit nowadays, not we manufacturers."

RECOMMENDATIONS BY THE LOCAL GOVERNMENT BOARD.

The Local Government Board have issued a "general memorandum" of procedure recommended by them to be followed in places attacked or threatened by epidemic disease. It is signed by Dr. R. Thorne Thorne, the head of the Medical Department, and contains the following recommendations on modes of disinfection:—"For the purposes of the sick-room—such as the reception of soiled handkerchiefs, sheets, and the like, as well as for the swabbing of floors—a valuable disinfecting solution may be made with perchloride of mercury. It is well to have this solution slightly acid, coloured also in such a way that it shall not readily be confused with drinks or medicines; and proper caution should be given to avoid accidents in its use. Sanitary authorities will find it advantageous to have such a solution prepared under the direct instructions of the Medical Officer of Health, and supplied of a uniform strength at the infected house upon the order of that officer. A solution fitted for the desired purposes may be made with $\frac{1}{2}$ oz. corrosive sublimate, 1 fluid oz. hydrochloric acid, and 5 grs. of commercial aniline blue in 3 gallons (a bucketful) of common water. It ought not to cost more than 3d. the bucketful, and should not be further diluted. The use of non-metallic vessels (wooden or earthenware house tubs or buckets) should be enjoined on those who receive it, and articles that have been soaked in it should be set to soak in common water for some hours before they go to the wash. A substance generally available in the removal of filth from privies and ashpits, and for application to foul earth and the like, is sulphate of iron (green copperas), either in a strong solution made by stirring crystals of the salt with five or ten times their bulk of hot water, or in the form of powder, to which form the crystals may be readily brought after desiccation. This agent should be used in quantity sufficient to destroy all odour, and in the removal of filth accumulations it should be well mixed with successive layers of the matter to be removed. The dry form of application is to be preferred where masses of wet or semi-solid filth have to be dealt with. The removal of dangerous filth is here the object to be attained. It cannot confidently be stated that either the iron salt or any available substance will effect a true disinfection of such masses of filth as are here in question. For disinfection of the air of rooms, after the room has been prepared by the removal of persons and of such articles as are best disinfected by heat, and by the closing of windows and crevices, sulphurous-acid gas in ample quantity may be evolved, the doors being kept closed for six hours or more. The amount of sulphurous acid required for the disinfection of a moderate-sized room can be obtained by burning 1½ lb. of sulphur (roll brimstone) in a pipkin over a small fire placed in the middle of a room, with an old tray or the like to protect the flooring. These processes should be effected by skilled persons acting under the directions of the Medical Officer of Health."

Personalities.

MR. R. T. HARLAND, who has been very successfully representing Messrs. S. Maw Son & Thompson, on a business tour through the Australasian Colonies, has just returned to London, *via* San Francisco and New York, and will next month resume his journey for the firm in the North of England and Scotland.

ACCORDING to *Nature*, Prof. Flückiger has sent to the President of the Pharmaceutical Society, as representing the British subscribers to the Flückiger testimonial, a bronze replica of the medal which was presented to him, and expresses the hope that it will be accepted as a sign of his gratitude and a slight proof of his appreciation of the friendship and encouragement he has always met with in England.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

DRAPER—IRVINE.—On August 24, at St. Stephen's Parish Church, Belfast, by the father of the bride, assisted by the Rev. Gerard Irvine, B.A., brother of the bride, and the Rev. J. A. Armstrong, B.A., Carter Napier, son of the late Harry Napier Draper, of Temple Road, Dublin, to Mary Stewart, elder daughter of the Rev. Richard Irvine, D.D. Mr. Draper is principal of the firm of Bewley & Draper, wholesale druggists, Mary Street, Dublin.

DEATHS.

CHARITY.—On August 28, Mr. William Charity, of the firm of W. Charity & Co., drug and chemical merchants, died after a painful illness at his residence, in the seventy-first year of his age. Mr. Charity—who was known to almost everyone connected with the wholesale drug trade in the city of London, and to many provincial chemists and druggists—came to London as far back as 1840, after having served his apprenticeship at a chemist and druggist's shop in his native county of Lincolnshire. His first appointment in London was with the firm of Yates & Co., of the Borough, a wholesale drug-house long extinct. In 1846 he entered the service of Messrs. Barron, Harveys & Co., of Giltspur Street, as junior warehouseman. He lived in the business premises of the firm, and married while in their employment, all his children being born in Giltspur Street. For more than eighteen years he remained with the Giltspur Street house, and it is no exaggeration to say that no employé of that old firm was ever thought higher of by his principals than was William Charity. Towards 1864, however, Mr. Charity's health gave way, and his employers granted him leave of absence for a year. At the expiration of that period his health had somewhat improved, and shortly afterwards he was appointed manager of the ill-fated Wholesale Drug Company—a concern which came to grief soon after its starting. After a brief interval—during which he acted as agent for a firm of meat extract manufacturers, and, indirectly, for a German wholesale drug firm—he joined the firm of Messrs. A. & M. Zimmermann as market clerk. He remained here from 1868 to 1875, when he started in business as a drug and chemical merchant on his own account. The firm established by him is now carried on by his two sons, who were admitted into the partnership at the end of 1890. Mr. Charity also leaves one married daughter. The deceased gentleman was very highly esteemed with all who came in contact with him.

GEORGE.—August 25, at Newark, Henry David Wilson, only son of Henry George (of Evans, Lescher & Webb), aged 9 months.

LANT.—Mr. George Lant, pharmaceutical chemist, 6 West Derby Street, Liverpool, died suddenly at his residence on Sunday last.

PARKES.—On August 26, after a painful illness of cancer in the throat, Mr. W. E. Parkes, chemist and oil merchant, Friar Street, Reading. Mr. Parkes was for many years a member of the Church Board of St. Lawrence's parish and also a school manager. He was, besides, a prominent local freemason.

Gazette.

PARTNERSHIP DISSOLVED.

Noble & Marshall, Cornwall Gardens, South Kensington, dental surgeons.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATION.

Wise, Joseph Norman, Durham, chemist and druggist.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," August 17, 1892.)

"STEPHANUS OINTMENT," and device of two hands holding ointment-pot, and wording; for a veterinary ointment. By E. E. Dejean, 19 Great Ormond Street, London. The essential particulars are the device and the word "Stephanus." 164,770.

Circular device, with hands holding cast of a foot, and wording; for ointments for carbuncles, boils, ulcers, &c. By Rachel Lion, 215 Green Lanes, South Hornsey. The essential particular is the device. 164,743.

"JOHN WOOLDRIDGE," and donkey's head with coronet, on label; for a patent medicine. By J. P. Lilburn, Dacontenia, St. Jean de Luz, France. The essential particular is the donkey's head with coronet thereon. 165,178.

"CASCARINE LE PRINCE," signature, and wording on label; for pills. By M. M. Leprince, Rue Bourbonnoux, 9 Bourges, France. The essential particular is the signature of the applicant. 165,532.

Device of steering-wheel; for medicated soap. By W. Gossage & Sons, Widnes. 165,669.

"GLYMOL"; for chemical substances used in medicine and pharmacy. By the Angier Chemical Company, Harcourt Building, Jevington Street, Boston, U.S.A. 165,713.

"KOLA VIVA," sketch of two men, circular devices, and wording on label; for an aerated beverage. By J. Eckersley, 37A Gate Street, Bolton. The essential particular is the combination of devices. 165,241.

"R. B. STRAKER," as signature; for mineral and aerated waters. By R. B. Straker, 159 Dansom Lane, Hull. 165,924.

"THE NEW ZEALAND HAIR-RESTORER," and sketch of Maori chief; for a hair-restorer. By H. Harding, Wellington, New Zealand. 165,058.

"NEUTRALALOE"; for a toilet preparation. By H. Milton, 1 Castle Street, Reading. 165,294.

"ZEPHYR"; for toilet soaps. By Price's Patent Candle Company (Limited), 31 Threadneedle Street, London. 165,654.

"NESSABI"; for perfumery and toilet articles. By E. Rimmel (Limited), 5 Chancery Lane, London. 165,781.

(From the "Trade Marks Journal," August 24, 1892.)

"VIKO"; for insect-destroying preparations. By J. Atkins, 104 Snargate Street, Dover. 165,998.

"HOMOCEA"; for a medicinal preparation for human use. By Mary L. Bowden, 43 King William Street, London. 165,805.

Sketch of kiosk; for aerated waters. By J. Dunn, 21 Greenhead Street, Calton, Glasgow. 164,950.

"TEE KEE"; for a preparation for teeth and perfumery articles. By W. Revell and F. A. Badman, trading as Revell, Steele & Co, 40 New Street, Birmingham. 165,365.

"CAVALAZZI"; for perfumes, brillantines and toilet articles. By W. Revell and F. A. Badman, trading as Revell Steele & Co, 40 New Street, Birmingham. 165,368.

"HAYDEE"; for perfumery and toilet articles. By A. Saalfeld & Co, 33 Lancaster Avenue, Manchester. 165,853.

(From the "Trade Marks Journal," August 31, 1892.)

"STANDARD DOMESTIC AMMONIA," and flag and staff with device of three arrows; for domestic ammonia, a liquid preparation for water-softening. By the Standard Ammonia Co. (Limited), Ordnance Wharf, East Green-

wich. The essential particular is the combination of devices. 165,092.

Coat of arms with inscription "Erimus"; for oils for veterinary purposes, embrocation, &c. By John R. Burrell, 3, Samuelson Street, Newport. 163,714.

"VINHO DE QUINA DE MURRAY," other wording, medal devices, and signature on label; for quinine wine. By Sir J. Murray & Son, Graham's Court, Temple Street, Dublin. The essential particular is the applicant's signature. 164,918.

"HYTHOR"; for medicinal compounds for human use. By Emma J. St. Hilaire, 382 Main Street, Hartford, U.S.A. 165,225.

"ST. JUNO RESTORATIVE-WINE"; for a restorative medicine for human use. By C. Lowe, 1 Claremont Road, Surbiton. The essential particular is the name "St. Juno." 165,985.

"ENPARAXIA"; for patent medicines or chemicals for use in pharmacy. By C. F. Mathieson, 81 Thornlaw Road, West Norwood, London. 166,082.

THE BIOLOGICAL EXAMINATION OF WATER.

By ERNEST J. PARRY, B.Sc., F.C.S.

WATER analysis is now a task which comes before the chemist and the pharmacist so often that the various processes involved therein have attained a great amount of precision. Two factors are essential in determining the value of a sample for any definite purpose—firstly, the quantity of given impurities present, determined by the ordinary methods of chemical analysis; secondly, the quality, so to speak, of the impurities. It is with this latter branch of the subject that this note is intended to deal. It divides itself naturally into two distinct heads—in the first place, a direct microscopic examination, and secondly, a bacteriological analysis. Assuming that the analyst has a sample taken with care in a perfectly clean Winchester quart, it is necessary to examine it as soon as convenient, so that one may make a report on the quality of the water as it is when received by him, before any further development shall have taken place. If the water is a drinking-water, it contains, as a rule, a very small amount of suspended matter. It is therefore necessary to allow it to settle in a long tube, and to examine the sediment, which will contain practically the whole of the suspended matter after being allowed to stand for four to six hours. The most convenient tube to use is one about 2 feet long and 2 inches in diameter, narrowing down to about $\frac{1}{4}$ inch at the base, to the end of which a little cup fits tightly. After the sediment has collected in the cup, a stopper, fixed to the end of a rod, is inserted inside the tube, thus allowing the cup to be removed containing the sediment. At least six slides should be prepared from a sample of water, by dipping a glass tube into the cup and transferring a drop to a microscopic slip, and covering it with a thin glass. The microscope should have, for convenience, a mechanical stage, and the light must be good. A $\frac{1}{4}$ -inch objective is quite high enough for ordinary work. Of course, in a drinking-water there is not nearly so much to be found as in a river water, of which I shall speak later. In the best drinking-water, such as that supplied by the Kent Company, there is often nothing more than a few particles, which cannot be identified as anything in particular. In many drinking-waters one finds no living organisms visible under $\frac{1}{4}$ -inch, but a small quantity of organic debris, and sometimes cotton fibres. Oxide of iron can often be seen in quantity, too, in drinking-waters. Other inorganic matter, such as flint particles and earthy matter, can be made out by an experienced eye. In the majority, however, of drinking-waters one finds a few living organisms visible under this power. These are, as a rule, diatoms—generally *Diatoma vulgare*—often in motion, desmids and confervids, infusoria, rotiferæ, and, rarely, that little water-eel the *Anguillula*, in very lively motion. Fungoid growths are rarely found. Straw particles and paper pulp, and now and then a few starch-grains, are met with, as also are woody

tissue and fibres of wool and flax. Sometimes one meets with a water which gives very good figures on ordinary analysis, but which shows a bad record when examined microscopically. For example, I have had a sample of water from a London company which yielded very good figures on analysis, but in which were discovered, on microscopic examination, the following—viz., diatoms, desmids, infusoria, flax fibres, large specimens of *Anguillula*, and general organic debris. This caused a repetition of the chemical analysis, which gave every evidence of its being a good water. For example, the free ammonia was .0004 gr. per gallon, the albuminoid ammonia was .0017 gr. per gallon, and the oxygen required for complete oxidation by the Forschammer process was only .065 gr. per gallon. Yet the microscope revealed that the water was by no means a pure one. This is easily understood when one remembers the minute size of the organisms contained therein.

Passing on to river waters, we find a much more interesting collection of organisms. In these cases it will not be necessary to fuse a settling-tube of the form described. A small conical glass will do very well, and it should be allowed to stand for a couple of hours, when a fairly big sediment is obtained. About half a dozen slides should be prepared as before, and examined carefully under the same power. In any ordinary river water we can generally find a good list of organisms. In almost every one we find plenty of diatoms in motion, and, if the river be not very rapid, desmids as well. Infusoria and rotiferæ are very common indeed. Flax, cotton, and wool fibres are very often found. I have also known starch-grains to be found in seven consecutive samples taken at different points along a river, showing how well an impurity is distributed therein. Spores of algæ, with their long cilia and red eyespots, are very common, especially in brooks and ditches, and naturally the algæ themselves abound too. Less commonly we find the bell animalcule (*Vorticella*), the sun animalcule, and *Pavaminium*. *Anguillula* is met with, and a small species of *Hydra*, generally *Hydra fusca*. Once I have seen a sample very rich in beautiful specimens of *Pediastrum granulatum*, with the unicellular organisms arranged in beautiful figures. Mycelia of fungi can be detected, and now and then human hairs. Disintegrated vegetable tissue is exceedingly common, showing spiral and scalariform vessels very beautifully. Besides all these well-defined organisms, &c., there is always a quantity of debris which can scarcely be classed anywhere. Any water containing muscular fibre, which can be easily detected, or epithelial scales in any quantity, should at least be viewed with suspicion, as it is a somewhat good indication of sewage contamination.

The second heading of the biological analysis is of extreme importance. In any ordinary water its value is, at present, merely relative; but in any suspected water its merits cannot be over-estimated. For this work one should use two powers, 2-inch and $\frac{1}{2}$ -in. Roughly speaking, the method consists in taking a known quantity of water, mixing it carefully with a sterile gelatine medium which is liquid at about 32° C., allowing this to set, thus fixing all the bacteria in position, and allowing each one to develop separately into colonies, which can then be counted. Each colony represents, in nearly every case, one organism. Of course, all the dishes, pipettes, &c., used for this work are carefully sterilised before use—firstly by washing with a 1-per-mille solution of corrosive sublimate, and then by heating to 150° C. three or four times. A very fine pipette should be used to deliver the known quantity of water—in fact, a tube of very fine bore, graduated in $\frac{1}{100}$ c.c., is most useful. For very bad waters $\frac{1}{100}$ of a c.c. is sufficient; for drinking-waters from $\frac{1}{10}$ c.c. to 1 c.c. is used, according to circumstances. Petri's dishes are best for the purpose of cultivation. These consist merely of circular thin glass dishes about 3 inches in diameter and $\frac{1}{2}$ inch deep, covered by a closely fitting glass lid, like that of a pill-box. The medium is usually a beef-tea broth, solidified by the admixture of 5 to 10 per cent. of Coignet's gold-label gelatine, or a mixture of Coignet's and Nelson's best gelatine. It should be kept faintly alkaline with caustic soda (15 per cent.). The water is dropped from a sterilised pipette on to the dish, enough gelatine to form a thin layer on the plate is poured on to it, and the cover quickly replaced. The whole is gently rotated so as to thoroughly mix the water and the gelatine, upon which the success of the experiment depends. If this be done

under a three-sided glass cover away from any air-currents, practically no organisms from the air will find their way into the plate. The plate is now allowed to remain for from three to four days at the temperature of the room, carefully covered over with a bell-jar resting on blotting-paper soaked in solution of corrosive sublimate. After the colonies have developed, they are counted in the following way. If the water be a good one, and contains a very few organisms, one should count the whole plate. This is easily done by ruling guiding lines on the under surface of the plate, and counting the colonies under a 2-inch objective. It is not sufficiently accurate to use a hand-lens. For example, I have known one of the best-known water analysts count a plate under a hand-lens, and return the number as 75. Counted by two other analysts under the 2-inch objective, the numbers obtained were 115 and 117 respectively. If, however, the water is bad, and there are a large number of colonies—sometimes they number hundreds of thousands on one plate—it is impossible to count them directly. We therefore adopt one of two plans: we either have plates ruled carefully with lines which cut off patches of known area, or we measure by a stage micrometer the whole field included by the special objective we are using. The area of the plate is of course known. We then count any fields that we place by chance under the microscope. At least twenty should be counted, and an average taken for a single field; this number is then multiplied by the number of fields present, and taken as the total number of organisms. A good drinking-water ought not to contain more than 500 organisms per cubic centimetre, but I have known pure waters run up as high as 1,800. The very best often contain no more than 50-70. But the great drawback to the enumeration of the micro-organisms is that unless they are fixed in the gelatine-medium directly the sample is taken—which should be done in a sterilised bottle, of course—an enormous increase of bacteria takes place. For it must be remembered that a single bacterium can look round with pride on millions—ay, and billions—of his descendants in the course of a few days (one germ will often produce 200 in a single day). Hence the necessity of inoculating the gelatine directly the sample is taken. In the case of river water it is common to find 50,000 or more organisms per cubic centimetre, and in sewages they number millions. When a sample has to be brought from a distance it should be kept in ice; this will freeze the sample and prevent development. I have found that if a sample has to come a day's journey, and be sent without ice, it will generally yield from three to four times the number of organisms as when it is sent packed in ice. The great importance of this examination is that disease-germs are readily identified by a practised observer. For supposing a water contains 1,000 organisms per cubic centimetre, but they are all—as in the case of pure drinking-waters—non-pathogenic, the water is not dangerous, whereas if it contains 50 cholera organisms it is condemned. Now, when the plate is examined the observer will mark any suspicious colony—for the pathogenic organisms generally grow in characteristic colonies—and in the case of a suspected water will carefully search for typhoid and cholera organisms, and if he finds anything which resembles one of the pathogenic colonies, a small amount should be removed from the colony, and a fresh portion of sterile gelatine inoculated with it. This is allowed to grow for a few days, and carefully examined by the usual methods, which will enable him to state whether it be a dangerous organism or not. If pyogenic organisms are found—that is, those characteristics of suppuration—such as many of the streptococci accompanying erysipelas and other skin-diseases, the water should be condemned both for drinking and for washing purposes, as the germs, finding any wound on the person using the water, may give rise to very malignant complaints. Of course the colonies to be enumerated must be allowed full time to grow, for, as a rule, the organisms are aerobic—that is, require oxygen for their growth. Consequently the surface bacteria develop first, and those deeper down require more time for their development.

There is but little doubt that the bacteriological examination of water is the factor which will be of most importance in the future of water analysis. It has assumed great importance during the last ten years, and in another decade it may so develop as to assume at least as much significance as the ordinary methods of chemical analysis.

MESSRS. WOOLLEY'S NEW WAREHOUSES.

LAST Monday Messrs. James Woolley, Sons & Co., of Manchester, opened the fine new premises they have erected on land adjoining Victoria Bridge in that city. The warehouses in Swan Court, Market Street, large enough half a century ago, when they were first entered upon, have for some time proved far too small for the ever-growing business of the firm, and some time ago, on the expiration of the lease of one of the warehouses in Swan Court, it was decided to build an entirely new warehouse designed in every detail for carrying on in comfort and efficiency the business of wholesale druggists.

Before describing the equipment of the building, which

rapidly did the trade of the firm increase during the next few years that, in 1879, an additional laboratory had to be built and further machinery put down. Uninterrupted progress has ever since attended the unflagging enterprise of the firm. In 1889, however, a sad accident occurred by which Mr. Harold Woolley lost his life, to the great grief of all who knew him. In 1891 Mr. E. J. Woolley, a son of the senior partner, joined the firm. It is worthy of note that since Mr. James Woolley first commenced business, all the partners have been pharmaceutical chemists, and at the present time twelve pharmaceutical chemists and twenty registered chemists and druggists are connected with or employed by the firm. The staff, all told, numbers about 150.

Messrs. Woolley have chosen for the site of their new warehouse a locality rich in reminiscences of Manchester life of other days. Several of the neighbouring streets, includ-



has been erected in accordance with this decision, a word or two may be devoted to the history of the firm. The business, we learn, was founded in 1796 by Mr. R. H. Hargreaves, who did a large trade in chemicals and dye-stuffs with the calico-printers, bleachers, and dyers of the district. In 1844 it passed into the hands of Mr. James Woolley, who died in 1858. His eldest son, Mr. George S. Woolley, the present senior partner, continued the business, and in 1868 he was joined by his brother, Mr. Hermann Woolley. In 1872 the title of the firm was changed to James Woolley, Sons & Co., Mr. Harold Woolley and Mr. C. A. Johnstone being taken into partnership. In the same year the premises in Swan Court, Market Street—part of which had been destroyed by fire—were considerably extended, and the manufacturing department was removed to Knowsley Street, Cheetham, where laboratories and drug-mills had been erected. So

ing Deansgate, Greengate, Old Millgate and Hanging Ditch, still retain their ancient names, but most of the old buildings which formed so interesting a feature of the locality have gradually passed away, giving place to large modern structures, such as the Royal Exchange, the Victoria and Grosvenor hotels, and the Exchange Station. The Cathedral and the Cheetham Hospital are now almost the only noteworthy survivals of old Manchester in this quarter. Still more important, from a business point of view, than the old associations connected with the locality is the circumstance that the site is exceedingly central. It is within stone's throw of the Exchange Station (L. & N.W.), and within four minutes' walk of Victoria Station (L. & Y.), while tramcars to the principal suburbs of Manchester pass within a few yards. The buildings cover about 1,000 square yards of land, and have a frontage of 80 feet to Vic-

toria Bridge Street, and of 120 feet along the right bank of the river Irwell. They consist of a basement and five storeys. As our illustration indicates, they are of pleasing design, and they cannot fail to attract the attention of anyone entering the city from the Exchange Station.

Our Manchester representative was on Monday shown over the new buildings, from the basement to the roof, and he sends us a report of what he saw and was told during his tour of inspection. Beginning at the bottom and going skywards, he informs us that the basement stretches over the whole area of the land, that it is fireproof, and that it is excellently lighted by nine windows overlooking the Irwell. It contains the "wet" room, two fireproof vaults, a boiler-house, and bottle-washing department, and communicates with the packing-room and town department above by two fireproof staircases, a hydraulic lift, and two small hand-hoists. It is furnished with brick and flag stillages, some supporting the large tanks of olive oil, others the casks and small tanks of tinctures, syrups, &c. The essential oils and more inflammable liquids are stored within the vaults. As a precaution against fire, the two vaults are fitted with sprays, or sprinklers, supplied from a tank on the roof, by means of which a copious shower of water can be thrown, in case of need, into every part of the two cellars.

In the "wet" room proper, which occupies the front portion of the basement, and is marked off by a brick partition, the walls above the casks are lined with shelves on which are ranged, in alphabetical order, tiers of stoneware tap-jars, of various sizes, containing liquid extracts and other fluid preparations. In this manner, from 8,000 to 10,000 gallons of tinctures, syrups, and other liquors are conveniently stored, while in the back portion of the basement additional tanks and vessels are provided for 5,000 gallons of olive and other oils. The poisonous preparations are placed apart at one end of the room, and this plan is adopted in all the other departments of the warehouse.

Above the basement each floor has an area of about 700 square yards. The ground floor is made fireproof, being constructed with steel girders, crossed by wrought-iron joists, bedded in Portland-cement concrete, over which is laid a floor of 1½-inch red deal blocks. The steel girders and columns carrying them are cased in patent wire lathing and plastered. The front portion of the ground floor is taken up by the "town" and "export" departments, the walls of which are faced with ivory-white bricks, with dark dados and cornices. These departments are placed right and left of the main entrance, and between them is a vestibule giving access to the staircase leading to the counting-house. The partitions and panelling are of pitch-pine, glazed with Chance's glass, the spandrels up the sides of the staircase being effectively filled in with embossed enamel tiling.

To the rear of the "town" and "export" departments the remaining space is occupied by the packing and goods-receiving room. On this floor goods are received and despatched by three wide doors opening on to the loading-way. The loading-way is 24 feet wide and about 110 feet long, is cut off from the street by a pair of wrought-iron gates, and is placed at such a level that the platform of a lorry is in line with the packing-room floor. Three lorries can be loaded or unloaded at the same time. The packing-room is supplied from the floors above by a large and a small lift, worked by gas-power, a small power-lift being also provided for the "town" department.

A complete system of speaking-tubes with pneumatic calls starts from the town counter, and ramifies to every part of the building. A similar system radiates from the packing-room, and a third one is arranged for the use of the clerks on the first floor.

On the first floor, immediately over the town department is the counting-house, a large apartment with pitch-pine partitions and furniture, the walls being faced with glazed bricks in various tints. This department is lofty, admirably lighted by ten large windows, efficiently warmed and ventilated, and can accommodate upwards of sixty clerks.

Behind the general office are private offices and the chemical and surgical apparatus room. As this department comprises appliances used in surgical, photographic, chemical, and other scientific work, a very extensive stock has to be dealt with; and for its display and storage an elaborate system of glass cases and cupboards has been fitted up.

The rest of this room is partitioned off for packing and other purposes.

The second floor is given up to druggists' sundries, stamped medicines, and proprietary goods. It contains over 6,000 square feet of shelving for the more bulky articles, besides a large quantity of numbered drawers for those which can be stored in small compass. At the end of the room is the compartment where a staff of girls is employed in packing and finishing bottled goods, perfumery, sanitary rose-powder and other specialities of the firm.

Above the "sundries-room" the "dry" room occupies the whole of the third floor. This contains between 500 and 600 wooden bins of various sizes, shelves being fixed above the bins wherever the light is not intercepted thereby. The bins in this floor are capable of holding about 50 tons of various chemicals, gums, barks, roots, seeds and their powders. Such articles as tartaric and citric acids, cream of tartar, arrowroot, and other white goods and powders are stored on one side of the room apart from the drugs generally, which are arranged alphabetically on the opposite side. The bins for poisonous drugs, stand together at one end of the room, and are painted a distinctive colour.

The fourth floor is a lofty room lighted from the roof as well as by side windows. It contains the pure-chemical department, the analyst's laboratory, glass-bottle room, and also the gas-engine and lift-machinery. Supported on the principals is an extra stage for storing light and bulky articles, and from it access is obtained to an external flat roof, on which stands a water-tank of 2 000 gallons capacity for supplying the fire-hydrants fixed in each storey and the "sprinklers" in the basement.

The building is warmed throughout by steam, and ventilation is secured by connecting each storey with a large ventilating-shaft, smaller shafts being also provided for the offices and such rooms as are partitioned off from the main rooms. Each floor is furnished with cloak-rooms and lavatories, and on the ground and first storeys are rooms for the accommodation of the employes during the dinner-hour. An external iron staircase, or fire-escape, communicating with each floor, passes down the building to the yard or loading-way. The whole of the work has been carried out by Messrs. W. Southern & Sons, contractors, Salford, from the designs and under the superintendence of Messrs. J. W. and R. F. Beaumont, architects, Manchester.

AT THE COUNTER.

"TWO PENNYWORTH of Lenard's lacture," was a Lincolnshire order which resulted in an exchange of some conf. senæ for bullion.

MR. GOULDEN, of Bromley, Kent, reports the following experience:—Enter gentleman. "Excuse me, sir; do you bite off dogs' tails? I want my dog's tail bitten off, and was advised to go to a chemist."

TOO GOOD FOR EARTH.—An Irish drug-firm advertised for an assistant, and among the applicants was one from an English town. The letter has been shown to us as a curiosity. The writer seems to be in association with the Society of Friends. His letter is a very lengthy one, and resolves itself at times into a sermon. "I have studied," he says, "at the Hospital for the profession. I left it rather early 'tis true, before I had become legally qualified. . . . I relinquished it on account of having a conscientious scruple against taking money for doing people good (merely) . . . In case of a man slipping on the footway, for instance, the passer-by does not draw himself up, and with a cool precision inform him, 'My fee is 5s. to help you up, 7s. 6d. to bind up your hand, and 10s. 6d. to get you some stimulant.' " This and much more to the same effect. How the gentleman can reconcile his conscience to the duties of the pharmacy is not clear, unless it be the case that he considers that the chemist does no good to his fellow-men, and can, therefore, legitimately accept pay.

CHOLERA.

THE SANITAS CO. (LIM.) beg to give notice that they have been entrusted with large orders from the Local Health Authorities at most of our Seaport Towns, and orders are crowding in from all parts of the country. They have made arrangements, however, to deliver promptly, and will not raise their prices.

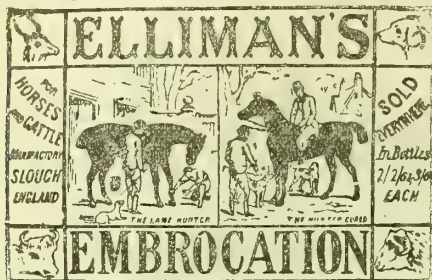
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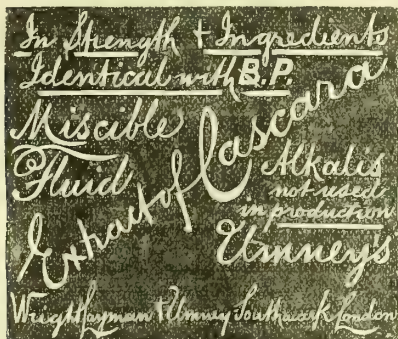


See first page, facing inside of front cover, in this issue, for latest particulars.

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Editorial Comments.

THE CHOLERA.

FOR the moment public interest centres in this country in the vigorous combat which is in progress between the cholera bacillus and the Local Government Board. So far official dom seems to have deserved well of the community. Our islands, with their vast shipping transactions, which imply

almost hourly intercourse with every part of the world, and the freedom of trade which has been our policy for so long, would seem to offer exceptional opportunities for the invasion of the insidious germ. That it has been kept at bay so long is unquestionably due to the wisdom and thoroughness of the sanitary laws which have been enacted amongst us during the past quarter of a century. The due enforcement of these is a duty of the utmost delicacy and importance, and the public generally will, for the moment, drop their objections to centralisation if the authorities at Whitehall continue to exercise their large powers with the judgment which they seem to have displayed in the crisis so far.

Chemists and druggists ought to take a much more important share in the execution of the public health statutes of the nation than they actually fulfil. When, in 1868, the handling of poisons was intrusted to them, many sanguine people believed that in a few years they would become almost State servants. It is not, perhaps, desirable that they should fill such a position, and they have effectually barred themselves from any approach to it by their vigorous resistance to anything like official control in the storage of poisons, and by the frequent denunciations of the poison trade and advocacy of a system of fancy prices for poisons, which have, unhappily, been planks in the pharmaceutical platform. Had it been otherwise, we might have had the satisfaction of publishing to-day memoranda from the medical department of the Local Government Board, advising chemists as to the disinfectants and first remedies they should be prepared to supply. To take a single example. In the "General Memorandum" issued by the Board, a formula is given for a solution of corrosive sublimate for the disinfection of soiled linen. The supply of this, whether to be given away or to be sold, ought, we conceive, to pass through the hands of chemists. Those who know how local disinfectants are distributed are aware that only a very small part of the solution which will be used will be compounded by those to whom the sale of poisons is confined by law. So, too, with disinfectants generally. It is not, perhaps, to be expected that local sanitary authorities should purchase their tons of chloride of lime, or their hundreds of gallons of fluid disinfectants from the retail-druggist, though the latter might in many more instances than he does touch a commission on such transactions.

That the chemist must, however, be the intermediary between manufacturers and the public in furnishing much preventive apparatus, and such remedies as are likely to be kept in readiness by the public, is obvious. It is in view of these contingencies that we commence the publication of "Cholera Notes" in these pages. We do not propose in these notes to give such facts as are provided by the daily press, in perhaps too liberal profusion, but we shall aim at giving only such points as may be of special use to pharmacists.

If there is one fact more striking than others in regard to cholera, it is the intimate connection between it and water-supply. In India, the home of the scourge, it has been conclusively demonstrated that an abundance of pure water has alone sufficed to reduce mortality to insignificant proportions; and even in London it was clearly ascertained that the spread of the epidemic in the East-end in 1866 was directly due to bad filtration of the River Lea water. The question, "What shall we drink?" becomes, therefore, a vital one, and one which retail chemists should be prepared to answer. Domestic filtration of potable water is a safeguard which may be advantageously encouraged. The knowledge which has been gained of recent years regarding the best conditions of filtration on the small scale has led to considerable modification of domestic water-filters, with the result that combinations of granular charcoal and

silicious media have been found which provide a practical means of clearing water from suspended matter, and greatly reducing micro-organic contamination. The present is an excellent opportunity of encouraging the use of such filters amongst water-drinkers. It is also to be expected that the use of natural table-waters will receive a great impetus just now amongst the well-to-do. Such waters as Apollinaris, Johannis, Gerolstein, and Rosbach are derived from subterranean springs far removed from sources of contamination, and their freedom from organic impurity has been one of the chief sources of their popularity. The practice, which has lately been greatly developed, of making aerated waters from distilled water should now meet with full appreciation, especially in London, where the public water-supply is not of the excellence provided in many provincial towns. The weakly alkaline soda and potash waters of this nature are as cheap and wholesome beverages as can be used, while an acidulated water containing 8 minims of dilute sulphuric acid and 4 minims of dilute nitric acid in each pint would form an excellent prophylactic, and a preferable beverage in many respects. Sweet drinks may prove a snare to the bacilli; the purely acid media they abhor. The notion that the addition of spirits to water makes it safe is erroneous. Five drops of acetic acid has more bactericidal power than a glass (2 oz.) of whisky, and the mineral acids are more powerful than acetic and citric acids, the latter of which is at present enjoying an exceptional degree of popularity. Elsewhere we mention some of the medicinal means which may be adopted for warding off attack, but as infection so greatly depends upon what we eat and drink, we give the question of beverages this note of importance. A few drugs may be expected to be in brisk request. These are camphor, in the form of camphor lozenges for wearing, and pills and spirit for internal use; peppermint, chloroform, and quinine—all reliable prophylactics; sulphur in the form of lozenges, sulphurous acid, or sulphites. Some of the forms in which these are used we indicate on another page, and if retail chemists adequately make use of their intimate relations with the public they may be of great assistance in allaying panic and making an epidemic impossible.

THE IMPERIAL INSTITUTE AND ITS WORK.

It is now some seven or eight years since the idea of an Imperial Institute—a kind of commercial Intelligence Department for the whole of the British Empire—assumed concrete form. In due time an organising committee was created, officials peculiarly qualified for such functions by previous experience in exhibition-promoting were sent to enthuse the laggard Indians and Australians, and to collect information, exhibits, and cash; and with a painful effort of the Laureate, recalling Pye and Southey rather than the singer of "In Memoriam," the Institute was fairly launched.

Since that time we have been waiting for the organisation to bring forth some fruit, and this week our patience has been rewarded by the receipt of a copy of its firstborn, the "Imperial Institute Year-book," a stout volume, brave in a scarlet cover and of severely official appearance. The object of the book, as set forth in the preface, is "to deal statistically with the physical geography, the natural resources, and the industries and commerce of the Colonies and India," and to give "facts and numerical data relating to these." It is compiled by Mr. J. S. Fitzgerald, the librarian, who has acquitted himself well of a task in which *l'embarras du choix* must have been no mean difficulty.

The usefulness of a book dealing largely with statistical

information depends mainly upon the reliability of the figures which form its foundation. The compiler of commercial books of reference is apt to be distraught by the fact that no two sets of statistics relating to the same matter, but taken from different sources, ever agree. If, having ascertained the exports of various kinds of merchandise from, say, the United Kingdom to Canada from British sources, he should innocently proceed to check his results by a set of Canadian statistics, it is absolutely certain that he will discover an utter disagreement between the two sets of figures. The same thing applies to all other countries. To harmonise the conflicting cyphers under the present system of statistication, which is different in every country, can lead only to madness. But it ought not to surpass the wit of official man to devise a set of statistical tables which could be applied to the whole of the British Empire. If a private firm with a dozen colonial branches can trace every case of goods which passes through its hands, why should not Government do as much? At present the classification of merchandise in the various communities of the empire is utterly dissimilar. Drugs, for instance, or glassware, or perfumery, are carefully entered under separate heads in one colony, while next door they are all lumped under "articles unenumerated" (a denomination beloved of the official mind) or, mayhap, are not mentioned at all. A really effective, detailed, and uniform system of classification throughout all the ports of the Empire might prove as valuable a step in the direction of Federation as any that has yet been proposed.

It is impossible to convey information concerning the whole trade of this Empire within the limits of a single volume, however ably compiled. The merchant or manufacturer who turns to this Year Book will find, indeed, a little nugget of information bearing upon his special trade enshrined here and there, but a pamphlet devoted solely to the particular branch of industry in which he is interested will be of more value to him than a book of 850 pages, nine-tenths of which can excite, at best, only a kind of mild curiosity in his mind. Therefore, having produced their excellent Year Book, and surveyed the Empire generally by way of introduction, we hope the Institute will begin to specialise. Its managers might take a hint from the Bureau of American Republics in Washington. That office was created recently for the express purpose of fostering commercial relations between the United States and other American countries. It has already produced a series of guides to the Latin-American States, and is now issuing handbooks relating to special trades. Its last bulletin, for instance, treats of "Breadstuffs in Latin-America." We have not read it. But it looks like a work of real value for grain-merchants, millers, and others of that persuasion. In the fulness of time, no doubt, the Bureau will bring forth a bulletin devoted only to the drug trade of Latin-America and thereby confer a substantial benefit upon all person connected with the drug-business.

About one-sixth of the Institute's Year Book is devoted to a skeleton outline of the trade of the United Kingdom, reproducing the familiar figures of the Board of Trade Returns. Then follow chapters, many of them pleasantly and brightly written, dealing with all the other parts of the Empire.

The island of Malta is of considerable interest to our druggists, as it is from thence that vast quantities of European and African produce, caraway, cummin, anise, squills and other drugs are transhipped. It would be very valuable to have accurate statistics of the movement of each of these goods for a number of years. But here we are calmly told that, "owing to the method in which the Government's Re-

turns are prepared, no accurate information concerning the trade of Malta is available." Could anything be more preposterous? Of what use are the officials we keep there if they cannot procure for us, at least, some information that may assist us in earning the wherewithal to furnish their salaries? As with Malta, so it is with Singapore and Hong-Kong, trade emporia of the highest magnitude, where ships come and go, leaving never a record behind of what they bring or take away. And this in the dependencies of a Nation of Shopkeepers!

The soil and climate in certain parts of Jamaica, we are told, are favourable to tea and cinchona cultivation, and if the island has failed to become a grower of either, it is simply due to its dear labour and high freight-rates. The acreage under ginger is expanding. In 1881 only 112 acres were devoted to this culture; now there are 204. What druggists would like to know is the quantities of honey, bees'-wax, quassia, lime-juice, and sarsaparilla Jamaica exports; but to these queries no official statistics we have ever seen afford a clue. Under "Bahamas" we look in vain for any information relating to sponges. Under "India" the value of the exports of shellac, button lac, and castor oil is given; but these figures exhaust the information on these subjects. About a page in "Ceylon" is devoted to the decline and fall of the cinchona industry, the facts being generally correct, though the statistics might have been brought up to the end of 1891. The price of quinine, we may remark in passing, has not been 2s. per oz. for years, and the "Proceedings" of the Planters Association for Ceylon of 1889 are in many respects obsolete as a guide to the present condition of the planting industry.

The compilers of the "Annual" have replaced the maps usually found in handbooks of this kind by diagrams showing the exports and imports of merchandise in the various colonies, and the fluctuations of the rupee value for the last twenty years. What strikes one particularly about these diagrams is the suddenness and frequency of the ups and downs in colonial trade. This is a disquieting feature from an economic point of view. Turn whither we will—to the Cape, to Canada, to the Australias—we cannot point to a colony among the lot that does not present a trade-diagram peaked like a jagged iceberg, foreboding danger to the craft of the commercial adventurer.

PLANS OF CAMPAIGN.

WITHIN the past ten years we must have published a hundred or more outlines of schemes which their authors seem to fondly imagine will furnish a royal road to fortune for all chemists and druggists. Many of these schemes are based on an Act of Parliament which seems to the proposer the most reasonable thing in the world, but which no sane legislator would ever dream of submitting to Queen, Lords, or Commons. Other planners rely upon the resources of the Pharmaceutical Society, or on some organisation to be formed; but all demand, as a primary essential, the co-operation of the great majority of the members of the trade.

This is the first and most obvious bar to the success of any such enterprise as is suggested. There is not an event in the history of pharmacy, there is not a topic which can be raised in this or any other journal of pharmacy, which does not testify to the absolute hopelessness—we will say, too, the healthy hopelessness—of the anticipation that anything approaching a representative section of the trade can be induced to unite in the furtherance of any specific trade object. It is not so much the objectors to a movement—

they are the best friends it can have: it is the vast uninterested mass which constitutes that immovable *vis inertia* so discouraging to the enthusiastic reformer.

These comments are suggested by the two letters which we print in our Correspondence section this week. We do not propose to discuss the schemes drafted in these letters with any heavy arguments; we are quite content to leave them to contend with the *vis inertia* to which we have referred, but we are conservative enough to sympathise in this case with the aforesaid *vis*. One of our correspondents offers us, professedly, "only a rough sketch"; the other lays down his lines in more detail. Both, it will be seen, propose to re-arrange, by means of an "organisation," the conditions which pharmaceutical life has worked out for itself.

"Molecule's" conception is particularly refreshing by its boldness and ingenuity. He proposes to seize the Pharmaceutical Society and actually to make some trade use of it. It is much as if he should board the Queen's yacht, put its Serene commander in irons, and run it as a penny steamer from London Bridge to Westminster. The trade are to join the Society *en masse*—at any rate in such mass as to overpower those who at present regulate its policy; they are to create a "business board" from its Council, or, as "Molecule," with a prudent reminiscence of the men whom we have hitherto known as councillors, considerably adds, "better still, as a separate body." The business board is to annex the laboratories, the Belt scholars, the Research Laboratory, the professors and all the great institutions so dear to the soul of Sir Gainsford Bruce for the purpose of inventing and supplying to shareholding chemists all sorts of proprietary articles. Messrs. Dunstan and Dymond would be set to produce an infants' food, while Professor Attfield was working up a new antibilious pill. The Council proper, which would have little occupation, might devote itself to designing the labels for these articles, but the business board, as we understand, would do the advertising. Chemists, so far as we can make out, are to simply sit still while Bloomsbury Square undertook the troublesome detail of getting their livings for them. We are to be the "organ" of this magnificent scheme; to be supplied free, we suppose, by the "business board" out of its profits.

"Lymph" has a similar idea of ensuring future prosperity by floating a co-operative company, by raising a capital of 100,000*l* among retail chemists, then supplying "drugs, chemicals, patents, and sundries, on better terms than ordinary wholesale houses," and out of the profits defending its shareholders against the Board of Inland Revenue, the food and drugs inspectors, and other officials who interfere with the sacred right of chemists and druggists to break the law when it seems good to them to do so. Does it occur to "Lymph" and to other correspondents who write in his strain, that it is considerably to the advantage of chemists who do obey the law that their competitors who do not should be restrained by fines? The airy style in which he suggests that a group of wholesale businesses should be floated is evidence of how little idea he can have of the amount of thought, and care, and skill, and experience which have had to be expended on those which have reached mature years. Assuredly he is mistaken in his complacent assumption that his scheme will be "strenuously opposed by the wholesale houses." There is nothing in it to excite their anger.

SPURIOUS ARNICA-FLOWERS.—An American contemporary notifies the fact that there are several lots of arnica-flowers on the way from Trieste to the States partly mixed in a clever way with spurious flowers, partly containing not even a percentage of the genuine flowers.

Legal Reports.

BAKING-POWDER NOT A FOOD.

ON August 25 at Ilkeston, a grocer named Dean was summoned under the Sale of Food and Drugs Act on two charges for selling baking powder containing injurious ingredients. Mr. Hopkins (Ilkeston) prosecuted, and Mr. Tillet (Norwich) appeared for the defendant. On May 19 Captain Sandys, inspector, purchased from the defendant a packet of the "Diamond" baking-powder, manufactured by Messrs. Fisher & Co., of Norwich, and sent it to the Derbyshire county analyst, Mr. Otto Hehner, Fenchurch Street, London, for analysis. Mr. Hehner, certified that in its manufacture 35.5 per cent. of alum was used, and that in his opinion it was injurious to health. In his evidence, Mr. Hehner said he took about as much alum as would be contained in a 4-lb. loaf, if this powder were used, with the result that he had an attack of indigestion which lasted over the next day. An assistant also tried the same experiment, and the result was precisely similar. He explained that some manufacturers use tartaric acid and bi-carbonate of soda; in the present case alum was substituted for the tartaric acid. When mixed with dough alum underwent a chemical change leaving a residuum termed alumina. This, he considered, rendered the powder injurious to health. Dr. M. A. Adams, F.C.S., F.I.C., and medical officer of health for Maidstone, concurred with the evidence of Dr. Hehner. For the defence it was contended that until it was mixed with flour baking powder was not an article of food. Mr. F. Sutton, F.C.S., F.I.C. (analyst for Norfolk and South Devon), said he did not think the powder was injurious and related an experiment he had made with some pigs. The stomach of a pig was more like that of a human being, and more susceptible to disease arising from a like cause than that of any other animal. The pigs, all of which were the same size and weight, were fed half with a mixture containing baking powder made from alum and the other half with baking powder manufactured from tartaric acid. After a short time the animals were examined, and it was found that those who had partaken of the alum preparation weighed 6 lb. more than those fed on tartaric acid. Dr. D. L. W. Thudichum, F.C.P., F.C.S., medical adviser of the Local Government Board and the Privy Council, and also author of the "Handbook of Chemistry," was also called, and gave it as his opinion that the powder was not composed of compounds of an injurious nature. He had found the baking powder perfectly wholesome. He said that the chemical process which followed the mixture with the dough rendered the powder entirely harmless. Baking powder made from alum was much better for domestic purposes, as it would mix better with the dough, and would keep longer, while that made from tartaric acid made it necessary that the dough should be put in the oven immediately, and this in many cases made it very awkward for housekeepers. Dr. Wynter Blyth, F.C.S., public analyst for Marylebone, Doctors Tobin and Potter of Ilkeston, and several other gentlemen gave similar evidence. They all denied that alum was injurious to health, holding also that it was not a food. The magistrates held that baking powder was not a food, and that the powder in question was not sold to the prejudice of the purchaser.

The summonses were dismissed.

EVIDENCE OF DELIVERY.

IN the City of London Court on Wednesday, before Mr. Commissioner Kerr, the Scotch and Irish Oxygen Co. (Limited), of 85 Queen Victoria Street, E.C., claimed the sum of 3*l*. 19*s*. 9*d*. for chemicals supplied to Mr. F. Lowndes, chemist, Faraday House, Charing Cross Road.

One of the plaintiffs' representatives was called, and said they received the order for the goods from the defendant, and the goods were sent off in the usual way.

Mr. Commissioner Kerr said that did not show that they were delivered.

The plaintiffs' representative said he knew they were delivered. Their man came back and told them he had done so.

Mr. Commissioner Kerr: He might have thrown them over London Bridge instead of delivering them, for all you know. "What the soldier said" is not evidence, as was decided in the great case of *Bardell v Pickwick*, reported some years ago in Mr. Dickens's book. (Loud laughter.) I must have evidence of delivery.

The witness added that they had received a letter from the defendant, in which he promised payment.

Mr. Commissioner Kerr: Why did you not tell me that at first, man? Go on! Judgment for the plaintiffs, with costs.

THE IRISH PHARMACY ACT.

In the Dublin Police Court on Tuesday, before Mr. Byrne, Q.C. Messrs. Samuel Boyd, J.P., and Walter Boyd, carrying on business under the name of Boyd & Goodwin, appeared to answer an adjourned summons instituted by the Council of the Irish Pharmaceutical Society, charging the defendants with selling on July 23 and 25, 1892, and keeping open shop for compounding medical prescriptions, contrary to the 38 & 39 Vict., c. 57, section 30, they not being persons properly qualified in that behalf according to law. When the case came before the Court on Tuesday week there were a number of other summonses against the defendants, but they were either withdrawn by the solicitor for the plaintiffs, or were ruled informal by the magistrate.

Mr. R. K. Olay, of Messrs. Casey & Clay, solicitors, conducted the prosecution, and Mr. Wiley (instructed by Mr. Blood) appeared for the defendants.

Mr. Clay asked his Worship had he any observation to make as to how the matter stood?

Mr. Byrne said what occurred was this. He saw the last day that he had not as good a knowledge of the law bearing on the matter as he should have, and therefore he had adjourned these summonses till to-day. He would not say, however, that he had changed his mind in any way.

Mr. Wiley said, with regard to the cases of the 7th and 11th, in which fines were inflicted on August 23, he assumed that his Worship came to the conclusion on the evidence that Mr. Best did compound the two bottles.

Mr. Byrne: Yes; but that was another matter. He had been anxious that the summonses should be correct.

Mr. Wiley said in that case he would assume that Mr. Best did on those two occasions compound those two prescriptions; but he submitted that that did not make his clients liable. The general prohibition was in section 30, which provided that it should be unlawful for any person not a pharmaceutical chemist to keep open shop for retailing, dispensing, or compounding poisons or medical prescriptions. Now, section 31 qualified that, and provided that nothing in this Act should extend to the making of patent medicines or the sale of them by dealers. The only evidence of keeping open shop for compounding medicines was that Mr. Best, who was a qualified pharmaceutical chemist himself, made up prescriptions twice, against the express directions of the firm, who told him not to compound. This was proved by the fact that, immediately after a case was made against the Messrs. Boyd in April last, every trace of label in the shop or notice in the window implying that this was a shop where prescriptions could be compounded was taken down.

Mr. Byrne: I don't think so at all.

Mr. Wiley: I asked Mr. Best this question—Was not every label in the shop destroyed and the notice taken away? And he said it was so. No person entering the shop would find any trace or notice that there was any compounding of medicine there. I have a distinct recollection of the evidence, and I would submit that the mere fact being proved that Mr. Best, who was employed in the shop, had on two occasions, against the instructions of his employers, compounded the prescriptions—I submit that that would not be evidence of the shop being kept open for compounding medicines.

Mr. Byrne asked that evidence should be given as to the register.

Mr. Wiley said they admitted that the Messrs. Boyd were not registered as pharmaceutical chemists, but as chemists and druggists.

Mr. Byrne: If this case goes to the superior courts it will be very narrowly scanned. Do you admit that they are not to keep open-shop for the compounding of medicines?

Mr. Wiley: I won't go so far. I admit that they are not entitled to compound medicines.

Mr. Ferrall, the Registrar under the Pharmacy Act in Ireland, produced a copy of the register to prove that neither Samuel nor Walter Boyd was registered as a pharmaceutical chemist.

By Mr. Wiley: Mr. Samuel Boyd was registered as having been in business as a principal chemist and druggist before the passing of the Act of 1875. Mr. Walter Boyd was registered as a druggist under section 7.

Mr. Olay: There is a great distinction between a chemist and a pharmaceutical chemist under the Act.

Mr. Byrne: Of course there is a distinction.

Mr. Wiley: That we admit.

In reply to Mr. Clay the witness said he had the original register of pharmaceutical chemists of Ireland, and neither Mr. Samuel Boyd nor Mr. Walter Boyd appeared on it.

Mr. Byrne thought the original register should have been produced, and that the evidence of the document produced by Mr. Ferrall was not sufficient.

Mr. Clay referred his Worship to a section of the Act which declared that a list purporting to be published by the Registrar, and which he was bound to publish every year, was evidence.

Mr. Byrne: I must say I am disappointed that the original register is not produced. I gave ample opportunity for its production. Mr. Samuel Boyd's name appears on the register of chemists and druggists?

Mr. Clay: Yes; on the register of chemists and druggists.

Mr. Wiley: My friend seems to think there is some difference between a registered druggist and a registered chemist and druggist. Mr. Walter Boyd is only on the register of druggists, but he has the right to retain the title of "chemist and druggist."

Some discussion then took place as to the form of the summons. Mr. Clay wished to have a summons in the form that Messrs. Boyd did use the name of "pharmaceutical chemists" contrary to law.

Mr. Byrne said he would not accept that. He would only allow summonses for keeping open shop for compounding. He would dismiss the summonses, unless they were put in the shape he indicated.

Mr. Clay said then he would take the summons in this form as far as this one was concerned. The form was that the defendants on July 23 did keep open shop for compounding medical prescriptions contrary to the 28th and 29th Vict., they not being persons properly qualified in that behalf according to law.

The man Farrell, who purchased medicine at Messrs. Boyd's, and who was examined at the previous hearing, was recalled by Mr. Clay. His evidence was that he visited the shop on July 23 to get a bottle made up on a prescription of Dr. Thompson, of Harcourt Street. He was told to come back for it, and he did so after a time, and got the bottle produced. He noticed the name of "Farlong" on the bottle. He saw two gentlemen in the shop, who looked at a book and asked him why he had changed from Dr. Swan, and he said because that doctor was out of town. He did not know whether the bottle had been made up by Mr. Farlong.

Mr. Wiley: When you read the label, where did you infer the bottle was made up?

Witness: I did not form a belief on it. It might have been made up anywhere as far as I was concerned.

Mr. Byrne: The case is this. A customer comes into the shop. He hands over a prescription. He is told to return, and he gets the medicine. It is sold to him; it is dispensed to him; and in my opinion that is keeping open shop for the purpose. There is no use in going into any evidence about Mr. Farlong.

Mr. Best was called by Mr. Wiley, who asked him where Farrell's bottle was compounded.

Mr. Byrne would not admit the evidence, as the summons was only one for keeping open shop for compounding.

Witness (to Mr. Wiley): I told Mr. Farrell to come back again, and he would get the prescription made up.

Mr. Wiley: Where was that prescription made up?

Mr. Byrne: I refuse to take that.

Mr. Wiley: I put it in this form. Was it made up in Boyd & Goodwin's?

Mr. Byrne: I refuse to take that evidence—it is not relevant.

Mr. Wiley: Well, there is not the slightest use in my taking the case to the Exchequer, when all the evidence I want to bring out is refused. If your Worship distinctly refuses to take the evidence I have a remedy.

Mr. Byrne: I must act on my own impression of the law.

Mr. Wiley: Then your Worship refuses to take the evidence as to where the medicine was compounded?

Mr. Byrne: Yes.

Mr. Clay: I am only taking the case of July 23 now—keeping open shop. There is the same ground for the case on the 26th.

Mr. Byrne: Have you not enough already?

Mr. Clay: I am only acting on my instructions from the Council of the Society, who think that a case against such a firm as Messrs. Boyd & Goodwin is one that should be followed up. The only offences now are the offences of the 23rd and the offence of the 26th (the other charges having been withdrawn). There is the same evidence for the 26th, and I wish to examine Mr. Furlong in that case only. The summons is for keeping open shop for the sale and retail of medical prescriptions.

Mr. Byrne said he would dismiss that summons.

Mr. Clay asked for a conviction on this summons, as it stood upon the same evidence as the last.

Mr. Byrne: I refuse. I dismiss the summons, as it is a bad one.

Mr. Clay: Well, your Worship convicts on the 23rd on the amended form—the two Furlong cases on the 23rd, the bottle and the ointment, as proved. I asked you to do the same thing for the 26th, and you refused. But I take it your Worship convicts on the 23rd. The penalty is 5*l.*, and I ask you for 3*l.* costs in both cases.

Mr. Wiley: I understand that your Worship convicts on the evidence of Farrell?

Mr. Byrne: Yes; and also on the evidence of Mr. Best. In giving his decision his Worship said: The charge is that Messrs. Boyd & Goodwin did, on July 23, 1892, keep open shop for compounding medical prescriptions contrary to 38 and 39 Vic. c. 57, sec. 30, they not being persons properly qualified in that behalf according to law. In my opinion they were not so qualified. Well, did they so keep open shop for compounding medical prescriptions? On the day mentioned in the summons a customer, Farrell, walked into their shop with a medical prescription and handed it over the counter to the shopman to be made up. He was told to call back, and when he did he got the medicine compounded according to the prescription. It was dispensed to him and he paid for it. He was not aware where it was actually compounded. The defendants did in the transaction—the subject of the charge—in my opinion, hold themselves out to the public as trading in a business they were not qualified to follow, and did keep open shop for compounding medical prescriptions contrary to the statute. They so incurred the penalty, which I now impose on them, of 5*l.*, with 3*l.* costs. A similar transaction occurred on July 26, 1892, the subject of the second summons, for which I impose the like penalty of 5*l.*, with 3*l.* costs.

Mr. Wiley: I understood that the second summons, that for July 26, was dismissed by your Worship; if a penalty is inflicted in that case also, I must ask your Worship to state a case for the superior courts, “whether there is sufficient evidence to sustain the conviction.”

Mr. Clay: I now see, your Worship, what Mr. Wiley is at, and I therefore ask you to appoint a convenient day when I shall attend and put the evidence in proper form.

It was arranged that the parties should attend in Court on Tuesday next, September 6, 1892, to formally complete the depositions, in view of any further proceedings that might be taken. Thus judgment has been given for four penalties, with 3*l.* costs on each summons, for offences on July 7, 11, 23, and 26.

“BULL BEEF” is the name given in some parts of England to the young shoots of briars. Recently a case of poisoning has been attributed to it, the victim being a girl of nine who had picked the shoots off a hedge and eaten them.

NEW COMPANIES.

BRUCE & Co. (LIMITED).—Capital, 1,200*l.*, in 1*l.* shares. Objects: To carry on the manufacture and sale of essence of beef and other meats, extracts, soups, sauces, &c. The first subscribers (who take one share each) are: J. Cameron, Irene Road, Fulham, gentleman; G. J. Edkins, 13 Lithos Road, Hampstead, accountant; C. de C. Etheridge, 26 Neville Street, South Kensington; F. W. H. Campbell, 153 Cheapside, E.C., merchant; C. E. Campbell, South Beach, Felixstowe, gentleman; F. W. Vina, 9 Woodville Terrace, Hornsey, clerk; and George Green, 28 Vincent Road, Wood Green, clerk.

CARDIFF CANDLE MANUFACTURING COMPANY (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Object: To carry on in all its branches the business of oil refiners and candle manufacturers. The first subscribers (who take one share each) are: H. Davies, 32 Penarth Road, Cardiff; J. S. Wyndham, 56 Chic Street, Cardiff; J. E. Davies, 71 Bute Street, Cardiff; W. L. Davies, Victoria Stores, Penarth; J. Stacey, 6 Custom House Street, Cardiff; and A. M. Bailey, 8 Custom House Street, Cardiff. There shall not be less than three nor more than seven directors, the first to be elected by subscribers to the memorandum of association. Qualification, 100*l.*. Remuneration not specified. Registered office: 8 Custom House Street, Cardiff.

GOODALL'S DRUG COMPANY (LIMITED).—Capital 2,000*l.*, in 1*l.* shares. Object: To acquire the undertaking of Goodall's Drug Company, hitherto carried on at Mexbrough, Yorkshire, and to carry on business as chemists and druggists, &c. The first subscribers (who take one share each) are:—W. G. Downham, High Street, Mexbrough, chemist's assistant; Catherine Downham, High Street, Mexbrough; John F. Dyson, 24 Queen's Street, Huddersfield, accountant; J. A. Jessop, 25 Lumb Lane, Bradford, manufacturing chemist; E. Topham, Swan Hill, Frizinghall, chemist's assistant; Eliza Jessop, 46 Ashgrove, Bradford; and Joe Meller, Kirkburton, clerk. There shall not be less than two nor more than five directors. Qualification, 50*l.* shares. Remuneration to be fixed by the company in general meeting.

BRITISH FULLER'S EARTH COMPANY (LIMITED).—Capital 20,000*l.*, in 1*l.* shares. Object: To acquire certain fuller's-earth works and mines situate at Woburn Sands, and to develop and work the same. The first subscribers (who take one share each) are:—A. J. Hunter, 19 Nicholl Square, E.C., manufacturer; A. A. C. Wing, 24 Arabin Road, Brockley, S.E., gentleman; R. Robinson, 15 Meredith Street, Clerkenwell, gilder; G. Watts, 16 Water Lane, E.C., agent; W. R. Richards, 244 Devonshire Road, Honor Oak Park, S.E., tailor; F. C. Temple, Ormonde Club, S.E., gentleman; and W. Williams, Rumsey, Hants, manufacturer. There shall not be less than three nor more than seven directors. The first are: C. P. Bennett, J. Soares, and E. C. Robinson, M.A. Qualification not specified. Remuneration, 200*l.* per annum, divisible.

CARDIFF QUININE BITTERS COMPANY (LIMITED).—Capital 5,000*l.*, in 10*l.* shares. Objects: To carry on the business of manufacturers, importers, distillers of, and traders in quinine bitters and all kinds of medical, pharmaceutical and chemical, &c. compounds. The first subscribers (who take one share each) are: Charles Fell, 25 Westbourne Road, Penarth, agent; H. L. Rees, 16 Stanwell Road, Penarth, agent; R. J. Morgan, Westminster Chambers, Cardiff, agent; O. Walkey, St. Mary Street, Cardiff, manager; R. Williams, 20 Womanby Street, Cardiff, grocer; A. L. Morgan, 22 Dumfries Place, Cardiff, agent; and R. S. Morgan, 22 Dumfries Place, Cardiff, agent. There shall not be more than seven nor less than three directors, and the first are: J. Jones, O. Walkey, and R. J. Morgan; remuneration and qualification not specified. Registered office, Westminster Chambers, Wharton Street, Cardiff.

REGINARIS (LIMITED).—Capital 51,000*l.*, in 1*l.* shares. Objects: To acquire certain mineral springs at Niedermendig, in Prussia, and to carry on the business of importers and dealers in mineral, medicinal, and table-waters, &c. The first subscribers (who take one share each) are:—F. L.

Phillips, 22 Newhall Street, Birmingham, M.D.; F. A. Hutchins, 50 Thurlow Square, S.W.; C. B. Norman, 10 Colingham Place, S.W.; C. Hürter, 11 Adam Street, Strand, W.C., wine merchant; H. H. Lübbers, 47 Baker Street, W., manager; R. Chandler, 15 Mornington Crescent, N.W., clerk; and H. Smith, 9 Stourcliffe Street, Edgware Road, London. There shall not be less than five nor more than seven directors, and the first shall be appointed by the above-mentioned subscribers. Qualification, 100%. Remuneration, 500%, divisible, and a further 100% for every one-per-cent. after payment of a dividend of 7 per cent. Registered office: 11 Adam Street, Strand, W.C.

VAN WYK & CO. (LIMITED).—Capital 10,000%, in 10% shares. Object: To acquire the business of manufacturers of and dealers in cocoa now carried on by Van Wyk & Co., at St. Paul's Churchyard, E.C., and to carry on and extend the same. The first subscribers (who take one share each) are:—W. P. van Wyk, 7 St. Paul's Churchyard, E.C., merchant; J. B. Corney, same address, merchant; J. T. Willans, Union Club, London, merchant; A. K. Stephenson, Elmstone House, Beckenham, accountant; E. G. Wilkinson, 48 Clanricarde Gardens, W., clerk; W. F. Marreco, Horsett, accountant; and B. G. Dicker, Tabley Road, Tufnell Park, N., clerk. There shall not be less than three nor more than five directors. The first are: W. P. van Wyk, J. B. Corney, J. T. Williams, and W. F. Marreco. Qualification, ten shares. W. P. van Wyk is managing director, his salary as such being 200% per annum, with an additional 100% per annum when the profits available for dividend on the ordinary shares exceed 5,000%. Registered office: The Dutch Cocoa Works, Richmond Road, Kingsland Road, Dalston.

Medical Cleanings.

COCAINE IN GENITAL IRRITATION.

DR. HOWARD WELLS comments, in the *Therapeutic Gazette*, on the advantages which several male patients of his, who suffered from sexual excitement, have derived from injections of a 4 per-cent. solution of cocaine hydrochlorate, or as a throat-spray. He was led to this treatment through observing that patients who had been using cocaine for pharyngeal catarrh appeared to lose sexual power temporarily.

TABLOIDS.

DR. JOHN MORTON, of Mossori, writes to the *Indian Medical Record* in praise of tabloids, and he says that "in our army hospitals tabloids should form the chief contents of a field-paunier. Government is lavish with its arrangements about hygienic measures, and rightly so, but the curative agents are sparingly added to its annual indents. Taking a review of the history of tabloids, one thought strikes me more prominently than any other, and that is, we cannot be sufficiently grateful for this advance in the treatment of disease."

POISONING WITH PYROGALLIC ACID.

A MAN and his wife in Calcutta took two handfuls of pyrogallie acid, and the results were thus described by the man to Mr. U. Banerji, M.R.C.S.: "Sensation of drowsiness coming on at intervals, like that produced by opium. Nausea, but no vomiting; slight paroxysmal numbness about the extremities and face; slight palpitation and dryness of the throat; tongue moist and black; perspiration scanty." Mr. Banerji simply ordered 20 drops of dilute nitro-muriatic acid to be taken every two hours, and at night 6 oz. of olive oil to be taken in three equal doses. The patients were better next morning.

THE NOSE IN ASTHMA.

DR. W. S. JONES, of Camden, N.J., is of opinion that many cases of asthma are due to lesions in the nasal passages, and, acting upon this assumption, he has effected a number of cures by cauterising hyperæmic spots with chromic acid. He considers, and reports in the *Therapeutic Gazette*, that in all cases of asthma the nose should be examined, and all

existing morbid conditions corrected. A large experience leads him to assert that nasal operations are frequently curative, and that the duration of the asthma does not effect the prognosis unfavourably if the cause be a local disease in the nose.

DELIRIUM TREMENS.

DR. NORMAN KERR stated at the recent meeting of the British Medical Association that liquor ammon. acet. in teaspoonful doses every hour is the only medicine necessary for treating *delirium tremens*. Milk, beef-juice, broth, and coffee should be given frequently.

TOBACCO-SMOKING FOR CONSUMPTIVES.

DR. THEODORE GRIFFIN, of Kansas City, claims that the judicious use of tobacco will ward off or cure consumption which has just commenced. He does not recall any case of consumption in a smoker, and mentions a case of a brick-layer who four years ago developed symptoms of pulmonary tuberculosis with hemorrhage from the lungs. Two years after the development of the first symptoms a physician directed him to smoke and inhale the smoke of five cigarettes daily, and not to exceed that number. He directed him to take no other medication. The patient soon began to improve, cough and hemorrhages finally ceased, and he is now a healthy, active man, above the average in intelligence. He did not restrict himself to five cigarettes daily; but he gradually increased the number, until at present he smokes at least one hundred daily. This is interesting, but fallacious, we should think. We know of many a smoker who has succumbed to phthisis.

BOILS AND THEIR TREATMENT.

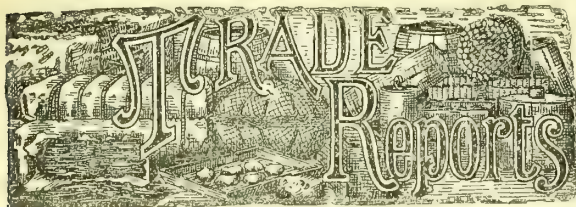
THE *Medical and Surgical Reporter* prints a lecture by Dr. W. C. Duggan, of Louisville, on this subject, in which the Doctor frankly confesses the off-hand way in which his *confrères* are apt to treat patients troubled with boils, and which, we may remark, is perhaps the reason why so many people prefer to ask the chemist's counsel in such cases. Poultices are the common method of treatment, says Dr. Duggan, but as generally made and applied are absolutely harmful, and should be discarded. Moist heat is undoubtedly beneficial, and there is but one form of poultice to be relied upon, and that is hot bichloride of mercury gauze wrung out of boiling water and applied in a thick pad over the parts and extending some distance from the inflamed centres, covered with oil-silk, rubber tissue, waxed paper, or oiled paper. It has all the advantages of the old linseed poultice, without the objections. The moist heat is sure to give the patient much relief, by lessening microbic action and causing tissue relaxation. Another line of treatment is the painting of parts with pure carbolic acid, tincture of iodine, turpentine, or some other powerful antiseptic. It is found that this will abort a certain percentage of the cases if done in time.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors

Toomey, Timothy, 207 Cannon Street, Middlesborough, drug and patent-medicine vendor. Trustee, George Catchpole, 63½ Wilson Street, Middlesborough, accountant. Dated, August 24; filed, August 30. Unsecured liabilities, 2411.10s. 3d.; estimated net assets, 612.; creditors fully secured, 454. The following are scheduled as creditors:—

	£	s.	d.
Benjamin, H., Middlesborough	28	14	0
Bleasdale, W., & Co., York	48	7	11
Bourne, Johnson & Latimer, London ..	36	11	9
Cohen, M., Stockton-on-Tees	27	0	0
Crichton's Oil Co., Newcastle	11	16	9
Guildhall Loan & Investment Co., London	37	10	10
Harrison, J., Stockton-on-Tees	23	10	0
James, F. Wilkinson, Manchester	10	9	1
Thompson, M. J., Middlesborough	14	3	0



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 31.

The London Markets.

The Reopening of the Soudan Gum-trade.

The Austrian consul at Cairo, in his report on Egyptian trade during the second quarter of 1892, makes the following statement with regard to the Soudan gum-trade:—"Small consignments of gum are now steadily arriving at regular intervals, thus proving that the resumption of commercial intercourse with the Soudan is an accomplished fact. There was a lot of 200 cantars in the market here the other day, for which a price of 160 piastres per cantar was refused. A lot of 60 cantars of Ghezirah gum was also offering. I hear from Suakin that about 800 cantars of 'Arabic gum,' several considerable parcels of Ghezirah gum, and some 200 cantars of Massowah gum, known to the local dealers as 'Barkhowi,' have been placed upon the market there. 'Barkhowi' is a mixed gum consisting for a great part of Ghezirah, and worth about the same price."

Ginger-growing in Jamaica.

"When our party entered the mouth of the Ginger River in Jamaica," writes a correspondent of the *Oil, Paint, and Drug Reporter*, "I beheld stretching from either bank, low flat plains of considerable extent, covered with grass-like leaves that looked strikingly like a field of Indian corn, in an early stage of its growth. This was 'Jamaica ginger.'"

"The ginger is a perennial herbaceous plant, with annual stems and creeping root-stalks like the sweet-flag so common in the United States, and as the stem dies down every year new ones are continually being put out from the root-stalks or rhizomes, that are always growing and spreading beneath the surface of the ground. The root-stalk is about the thickness of a man's finger, knotty, fibrous, and fleshy when freshly dug. The stems which it sends up are reed-like, with opposite rows of smooth sheaths of leaves, linear and lanceolate in shape. The plant rarely grows more than four feet high. A peculiarity of the Jamaica ginger plant is that its flowers are not produced on the leafy stem, but on the leafless stalks, which spring up from the root, bearing on the top a spike-shaped head about the size of one's thumb. The flowers are of a milk-white colour, the edges of the petals being tipped with purple. The Jamaica ginger plant is extremely easy of cultivation, indeed, it scarcely needs to be cultivated at all, for it will grow readily and luxuriantly in almost any moderately damp soil in which the roots are placed; and even if the roots are dropped on the top of the ground, if there is sufficient moisture the fleshy roots will put down tiny fibres and grow; but a tropical climate is necessary. When the annual stems have withered the roots are taken up, and prepared for the market by scalding in boiling water and drying; and are sometimes scraped to remove the thin bark or skin. Ginger is found growing almost everywhere along the low river banks of Jamaica, as well as in peculiar localities among the mountains; but it is found in particular abundance round about Morant Bay, on the south-east coast.

It is a very profitable crop, and pulling up the roots no special care is taken to preserve the seed roots, for it is not necessary. The tiniest bit of root will continue to grow, and plenty of roots are always left in the ground."

What is our Stock of Quinine?

In our Correspondence columns will be found a letter from a well-known operator in quinine, who states it as his opinion that our estimate of 3,500,000 oz. as the net weight of our stock of quinine in the Dock Company's warehouses is much too high. With regard to our correspondent's estimate of the stock of quinine at Smith's warehouses and Bull Wharf (the two other chief points of storage in London) at 1,250,000 oz., we should think that that is much in excess of the actual fact. Very little quinine, so far as we are aware, has been imported into either of these two warehouses since 1887 or 1888, while, on the other hand, the old stocks there have been constantly drained by deliveries to consumers. Our correspondent himself, we believe, has not entered a single package of quinine at Smith's warehouse for the last five years, and, so far as we can gather, the only quinine importers who are regularly in the habit of consigning their imports to Bull Wharf are the agents for a brand which has practically been out of the market ever since the German makers began to undersell one another. It is doubtful, therefore, whether the total stocks outside the dock warehouses would do more than account for the difference between the figures mentioned by ourselves—viz., 3,500,000 oz.—and Mr. Buchler's estimate of 3,000,000 oz.

The Almaden Quicksilver-mines.

The quicksilver-mines of Almaden are situated to the north of the town of the same name. The veins of mercury run irregularly in several directions; those that are now being worked cover an area of from 550 to 600 feet in length by 40 to 45 feet in width. Their depth is still unknown, as after the exhaustion of one vein the borings are continued until a lower one is reached. Several veins are not payable ones, and are, therefore, left undisturbed. The average thickness of payable veins varies from 40 to 130 feet. The lowest point reached at present is about 1,100 feet below the surface. Both the quality and the percentage-yield of mercury improve with the depth of the vein, and in the tenth and eleventh galleries (the lowest as yet worked) the mercury actually runs out of the rock like gum from a tree, and is caught in small leather receptacles. The colour of the rock varies from blackish grey to vivid red, and the redder its colour the richer is the yield of the metal. Mercury is often found in Almaden as a sulphide. Three veins are being worked at present. The ore is carried from the mines to gigantic smelting ovens, where it is distilled by the application of intense heat. The product of distillation passes through a long system of tubes, at the end of which it forms drops, which are caught upon small tubes fixed in containers. The annual production is from 55,000 to 60,000 *frascos*, or metal bottles, containing 4 arrobas each. About 3,000 hands are employed at the mines at present, 2,000 of these working below the surface.

ARSENIC is a little dearer, and for best white powder 12s. 9d. per cwt., landed terms, is now asked.

CANARY-SEED.—Since our last report prices have advanced further, and as much as 85s. per 464 lbs. has been paid for fair *Turkish* seed here, while in Liverpool 80s. is still the quotation. For shipment 90s. is asked. The stock of Turkish canary-seed in London is estimated at 6,000 bags against 25,000 bags last year, and in Liverpool at 9,000 bags against 47,000 last year. The crop in Turkey is said to have been 20,000 bags this year, against 60,000 bags in 1891 and 100,000 bags in 1890. On the Continent there are no stocks, with the exception of a few hundred bags in Marseilles.

CASSIA LIGNEA is selling, in a small way, at 22s. per cwt., for whole quill.

CINCHONA.—The two richest lots of bark offered at the Amsterdam auctions last Thursday were 89 bales of Ledger shavings, equalling 125 per cent. of sulphate of quinine, from the Government plantations, for which the parity of 11½d. to 12½d. per lb. was paid (showing a unit of somewhat less than 1d. per lb.), and one of 14 bales

ground Iedger bark, analysing 11.86 per cent, which realised 13½d. per lb. The first-named parcel is probably the cheapest lot of high-class bark ever sold at a public auction. The next sales in Amsterdam will be held on September 29. At last Thursday's auctions in Amsterdam 128 packages druggists' bark were offered, including 52 cases long Succirubra quills, which were partly sold at the rate of 5d. per lb. The remainder fetched 4d. to 5d. per lb. for good short mossy quill, and 4d. to 6½d. for brown quills. Says the *Times of Ceylon*, in discussing the prospects of the cinchona shipments from the island: "In our opinion, too little allowance has been made for the large amount of bark raised from self-sown trees scattered all over the districts of Ceylon. Though coppiced from time to time, others spring up in their place, and thus a constant supply of bark is provided. This year we shall ship 6,000,000 lbs. of 2 per cent. bark, on the average, and, owing to the very large stocks of bark held in Colombo, we shall put quite 4,500,000 lbs. on board next year, and ought to be able to maintain a shipment of 3,000,000 to 4,000,000 lbs. for many years to come."

CINNAMON is rather firmer, with sales of Ceylon, usual assortment, shipment per August-September steamer, at 6d. per lb. c.i.f. terms. Of 570 bags Ceylon cinnamon chips offered on Monday, 450 sold at from 1½d. to 1¾d. per lb. for common coarse, and at 4d. per lb. for good quality.

COCA.—The 74 packages Java coca, "crushed top-leaf," offered at last Thursday's Amsterdam cinchona auctions, were all bought in at nominal prices.

COPPER (SULPHATE).—The market is very flat at 14l. 10s. per ton for ordinary brands, both in London and Liverpool.

CREAM OF TARTAR.—Crystals are unaltered at 83s. 6d. to 84s. per cwt. for best white French. Powdered cream may be had at 85s. per cwt.

OPIMUM.—Our Smyrna correspondent writes, under date of August 20:—"At Constantinople prices are higher than they are here, but we hardly think they will be long maintained above the Smyrna value, as stocks are accumulating, and the arrivals to date with us amount to 1,819, against 1,553 baskets last year, and we hear that 500 have been sent to Constantinople from different parts of the interior. It is difficult to form an opinion as to future prices, but for the moment there is no great likelihood of a decline of any importance. Later on, however, we may have an earlier market, after a certain proportion of the quantity required by the Dutch Government has been secured."

PLATINUM.—Foil or wire of platinum is now quoted at £2s. per oz., Troy. The following are the present values of some of the rarer metals usually found in association with platinum. *Iridium*—powder, 3s.; fused, 4s. 6d.; worked, from 7s. 6d. to 10s. per gramme. *Rhodium*—powder, 15s.; fused, 17s. 6d.; worked, 18s. to 25s. per gramme. *Palladium*—powder, 2s.; fused or worked, 3s. *Ruthenium* powder, 10s., and *Osmium* powder, 3s. per gramme. The total output of platinum from the Ural mountains in 1891 was 10,311 lbs., English—an increase of 3,060 lbs. upon the output in 1890.

QUININE.—The following are the quantities of sulphate of quinine in the bark, bought by the different buyers at last week's Amsterdam cinchona sales:—

	Kilos.
Brunswick works, about	4,367
Auerbach works, about	3,490
Amsterdam works (for Böhringer & Sons)	1,874
Matthes & Bormeester, Amsterdam	1,050
Pelletier, Paris	1,035
Frankfort works	486
Sundry buyers	329
Withdrawn	6,617
	19,178
Fold after the sales, about	1,900
Leaving unsold on August 30, about	4,717

SHELLAC.—The speculative market closed with a steady tone last week, but business has since been of a very limited nature. Second orange TN has been sold at 84s. for October, and 34s. 6d. for November, delivery. American houses have bought a fairly extensive quantity of second orange on the spot at 81s. 6d. to 82s. per cent. cash for TN standard

orange. From the Continent also several orders have been received. At auction on Tuesday the moderate supply of 617 cases was offered, of which 372 sold at firm prices for orange and button lac, while garnet was slightly easier. The following prices were paid:—*Second orange*, worked: good: pale to fine bright curly 85s. to 87s., shivered red 80s.; unworked: cakey to fair pale flat 81s. to 82s. 6d., cakey to fair bright reddish 79s. to 82s. per cwt. *Button*: unworked cakey to good pale firsts 93s. to 95s., fair to good thirds 80s. to 82s. flat. *Garnet*: unworked cakey and curly AC 73s. per cwt.

SODA SALTS.—*Acetate* of soda is rather neglected at present, with easier prices; 17l. 7s. 6d. c.i.f. Hull is the present quotation. *Soda ash* is very firm on the spot and for early delivery, but not quite so steady for distant; ordinary 48 per cent. caustic is held for 5l. 7s. 6d. per ton, refined ditto for 6l. carbonated, according to strength, at from 5l. 10s. to 6l. 2s. 6d. *Glauber salts* are worth 35s. per ton.

SOY.—The last business done in China soy was at the rate of 1s. 1½d. per gallon on the spot, but no more is to be had at that price now.

STICKLAC.—Supplies of *Siam* lac are still coming in, and prices have fallen from the high point reached some time ago. Business has lately been done at 80s. per cwt. for fair quality.

SULPHUR.—Foreign flowers are now quoted at 8l. 10s.; and ditto roll at 7l. 10s. per ton. The quotation on the Tyne is 95s. f.o.b.; and for best thirds 97s. 6d. ex ship, is asked.

TEA.—The Congou market is sadly lacking in animation, and a good deal of the tea printed for public sale is under reserve and withdrawn for better prices—a state of things that cannot go on for an indefinite period, and dealers are buying very sparingly in consequence, having learnt to doubt whether the China market has any bottom at all. Capers are in plentiful supply, and new teas are selling very reasonably from 6d. to 1s. Old Capers are very hard to move—even the 3d. sorts. *Assams* continue very firm for all good liquoring sorts; everyone wants to buy them, and as yet the supply of good sound trade teas is small. *Ceylons* are steady to firmer for good medium and fine teas.

TURMERIC.—At auction on Tuesday 60 bags fair *Bengal* finger were bought in at 20s. per cwt.

WAX (BEES').—Business is slack, and holders generally are not disposed to make concessions.

Thursday's Market News.

42 CANNON STREET, E.C., September 1.

London. The run has all been on cholera-remedies and disinfectants this week, and in all drugs of which there is a more or less remote possibility that the demand might increase if the cholera crisis were to become more acute there has been an advance in price. In chemicals these enhanced quotations are particularly pronounced in carbolic acid, bleaching-powder, and camphor. Permanganate of potash is also higher for immediate delivery. Quinine, morphia, and citric acid are slightly dearer, but tartaric acid sold very cheaply to-day. Quicksilver has fluctuated, and is lower, but mercurials remain unchanged. The principal rise in drugs has been in ipecacuanha. Gum kino, Chinese cantharides, ergot of rye, opium, camphor, and peppermint oil are also dearer. Messina essential oils keep very firm, and the crop of manna is said to have been an entire failure. Caraway-seed is a little higher. In many important drugs, however, there have been declines. This is notably the case with calumba, Siam benzoin, honey, lime-juice, cubebs, gamboge, myrrh, rhubarb, and beeswax. New chamomiles are also lower.

In outside articles, canary-seed continues to attract much attention, and is again dearer; cinnamon has also advanced; shellac, gambier, and indiarubber are higher, but sticklac, nutmeg, mace, and cloves are lower in price.

The Bank rate is unaltered at 2 per cent. Bar silver stands at 38½d. per oz. to-day. The Bombay and Calcutta exchanges are at 1s. 2½d.

Liverpool. Our Liverpool correspondent writes that canary-seed is still advancing in price, while higher rates have also been paid for *Cartagena ipecacuanha*. Castor oil and quillaia are somewhat firmer, whereas bees-wax and Sierra Leone chillies may be had at a little less money.

America. Our New York correspondent writes, under date of August 24, as follows:—"There is a very fair jobbing trade under way, but no special movement in large packages from first hands. The most interesting feature of the week is the break in *Peppermint oil*. It will be remembered that some two months ago the stocks of H.G.H. oil were very well concentrated, and the price of this brand had been raised to \$3.25, which was rendered possible under unfavourable crop reports. There was very little, if any, sold at this figure, however, and the situation became much altered by the change in the crop prospects, which are now very favourable. As a consequence, outside holders have gradually weakened in their demands, and the principal holder has at last turned 'bear,' and has cut his price down to \$2.50. Precisely how long this price will rule it is difficult to say, of course, but the trade generally are 'standing from under' and awaiting the development of the crop now harvesting. Western oil has also declined, and is now quoted at \$2.10 f.o.b. In the West, and in Wayne county, New York State, bulk oil can be had at \$2.30 f.o.b. The town holders, however, seem demoralised, and offer Western bulk at \$2.15 and Wayne county bulk at \$2.25. The sales include 1,500 cases bulk oil at the prices named, and about 200 cases of HGH at \$2.50. Oil of *Pennyroyal*: Domestic has advanced, and sales have been made at \$2.50. Oil of *Lavender* has also advanced. Mexican *Sarsaparilla* is much dearer and undergoing a 'boom.' There is only one house here that has supplies, and even their stock is limited, and is held at the high price of 17c. Recent arrivals of *Jalap* have passed out of the hands of importers, leaving only jobbing lots on the market, for which 33c. to 35c. is wanted. A sale is reported of 7,000 lbs. of *Golden Seal* for export at 22c., which is the price now asked from the country. *Senega* and *Snake roots* are held firmly at previous prices, but no sound lots are moving, nor is there any export inquiry mentioned. New crop California *Mustard-seed* is offering for shipment by sail at 4½c. *Damiana-leaves* are becoming scarce, and for good-quality leaves 20c. is required. The article is, however, a comparatively small one. *Opium* is firmer and a shade higher. *Quinine* is strong, with sales of 25,000 oz. in the last three days at 17½c bulk. For jobbing lots 18c. has been paid. Norwegian *Cod liver oil* is firmer, at \$20 to \$21 per barrel as to holder. *Japan wax* is easier, with sales at 8c. to 8½c. Short *Buchu-leaves* are in limited supply, and have advanced to 11c. to 15c. as to quality and holder. It is reported that but few are to be had in London. *Lycopodium* has improved, and is now steady at 40c. to 41c. *Oxalic acid* is held at 6c., though in a few cases business might be accepted at 6½c. *Nitrate of silver* has regained its loss of last week. Reports are being circulated that the *Cream-of-tartar* people are about to settle their disputes, which make *Tartaric acid* and the *tartrates* stronger. The reports, however, lack confirmation. *Senna-leaves* are improving somewhat under stronger advices from abroad. *Ergot* is easier. *Mercury* and the *mercurials* are easier, the principal salts having declined 2c. per lb. *Bromides* and *Bromine* are quiet and unchanged. *Canary-seed* continues to advance."

ACID (CARBOLIC).—The market has gained considerable firmness this week, especially in liquid carbolic, and prices are running up excitedly at the close. The quotations are now: Liquid, 95-99 per cent., 2s. 3d. to 2s. 6d. per gallon (though it is doubtful whether anything could be had at the lower figure); crystals, 39°-40°, 6½d. to 7d.; ditto, 34°-35°, 5½d. to 6½d. per lb. The principal advance has been in liquid acid, for which the demand is much more considerable than for the crystals. Only one or two makers are able to offer for immediate delivery, the others being already oversold for a long time ahead.

ACID (CITRIC) firm, at 1s. 5d. per lb. on the second-hand, and 1s. 5½d. (B.P.) from the makers. Stocks are said to be very low, and the manufacturers seem to anticipate a rise in the prices.

ACID (TARTARIC).—Nominally there is no alteration in the market, English (B.P.) acid being still quoted at 12d. to 12½d. per lb. by the makers, while the second-hand price, according to brand, runs down as low as 11½d. per lb. But the slaughter of 4 tons at to-day's drug sales (they were bought by the export trade) will probably render the market still weaker. This lot, consisting of 16 5-cwt. casks of Lawes' brand, said to be five years' old and not guaranteed to correspond to the B.P. requirements, sold by auction without reserve. The first lot realised 11d., but then the bidding dropped, and the bulk realised only 10½d. per lb. It is said that the parcel was sold in the process of the realisation of the estate of its late owner.

ALOE.—*Cape aloe*, in spite of the fact that the arrivals are very small, show no animation whatever; 30 cases were offered to-day, of which only 5 sold at 19s. for ordinary dull drossy; fine bright hard are nominally worth 22s. per cwt. Of *East Indian aloe* nothing of fine quality was shown. *Curacaos* of good appearance, colour, and flavour were in fairly large supply, and 277 gourds all sold at from 40s. to 53s. for medium to very good brown, 30s. to 40s. for more or less capey, and 19s. for ordinary dull. There was also 93 boxes of ordinary overheated *Curacaos*, which realised (subject to approval) from 8s. to 13s. per cwt.

AMBERGRIS.—A 16 oz. tin fair grey quality sold, subject to approval, at 120s. per oz. and for a tin of dark ordinary ambergris 60s. per oz. was paid, also subject.

ANTIMONY.—79 cases crude Japanese were bought at 27s. per cwt. to-day.

ANTIPYRIN.—We are informed that the price has not been changed during the last two months or so, when it was fixed at 2s. 8½d. per oz.

ARECA NUTS.—Fifty bags of fair quality, which have been bought in on several occasions previously, were again taken out to-day at 32s. 6d. per cwt. A bid of 27s. per cwt. was declined.

BLEACHING-POWDER.—There has been quite a run on this article, which has advanced at the rate of about 5s. per ton daily during the last few days, and is exceedingly scarce for immediate delivery. To-day it is reported that all the available stock in London has been cleared, and the prices quoted for prompt are 10½ 10s. per ton for hardwood, and 9½ 10s. per ton for softwood casks. In Liverpool the f.o.b. price is about 15s. less.

CALUMBA suffered an almost unprecedented downfall to-day, a considerable quantity selling at a decline of from 10s. to 15s., which is equal to from 50 to 75 per cent. Of 420 bags, 264 sold at 24s. to 26s. for fine medium to bold brownish and yellow mixed natural sorts, 20s. to 22s. for rather darker ditto, and 19s. for rather ordinary grey mixed.

CAMPHOR (CRUDE) has further advanced since our last. On Saturday last 10 tons Japan changed hands on the spot at 135s., and the quotation was then raised to 140s. per cwt. on the spot for both *China* and *Japan* while for shipment Japan camphor might be had at 127s. 6d. to 130s. c.i.f. according to position, and *China* (very little offering) at 120 c.i.f. terms. Since then, however, offers of 140s. for Japan on the spot have been refused, holders standing out for 150s. per cwt., and for 145s. per cwt. for *China*. At the auction 20 tubs Japan were bought in at the nominal price of 7½ 15s. per cwt.

CAMPHOR (REFINED).—On Monday the English makers advanced their quotations by 1d. per lb., *bells* being now quoted by them at 1s. 8½d. to 1s. 9d. per lb., according to quantity; flowers and tablets in proportion. German refined camphor has advanced to 1s. 7½d. per lb. net, in sympathy with the rise in English; but to-day's quotations are nominal, and a further advance is not unexpected.

CANARY-SEED.—A further advance is reported to-day 500 bags of Turkish sold at 82s. It is said that the Spanish crop is only one-third of the ordinary crop, and, considering that the highest price on record for Turkish seed is about 300s., there is plenty of room yet for an increase in price.

CANELLA ALBA.—The parcel of fair bright pale but broken quill which was recently imported from New York was again bought in at 30s. per cwt.

CANNABIS INDICA.—No demand whatever, and only a lower offer was forthcoming to-day—namely, 2½d. for fair green rather dusty and stalky tops. This was refused.

CARDAMOMS.—Only a very little was sold to-day, the 44 packages offered being mostly bought in, and no change in price was established. Genuine *Malabar*, small and grey, sold at 1s. to 1s. 1d. per lb., which was a little below valuation. *Ceylon-Mysore*, small to bold pale long brown mixed *Mangalore* character, are held for 2s. 9d., bids of 2s. 6d. and 2s. 7d. being rejected; small brown, partly specky, sold at 1s. to 1s. 1d.; for brown seed 1s. 4d. was accepted; but pale is held for 1s. 5d. per lb. The following figures refer to the exports of cardamoms from Ceylon between January 1 and August 8:—1892, 219,440 lbs.; 1891, 185,444 lbs.; 1890, 201,840 lbs.; 1889, 165,972 lbs.

CANTHARIDES.—Good quality *Russian* flies of the old crop are quoted by the agents at from 2s. 9d. to 2s. 11d. per lb., c.i.f. terms, but it is not certain whether prompt orders could be executed at those rates. *China* cantharides are fully 3d. per lb. dearer. The nominal price until to-day was 1s. 2d. per lb., but at auction 5 cases sold, with good competition, subject to approval, at 1s. 5d. per lb. The cause of this advance is probably the fear that the supplies of Russian flies may fall short.

CARAWAY-SEED.—Dutch seed is dearer, and is held at 23s. for good quality.

CASCARILLA.—In fair supply and slightly dearer, 13 out of 105 packages selling to-day at 34s. 6d. for fair silvery but broken, 30s. 6d. for rather smaller, and 24s. for small dusty and thin.

CHAMOMILES.—*Belgian* flowers are again a little cheaper, 67s. to 67s. 6d. per cwt. being now quoted for fine soft pale, while a later picking, rather yellower and smaller, is offering at 60s. to 61s. per cwt.

CHLOROFORM.—The present quotations (at which all the makers are reported to be executing orders) are: *Warrington* brand, 1s. 6d.; *Ketone*, 1s. 5d.; *Acetone* 1s. 3d. per lb.

CINCHONA.—At to-day's auctions a small parcel of 23 bales genuine *Lova* sold with good competition at 1s. 8d. per lb. for good bright silvery broken quill, 1s. 5d. to 1s. 6d. for brown bright ditto, and from 9d. to 10½d. per lb. for broken quill. The other parcels offered excited very little interest, and were almost all bought in at nominal prices.

The cinchona exports from Java from August 1 to 20 were 240,000 Amsterdam lbs.—a very low figure.

CLOVES sold again cheaper at this week's auctions, 2½d. per lb. being accepted for good fair *Zanzibar*.

COCA-LEAVES.—Four small boxes from Ceylon, nice green leaf, good flavour, but rather broken, were bought in at 2s. to 2s. 6d. per lb. to-day.

CUBEBS are about 10s. cheaper. Twelve bags small to bold-mixed berries, not stalky, but of little flavour and peculiar bluish colour, sold at 5l. 15s. 6d. to 6l., and a somewhat duller lot at 5l. 7s. 6d. per cwt.; for a small lot of dusty very bold red-brown berries without flavour, from Penang, 37s. 6d. to 40s. was paid.

CUMIN-SEED.—Old *Malta* seed may still be had at 45s. per cwt. A few leaves of somewhat dark *Mogadore* sold at 17s. per cwt. to-day.

CUTTLE-FISH.—For fairly good small to bold pale East Indian bone 2¼d. per lb. was refused.

DRAGONS'-BLOOD.—Firmly held for fine qualities, a case of fine bright fiery saucers being bought in at 12l. to-day; ordinary dull saucers sold at 95s.

ERGOT OF RYE.—The market has seriously advanced since our last report, but it appears to be wavering a little to-day. It is said that old *Belgian* ergot has been sold privately at 2s. 4s. to 2s. 6d. per lb., while for old crop *Spanish* 2s. 6d. per lb. has been paid, and 2s. 9d. is wanted for new. At auction to-day a rather large quantity, nearly all more or less mixed and wormy, was offered, but only 1 bag, very weevily, sold at 1s. 6d. per lb., offers of 2s. 2d. per lb. being refused for other lots. The price for *German* ergot to-day is 2s. 6d. per lb., c.i.f. Hamburg.

GAMBOGE is from 5s. to 10s. lower, the drop being greatest in the better qualities. Forty-three packages were offered,

of which 33 sold at 11l. 7s. 6d. to 11l. 10s. for cakey Singapore pipe, rather ricey and red in fracture; 11l. 2s. 6d. to 11l. 5s. for broken cakey and very dull and ricey Saigon pipe, and from 10l. to 10l. 2s. 6d. for very common damp colourless ditto. On July 30, the stock of gamboge left at Saigon was very small.

GUM AMMONIACUM.—Tending cheaper. A few packages of rather dark mixed blocky almonds sold to-day at 25s., and for good to rather old yellow drop, somewhat drossy, mixed there was no bid at 40s. per cwt.

GUM ARABIC.—Some packages of the Turkey sorts now being imported into Liverpool were shown at to-day's drug auctions and bought in at 80s.; they were rather dusty. 7 packages of Ghezirah gum were also shown and bought in. For fairly clean pale small picked Alexandrian 9l. 10s. is wanted, and from 7l. to 7l. 10s. for rather greyish ditto; 5 bags of fair glassy Cape gum were bought in at 65s. per cwt. Mogadore gums are also neglected; 14 casks rather dull dusty yellowish sorts were bought in at 80s. per cwt., and a lot of very fine pale picked at the nominal price of 8l. Fine genuine Soudan sorts have been sold in Liverpool at 85s. per cwt.

GUM BENZOIN.—Siam gum was offered to-day in large quantity, no less than 110 cases passing the hammer; prices were again from 10s. to 25s. lower, and have now reached a point which we believe is quite unprecedented. About 40 packages sold at 7l. 15s. to 8l. for small to medium bright almonds in block, 5l. 5s. for bright bold siftings in block, 80s. to 87s. 6d. for fair ditto, and from 60s. to 62s. 6d. for very ordinary dull grey siftings in block; small bright brown almonds in hard block are held for 9l. 10s. to 10l. per cwt. Sumatra gum was not offering; and the few lots of Palembang shown were all bought in. Of Penang some fair glassy almondy seconds sold at 70s. per cwt.

GUM GUAIACUM.—Without alteration in price, but still in fair demand. Of 118 boxes offered 10 sold at 1s. 10d. to 2s. 2d. for fair to good block, and at 3d. to 4d. for very common woody and barky broken pieces.

GUM KINO.—Higher and much wanted; 2 cases fair East Indian, offered to-day, sold with good competition at 97s. 6d. to 93s. per cwt. One bag was imported from Akassa (W. C. Africa) in the *Boma* this week.

GUM MYRRH is offering more freely, and a few lots were sold to-day at a decline of 2s. 6d. per cwt., coarse siftings bringing 44s.; for good pale sorts odd bids of 73s. to 75s. were refused, and for fair to good picked, offers of from 5l. 5s. to 6l. 15s. were also declined.

HONEY.—Slack of sale, and rather easier all round. Jamaica sold to-day at 29s. for very fine pale; 25s. to 27s. for good liquid amber; and 23s. 6d. to 24s. for rather dark liquid. Of *Australian* honey, 2 casks partly set, partly liquid, brown honey from Adelaide sold to-day at 23s. per cwt.

INDIAN ROOT (GOA IPECAC ?).—The parcel of 18 bags of root entered as ipecacuanha from Singapore, and to which we referred recently, was offered for sale to-day. The broker, before putting it up for auction, declared that he did not offer it as ipecacuanha, but as "Indian root," as he had had it tested, and it was found to contain no emetine. So far as he is concerned, therefore, no complaint can be made. There was a ton of the root, and the whole of it sold, with fairly good competition, to export firms (mostly, we believe, for Paris) at from 2d. to 3d. per lb.

IPECACUANHA has continued to advance in price very considerably, and 6s. 9d. per lb. was said to have been paid privately for root of fair quality on Saturday last. Since then, however, there has been a heavy arrival of 119 packages (all in one consignment) from Buenos Ayres, and, under these circumstances, to-day's auctions were looked forward to with much interest. Three brokers offered Rio root, the total packages being 75. About two-thirds of this supply sold at the auctions at prices at first slightly below, but afterwards fully equal to, the highest rates paid privately, and at an advance of from 10d. to 1s. per lb. upon the last auction rates. The bulk of to-day's supply, however, was much better than that offered at the last auctions. The following rates were paid: Sound thin to good stout annulated, 6s. 3d. to 6s. 9d.; first-class damages, 6s. 2d. to 6s. 5d.; second and third class ditto, 6s. 4d. to 6s. 7d. per lb.

Of thirteen packages *Cartagena* root, two sold at 5s. 6d. to 5s. 7d. per lb. It is reported that since the auctions the bulk of the unsold supply has been disposed of at a fresh advance, and that now 7s. per lb. is the lowest price for good root.

JALAP.—The holders have made a slight concession, and sold two bales good medium to bold *Vera Cruz* root at 1s. 5½d. at to-day's auctions.

LIME-JUICE is quite neglected now, and owners would accept lower rates, in spite of which they cannot get on. At auction a large quantity was offered, but all bought in at from 1s. 4d. to 1s. 8d. per gallon.

MANNA.—Advices from Italy, just received, say that the crop is almost destroyed, and holders refuse to quote. It is also said that there is very little left of the old stock, and that the only kind of the new of which anything will be harvested will be flake and broken manna. Quotations are merely nominal.

MUSK.—Dull of sale at unaltered rates. One caddy, somewhat damp medium, to hold pods well trimmed, old-fashioned, with top and underskin, sold at 51s., but the owners could not get that price for any more. For second pile *Tonquin* pods, very skiny but genuine, 35s. was paid; and for third pile, fine thin skin, an offer of 42s.; and for fair but old-fashioned skin, one of 24s. was refused. *Musk-skin* trimmings sold at 4½d. to 5½d. per oz.

NUX VOMICA.—Slow of sale; for fair pale mixed silky partly perished seed from *Colombo*, 10s. was accepted, while for a rather duller lot an offer of 7s. 6d. was refused.

OIL (CASTOR).—Forty cases good pale No. 1 East Indian sold to-day without reserve at the low but steady price of 3d. per lb. A *Calcutta* correspondent writes under date of August 9:—"Stocks are light, the production is small, and the market is quiet, with little prospect of lower prices."

OIL (COD-LIVER).—A parcel of 20 casks Norwegian in 40-gallon barrels (?) sold without reserve to-day at from 56s. to 58s. 6d. per barrel.

OILS (ESSENTIAL).—The anticipations of an advance in American *Peppermint* oil expressed in our last issue have since been realised. Early this week 13s. was paid for HGH oil on the spot, and 12s. 3d. c.i.f. terms for forward delivery. English-drawn *Caraway* oil is obtainable at 5s. per lb., although the present price of the seed would warrant higher prices. Oil of *Pennyroyal* (French) of last year's crop is held for 5s. 6d. per lb., but there is no new oil to be had. Four cases oil of *Cassia* sold at to-day's auctions at 3s. 3d. per lb. A correspondent writes from Messina, under date of August 21:—"Oil of lemon here is quite demoralised; absolutely no essence of good quality is on offer. Prices for inferior lots have advanced considerably, and are still advancing. The highest prices will be reached which have been obtained for some years. Prices for future delivery are advancing in sympathy, and bid fair to be higher than last year."

OPIMUM.—There has not been much business in *Turkey* opium this week, and prices remain unaltered at our last quotations. *Persian* opium, however, has been in very strong request, with further sales at 9s. per lb. on the spot for good qualities. Holders ask 9s. 6d. now. In Persia there has been a very considerable advance during the last few days, 11s. per lb. being said to be now the quotation there.

OPIMUM SALTS.—*Hydrochlorate of morphia* continues to be in demand. The makers ask 3s. 4d. per oz. for powder, and say that it has been paid to them.

ORRIS.—The new crop is now almost due, and we hear from Italy that at the end of this week several important fairs are taking place to which cultivators will come, and on which occasion prices for the new season will probably be fixed. It is the general belief, so our informant says, that they will be lower than the last. It is stated that sales have already been made of good selected *Florentine* root on the basis of 106s. 9d. in Italy, but these reports are discredited.

OTTO OF ROSE.—Prices remain as quoted by us last week, but the growers appear to think that they will advance another 2s. or 3s. as the season grows older.

PERMANGANATE OF POTASH.—The official prices have not been raised from their previous limits of 77s. 6d. and 82s. 6d.

per cwt., but the makers' agents have nothing to offer on the spot at present, and second-hand holders are taking advantage of this position by asking an increased price—viz. 90s. for large, and 85s. per cwt. for small crystals.

QUICKSILVER has experienced several alterations since our last report. Late last week there was quite a panic in the article, during which second-hand holders sold at 6l. 4s., the importers' price being still nominally 6l. 15s. Thereupon the first-hand holders came down to 6l. 5s., at which price the second-handers could not undersell. Since then *Rothschild* has gone up to 6l. 7s. 6d. again, and to-day second-hand holders offer at 6l. 6s. 6d. per bottle. *Mercurials* have come unchanged through all this turmoil.

QUININE is dearer, and yesterday some business was done in second-hand German bulk at 9½d. on the spot, while for January delivery we hear 9½d. was refused. To-day the owners' quotation may be called 9½d., at which, however, there are buyers and sellers. "Tois," said a dealer to us yesterday, "is the first occasion I can remember upon which quinine has gone up in price without any speculative action to cause the advance."

RHUBARB.—The quantity offered to-day—namely, 159 cases—was largely in excess of the demand, owners being evidently scared at the heavy arrivals. Only a very few lots sold, and the following were the quotations:—*High-dried*: medium to bold flat is held for 1s. 4d.; small size, 1s. 2d. refused; dark and horny coat, little colour and fracture, 9d. refused. *Canton*: medium to bold fair coat, three-fourths pinky, one-fourth dark, 1s. 4d. refused; medium ditto, 1s. 3d.; and small, 1s. 2d. refused. *Shensi*: fair medium to bold bright coat, seven-eighths pinky-grey, one-eighth dark fracture, round, 1s. 7d. refused, 1s. 9d. being the price; very fine round *Shensi* brought 2s. 5d. per lb.; ordinary pale, of grey fracture, 1s. 1d. per lb. Fair to good high-dried, 1s. 3d. to 1s. 6d. per lb. The drug is still arriving very freely. The *Formosa* brought 114 cases and the *Glenorchy* 51 cases from Shanghai this week.

SARSAPARILLA.—*Jamaica* root is in fair supply, and sells well at 1s. 2d. to 1s. 3d. per lb. for fair to good red native, and from 7d. to 10d. for damaged and dull; ditto sound grey *Jamaica* continues to realise 1s. 5d.; damaged ditto, 1s. 3d. to 1s. 4d. per lb.

SENNA.—No new leaves were offered to-day, the entire supply consisting of several second-hand packages, totalling about 40 bales, of which only a few bales sold, at 2½d. to 2¾d. for medium-sized rather yellowish and specky leaves. A parcel of 113 packages of *Tinneelly* pods was bought in, a bid of 1d. per lb. being refused. Some fair broken but good green *Alexandrian* leaves realised 8d. per lb. There were 186 bales (including 42 bales pods) in the *Rochella*, which arrived from Bombay last Saturday.

VANILLA.—In small supply, most of which sold without alteration in value; fair to good crystallised, 7½ to 8½ inch, 15s. 6d.; 6½ to 7½ inch, 10s. 3d. to 13s.; chocolate beans with little crystal, 5½ to 7 inch, 7s. 6d. to 10s.; common foxy and brown at from 8s. down to 3s. per lb. At to-day's auctions a broker announced that the London stock of vanilla, which was 2,100 tins on May 1, had shrunk to 770 tins on September 1.

WAX (BEES').—Australian wax sold very cheaply to-day, ordinary qualities being from 15s. to 20s. per cwt. lower; dark grey and yellow mixed brought from 5l. to 5l. 5s.; fine pale grey from *Adelaide*, 6l. 5s. per cwt. Of West African wax 19 bags ordinary in balls sold, subject to approval, at 85s. *Jamaica* wax is also easier; good to fine pale orange, 7l. to 7l. 7s. 6d.; reddish from 6l. 12s. 6d. to 6l. 17s. 6d. per cwt. Five cases French beeswax in orange bars, rather greasy and soft, sold at 70s. to 75s. per cwt.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, September 1.

OUR market is a shade easier this week. Seventy-one cases manufacturing opium of the usual kind have been sold at a decline equivalent to 1d. per lb.—viz. 6s. 7d. per lb., f.o.b.



Memoranda for Correspondents.

Always send your proper name and address; we do not publish them unless you wish; if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest; we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Opium Questions.

SIR,—Your correspondent "Arglo-Indian" has been pretty well answered by Mr. J. F. Brown, but perhaps I ought, with your permission, to add a word of explanation. By the expression, "Indian opium," I meant those qualities of opium which form the great bulk of the Indian product, and of which samples occasionally reach this country. That is the material which is not well adapted for the preparation of morphine, for the simple reason that it contains a small proportion of morphine with a large proportion of useless alkaloids and impurities, compared with the opiums of Turkey and Persia. I believe that a very small quantity of fine opium is actually produced in India, and I doubt not that, should circumstances require it, a greatly improved drug would be imported from that country. Most of us will agree with Mr. Conroy, that a tincture or liquor made from Indian opium would not commend itself to the English taste, but then it must be remembered that Anglo-Indians may develop a peculiar taste for opium preparations, just as they acquire a fancy for certain curiously-flavoured chutneys.

I am, Sir, yours very truly,

Edinburgh, August 30.

D. B. DOTT.

SIR,—Soon after writing the letter which appeared in your last issue, I obtained from a friend a portion of some opium marc, the residue left after making successive batches of the tincture over a period of six years.

Dried on a water-bath it lost 36.3 per cent. in weight. On applying the B.P. test for the amount of morphia present, the only visible result after twelve hours was a dust-like layer at the line of junction of the two fluids. Having occasion to leave home, I let it remain undisturbed for three days, when a small cluster of crystals had formed at the bottom of the denser liquid. These—which I enclose—after they had been washed and dried, weighed .6 grain. Possibly the extension of time may have allowed the crystallisation of one of the other numerous alkaloids of opium, or a portion of the 1 per cent. of morphia—which Mr. Conroy found to be the average loss in applying this test—had crystallised out. (See his paper on "The Estimation of Morphia in Opium," read before the Liverpool Chemists' Association on December 4, 1884.)

Putting aside any doubt as to the accuracy of the result, and accepting the loss of 1 per cent., it would seem that the marc contained 1 per cent. of morphia.

Yours obediently,

Dover, August 31.

J. F. BROWN.

Liquid Extract of Cascara.

SIR,—No doubt Mr. T. Stephenson is quite correct in saying that my process for miscible cascara cannot be advantageously worked with strict attention to all details in a hot climate, such as that of India. I am quite sure, however, that a gentleman so acute and thoughtful as the author of the paper on "Jambul," which was read at the Conference, Edinburgh, last week, will be at no loss to make the necessary modification in the process, so as to suit the altered

circumstances and yet produce a result equally satisfactory with that obtained by myself working here.

I might suggest extraction of the coarsely-powdered cascara by maceration for two hours in water, followed by strong pressure in a hydraulic press. Let this be repeated twice, and before the working-day is over, all the liquors may be in the pan and concentrated to a degree which will ensure perfect keeping over-night, ready for the further steps of the process.

Deptford, August 31.

Yours faithfully,

JOHN MOSS.

Water analysis.

SIR,—Mr. Parry's letter shows that he cannot have been present at that meeting of the Chemical Society in the year 1876 when water-analysis was under discussion. If he had been, he would have heard one of the gentlemen mentioned by him as a worker of Frankland's process pronounce an emphatic condemnation of Frankland's process; he would have heard that Dr. Dupré worked my process and abstained from working Frankland's; that Dr. Russell said that 99 out of every 100 analyses of water were made by my process; that Dr. Frankland grieved to say that my process was almost universally adopted; and the conclusion would have been forced upon him that Dr. Frankland's was almost universally rejected.

I have to thank Mr. Parry for the straightforward manner in which he has put on record that in his own examinations of drinking-water he should never dream of omitting my process. If I understand him rightly, he has found that, in his hands, Frankland's process and my process almost always agree in condemning or in approving a given sample of water. If that be so, the question naturally arises, What, then, is the use of the more tedious of these processes?

I perceive that Mr. Parry labours under a delusion which is very common among those who adopt Dr. Frankland's process. He appears to believe that my process gives an indefinite, and Frankland's a definite, result. The truth is all the other way.

The ammonia-process gives no estimation, either true or false, of the total amount of organic matter in drinking-water: its object is much more special, and I think much more to the point. Its object is to measure only that fraction which is the source of danger. It proposes to measure the very material of which germs are composed, and the very material of potent organic poisons—viz., those albuminoid and those other complex organic nitrogenous substances which render drinking-water dangerous. It effects this measurement by making these substances yield ammonia by a certain operation. That ammonia it measures and labels as albuminoid ammonia. The circumstance that only part of the nitrogen of an albuminoid is transformed so as to yield ammonia is no hindrance to the process, and in no wise affects its character as one of the most scientific processes known to chemists. As to the statement that Frankland gets the actual amount of carbon and nitrogen present in the organic compounds existing in the water, I have demonstrated the utter absurdity of such a notion on many occasions.

Yours, &c.,

New Malden, Surrey,
August 29.

J. ALFRED WANKLYN.

The Irish Pharmaceutical Council Election.

SIR,—I wish to draw the attention of the Irish pharmacists and registered druggists to the coming annual election. It is currently reported here that a great attempt is to be made this time to deprive the members who retire by rotation of their seats and place on them registered druggists. I don't at all object to the registered druggists being on the Council, provided they act as their conscience allows; but I do object, and I warn pharmacists and registered druggists that an attempt will be made to put on men this time who will be the representatives of the wholesale trade in Dublin, Belfast, and through the country, and who are not *bona fide* druggists, but grocers and fish-dealers to a large extent. So it behoves both classes to be up and doing, as the time is drawing very close when they will be asked to elect seven gentlemen to watch over their interests, and I sincerely trust they may give votes which will show they are not to be dictated to by wholesale grocers, &c.

Attention has been drawn to the reports in *THE CHEMIST AND DRUGGIST* in respect to the prosecutions lately instituted by the Irish Council. I cannot believe there is an honourable registered druggist who objects to these, and it must be proof to all that the Council are at present no respecters of persons. They appear to be on the war-track, and mean to use the power given them to protect not only their licentiates and the registered druggists, but the public from being imposed on.

May I request all pharmacists not members to at once send in their names to Mr. Wells or Mr. Grindley, and so swell the numbers of the Pharmaceutical Society, as only paying members have a vote? The registered druggists are not asleep this year.

I am, Sir, faithfully yours,
Monkstown. GEO. LANE McCORMACK.

SIR,—As the time for election of members of the Council of the Irish Pharmaceutical Society is now almost at hand, I wish, as a druggist, who am as much interested in the proper carrying out of the Pharmacy Act as any pharmaceutical chemist, to ask my fellow-druggists and chemists, Is it possible that the trade are going to hand their interests over to people who, instead of using the title "wholesale druggists" would be more truthfully styled "wholesale fish, fruit, and cheese merchants," for therein lies three-fourths of their trade, and not in drugs? We, as druggists here, must have our full representation of seven members on the Council, and it is simply our own fault if we are represented by men whose interests are not identical with ours but rather antagonistic through their eagerness to create a market for their goods. Why not have some good retail druggists who live by the trade to represent us?—for, to tell the truth, our two present wholesale representatives have not yet shown much anxiety for the retailers' benefit, but have attended rather to their own personal interests. I hope my brother-druggists will stir themselves and see that useful men are elected to represent us.

Yours,
A STRUGGLING DRUGGIST. (104/71.)

The Irish Examiner in Pharmacy.

SIR,—“M.P.S.I.” writes you relating to election of Mr. T. W. Robinson as examiner. The regulation says: “No member of Council shall be eligible for the office of examiner.” Now, Mr. Robinson was not a member of Council when elected, and it did not matter so long as his letter of resignation was on the agenda, also his application for examiner. The Council accepted his resignation and appointed him, as it had done in a similar case before. One of your correspondents asked a short time ago what recommendation Mr. Robinson had for the post. My answer to him is short, and to the point. Mr. Robinson has good practical experience in pharmacy, and is fully capable of judging whether a man knows his business or not. I regret troubling you with these remarks, but the remarks of “M.P.S.I.” require a reply, and as Mr. Robinson might be bashful about stating his qualifications, &c., I take the liberty of doing so.

I am, Sir, faithfully yours,
Monkstown, Aug. 26. G. LANE McCORMACK.

Adulterated Cream of Tartar.

A firm of agents in London write, in reference to Messrs. G. Turley & Co.'s letter in last issue, saying they could easily protect themselves against frauds such as they describe by requiring in every case a percentage guarantee of the cream of tartar, and the original weight-slip from a public wharf.

The Pharmacopœia Authority.

SIR,—If, as was settled at Bow Street some time ago, spiritus ammoniæ aromaticus, B.P., must be supplied if sal. volatile is asked for, why is it not compulsory that liquor sodæ effervescens, B.P., must be given when soda-water is asked for? I have obtained samples both from chemists and others and have not been served with the article wanted,

and the makers I have spoken to say, “If B.P. is ordered we supply it.” This may be right, but a B.P. seidlitz powder was not asked for in the prosecutions awhile back, therefore soda-water should be required to answer the characters and tests mentioned or the vendor held liable as much for the one as the other.

Yours obediently.

LIQUOR POTASSÆ EFFERVESCENS. (99/58.)

[There is no law definitely declaring that an article named in the B.P. must necessarily be in accordance with B.P. description. At most the B.P. description is an authority which can be quoted as evidence; but if overwhelming evidence could be adduced in favour of another article being customarily desired by and supplied to the public, this would tend to rebut the presumption.]

A Lime Fire.

SIR,—In the week ending Aug. 20, I was staying at Red-hill, Surrey, and on the Thursday evening, about 9 P.M., during a thunderstorm, the fire-brigade was called to a villa in the Hatchlands Road. It seems that some months ago, during a previous storm, this house had been flooded. In order to prevent a recurrence the landlord promised to put in place of a wooden fence then standing a solid stone wall. Among the materials for this purpose were eight sacks of lime, which had been placed in the basement of the house. When the rain came down—as it did in sheets—it poured into this basement and flooded it, and the chemical reaction set in with great violence. The heat caused the sacks to burst, smoulder, and burn. The walls and ceilings were charred, and the steam and smoke were something like a London fog. The brigade quickly removed the lime-bags, and sluiced the heated walls well with water, and so quickly put an end to all danger.

I am, yours faithfully,
GEORGE H. BISHOP.

What is our Stock of Quinine?

SIR,—With reference to your interesting note of August 27 under the heading “What is our Stock of Quinine?” supposing the number of cases to be correct, the net weight is considerably over-estimated. The weight of a case of 10 tins of 100 oz. each B. & S. for Auerbach quinine is as near as possible 1 cwt. 1 qr., more often a few pounds over than less, while 2 cases of five 100-oz. tins each of Brunswick go about 145 lbs. gross total. The contents of 2,550 cases should therefore not be estimated at over 1,750,000 oz., and would probably weigh less, as we have to make a reduction for smaller packages, such as 25-oz. tins and 1-oz. vials. There must be a fair amount of the latter (Howards' and Pelletier's), and the tare of a case of 100 oz. net weighs probably nearer 66 lbs. than 28 lbs.

The stocks at Smith's warehouses have decreased for years, and if we add, for safety's sake, 1,250,000 oz. for Smith's & Bull wharves—a figure, in my opinion, very considerably in excess of the actual stocks there—we get at a total stock of 3,000,000 oz. in London. We have very little stock of suitable barks to fall back upon should the regular supplies be interrupted, and a stock of 3,000,000 oz. of quinine is just enough to protect the trade against very violent fluctuations. In any case it should not frighten the most timid holder, and your statement that stocks have actually decreased during the biggest years of production shows that quinine is slowly working into a very sound position indeed.

Yours faithfully,

H. BUCHLER.

Dunster House, Mincing Lane, E.C.,
August 30.

Plans of Campaign.

SIR,—To the latest movement of the Pharmaceutical Society the support of every chemist should be given, for, although the grocer and small shopkeeper are only responsible for a very limited amount of the loss of working-profits of which chemists justly complain, their relegation to proper lines will be a distinct gain. It is the qualified men, the limited-liability directors, and the gentlemen “in sympathy with modern business,” who rob us of our income, status, and of every aspiration after sweetness and light. We

follow the sharks' lead in a spiteful, cynical way; curse the Society because we do not thoroughly understand its functions; and see our legitimate calling slowly but surely slipping away from us without making a single effort to save it. The "drug-stores" gratuitously advertise the patent-medicine man, much to his satisfaction; and, with the extra discount, and grocers' assistants, and one qualified man for the cheap dispensing, general storekeeping pays. If capital is everything, if buying and selling and general business is what chemists are to be "raised" for, then our arguments fail. But there is something more: the public have still a little confidence in us, they look up to us, they consult us on various little matters, and make general encyclopædias of us; but if they know our price to be one penny more than the "Cash Stores" in the next street, they say, "Good afternoon." The only remedy seems to be that we should sell as low as the lowest, but probably before we have heard of the low-water mark of the cutter, several of our customers have found it out and left us, silently hurt and indignant because we have, unintentionally, overcharged them. Business drifts from us, and we accept that sort of thing as inevitable, when it really might be changed by combined and systematic effort on the part of the large majority of chemists.

In any scheme for the improvement of chemists, socially and financially, the great principle which must guide us is a small working-profit. Cutting may be stamped out, but there will never be any return to the good old prices. Uniformity of charge, under certain modifications, can be obtained. A firm stand against patent medicines, and a determination not to be made the tools of non-cutting schemers, should be impressed upon us. It may appear ungrateful to those who are so anxious to secure for chemists a legitimate profit, but the real ingratitude is on the part of successful patent-medicine men, whose introduction to the public was made principally through the instrumentality of the retail druggists.

Chemists should certainly take every advantage of these schemes; they will thereby be assured of a temporary enhanced profit; but to imagine that they will be permanently benefited is a serious mistake.

The first duty of every registered chemist is to join the Pharmaceutical Society. Then the combined voice of the trade should call for several additions to the Council, to form a committee of representative men, either as part of the Council, or, better still, as a separate body, which, for convenience, I will call the business board. If the members of the Council were *ex-officio* members of the business board it might give more weight to the new committee; but whether it would not be more practicable for the business board (by whatever name it might be called) to act independently, but under the patronage, so to speak, of the Society is a question of detail. Through the agency of the business board a Trade Association should be formed, having for its object the supplying of members with new remedies, elegant pharmaceutical products, and all those preparations which form such a large item in the business of a pharmacist, but which can only be manufactured successfully on a large scale. The Association could undertake the introduction of these new lines to the medical profession and the public. In fact, they would have to advertise. We cannot ignore the fact that the public insists upon having largely-advertised proprietaries; and why should not the chemists and druggists have something more than a mere buying and selling interest in popular preparations? It will be said that such a course would be *infra dig.*; but it is "in for a penny in for a pound" in these days, and a calling which depends greatly on getting hold of the public through the medium of advertisements cannot afford to slowly lose every vestige of profit remaining on proprietary articles. The laboratory of the Association could be used for experiment as well as production, and new combinations and valuable products could be registered "under various fanciful names," as the Pharmacopœia puts it. Elegantly-put-up forms of dietary articles, tabloids, capsules, not to forget a toilet soap, a dentifrice, a hair-lotion, and an infants' food, would come well within the Association's sphere of influence. There is plenty of scope for developing the idea. Even a few good domestic remedies—to meet the public demand for advertised articles—would be an advantage to the trade of no small importance. Shares in the Association should be

allotted to registered chemists only who were willing to be bound by the conditions laid down, the principal of which should be a uniform rate of retail price. As it would be attempting too much to restrict the sale purely to chemists, the wholesale prices might be made so that no margin would be left for cutting—for example, 11s. per dozen for 1s. articles. Extra discount and dividend would fall to complying members. Any infringement of regulations might be visited with forfeiture of membership, par value of share being returnable. Stringent opposition to any such scheme would have to be met, but it is in our power to crush such opposition. We, the suffering ones, have met with but little consideration at the hands of advertising firms, and, as we are in a big majority, we can with proper effort secure a desideratum which will save the trade from being swamped by stores, co-operative societies, and gigantic retail firms with large capital, who have used the standard articles of the drug-trade as catchpennies. The Association's laboratories, factories, and depôts would offer positions to our educated young men with ambition, and instead of our prizemen and Bell scholars leaving us for more honourable professions we should be able, at least, to keep a few of them in our midst and utilise their talents to the mutual advantage of themselves and the trade at large.

It is not too much to expect that such a scheme may come within the range of practical pharmacy, though I am bound to admit that the want of definite detail leaves it at present in a state of nebular hypothesis. I shall be willing and glad to receive suggestions, to answer questions and objections, and in another letter formulate methods by which such an Association could be floated and successfully carried on. One great objection on the part of many chemists would be the fear that the introduction of such goods might interfere with their own proprietaries—a fear that is quite groundless and can be logically dissipated. It would be necessary, in the event of anything arising from this suggestion, to appoint representative members of the trade, who have the confidence of their fellows, to bring the matter before the chemists in their districts. As an organ would be required to circulate information amongst the members, it would only be fair to THE CHEMIST AND DRUGGIST to make it the recognised organ of the Association. This is with all due deference to the *Pharmaceutical Journal*, which has done good work in its own particular sphere. I hope someone more able than myself will be able to see a grain of corn in all this chaff and encourage and criticise in a fair spirit.

MOLECULE. (103/67.)

SIR,—Now the Pharmaceutical Society has shown itself to be to the business chemists and druggists of Great Britain more a prosecuting than a defending Society, it is surely time for the chemists to form themselves into a limited liability company "brotherhood," so that any member or shareholder would be defended by an able lawyer or barrister, and the costs of his witnesses paid by the company, if he were prosecuted by the Society, the Inland Revenue authorities, the food and drugs inspector, or by anybody prosecuting him for a "legitimate" trade offence, to some of which we are undoubtedly at times all liable, though it may be unwittingly.

If it were decided to form a limited company, a wholesale drug-business could be started, with the usual patents and sundries attached, for the convenience of customers. After paying a moderate dividend and the working-expenses, the remainder could be added to the reserve fund, out of which all defence expenses would be paid.

This society, or company, would be able to supply drugs, chemicals, patents, sundries, on better terms than ordinary wholesale houses, and this in itself should be sufficient to induce chemists to join.

This scheme is only a rough sketch and may seem at first "a large order." Naturally it would be strenuously opposed by the wholesale houses, and all whose interest this way of doing the wholesale trade would affect; but surely there are sufficient chemists in Great Britain who have no such interest, to subscribe a capital of 100,000? The shares should be equally divided, if possible, and open only to retail chemists.

LYMPH. (99/73.)

The Medicine-stamp Duty.

Mr. Partington, Bath, informs us that he was recently called upon to pay 2*l.* in respect of two offences against the Medicine-stamp Acts which were alleged against him. One concerned a "corn-eradicator," which he had stamped, but (accidentally) not over the cork, the stamp being affixed in such a way as to have been entirely hidden by the label. The other case was the sale of a bottle of compound syrup of the hypophosphites. It bore a label, which we believe to be a stock one, on which appeared the following:—

Extracts from the Medical Journals.

"The HYPOPHOSPHITES are specially used in weakly and rickety children, and where digestion is impaired it seems to aid the assimilation of food. In Phthisis, and like cases, the *Hypophosphites* raise the nervous power, and improve the condition of the secretions."—*Lancet*.

"They act as respiratory excitants, expand the chest, increase animal heat and nervous force, remove erratic pains, and increase the appetite."—*Medical Times and Gazette*.

"Considered the best general tonics in Incipient Consumption, and in the more advanced stages."—*British Medical Journal*.

Mr. Partington explained the eradicator mistake, and, in reference to the syrup-label, reminded the Board that some time since they had declared it to be "not liable" in reply to an inquiry from Plymouth. The Board replied as follows:—

With reference to your further letter of the 13th inst., I am directed by the Board of Inland Revenue to explain that they find upon referring to the papers as to labels for syrup of hypophosphites sent up in 1839 that some doubt then existed as to the liability or otherwise to stamp-duty of the articles to which the labels were attached. The Board's solicitor has, however, since then advised that the label unquestionably renders this article liable, and in future must be stamped.

The "corn-eradicator" was, as you say, stamped, but the stamp was so completely obscured by the label as to be unnoticeable. It would be better for the stamp to be affixed over the case in future.

In the circumstances the Board have directed that the claim for penalties is to be waived.

Mr. Fitton, Hertford, tells us that he has had to pay a mitigated fine of 10*s.* in respect of the sale of some granular effervescent antipyrin, which had been rendered liable by mention in an almanac issued by Mr. Fitton, as a remedy for headache.

LEGAL QUERIES.

Consult Alpe's "*Handy-book of Medicine-stamp Duty*" in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

102/63. *A. H. W.*—Your label renders the preparation liable to medicine-stamp duty because it recommends the tincture "for biliousness, &c." At present the Board of Inland Revenue have not recognised the Homœopathic Pharmacopœia in the same way as they do the British Pharmacopœia and the French Codex, but they probably would do so if they were applied to. The effect then would be that you might print on your labels "*A. H. W.'s tincture of podophyllum, prepared according to the British Homœopathic Pharmacopœia*," without thereby rendering the article liable; but the additional matter on your label would still be such as would involve the necessity of stamping.

103/34. *Nibor*.—It is not possible for us to reply satisfactorily in reference to two complicated transactions the details of which you explain to us on a single post-card. Your liability in regard to the scales depends on what was said or understood between you when they were lent. Obviously they were lent on the idea that you were to be a purchaser, and we should think it likely that you may have rendered yourself responsible. The gas-stove query is really unintelligible. We think you have mixed up C and D in your statement. It certainly does not seem that D has any shadow of claim to the gas-stoves.

105/ *Cepia*.—The strength of your claim depends on how completely you can prove your title to a three months' notice. If you can establish that, you can probably recover three months' salary in a county court; but, failing that, you must remember that the Court will only give you what is the custom of the trade, which is one month's notice or salary.

104/52. *In Vino Veritas*.—The poison-label is to be placed on the bottle or cover. The Act does not require that it should appear on both.

104/38. *Philanthropist*.—A patent for the adaptation of saccharin to pill-coating was taken out a few years since by Messrs. Barron, Harveys & Co., but the validity of the patent was challenged by Messrs. Richardson & Co., of Leicester, and it was never contested.

104/33. *Philanthropist*.—Medicine-stamp duty is chargeable only on medicines that are sold, or delivered out of the custody and possession of the owners, proprietors, &c., for sale, or exposed for sale, or offered or kept ready for sale (42 Geo. III., c. 56, s. 3. Medicines distributed gratis are not chargeable (Alpe, "*Handy Book*," page 28), and it follows that medicines *bonâ-fidè* given away would not be chargeable.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "*Memoranda for Correspondents*."

A list of "*Books for Chemists*" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4*d.* each.

68/68. *Inquirer*.—Inseparable Lime juice and Glycerine.—Try this: it is cheap and satisfactory:—

Curd soap (dry and cut small)	..	..	3 <i>iss.</i>
Water	..	..	..
Nut-oil	..	..	..
Perfume (lemon, bergamot, and rose geranium)	..	..	..

Dissolve the soap in the water with the aid of heat, and while still warm rub up gradually with the oil and perfumes mixed.

99/25. *Mistura* sends a card used in photography as a support for celluloid film. The film comes away easily upon steady pulling, and in the dark-room small spots between the adhesive substance and celluloid are noticed upon separating. He asks what is the adhesive matter. It is probably Canada balsam and a resinous gum. As the card is only a medium for the support of the film, there should be no spots, provided the film is properly laid down on the support.

95/49. *Subscriber* (Devon).—The sample of Preparation for Harness which you send is quite harmless, and contains black aniline, shellac, resin, and borax. You will find a formula for a similar preparation in the DIARY of 1891. Perhaps your customer may not have used the neatsfoot oil sufficiently, or, if the preparation were put on too thick, it might peel and produce an appearance of "burning the leather."

100/67. *Marmor*.—To Remove Moss from a Marble Monument with an inscription.—Use a strong solution of caustic soda, which may be easily made by pouring a pailful of boiling water over a few pounds of common washing-soda and freshly-slaked lime; allow it to stand for a few hours, stir occasionally, and decant the clear liquid. Use a large earthenware dish for the purpose. You might also find a ready sale for this solution among painters, who use it to remove old paint.

100/65. *T. S. (Devon).*—A quick-drying Tar-varnish for ironwork:—

Asphalt, in small pieces	..	..	..	Oz.
Benzole or turpentine	..	..	..	6
Linseed oil..	..	..	..	2
	..	..	..	2

Macerate for a few days, with occasional shaking, and decant from any insoluble matter.

91/55. *Soda Carb.*—We should think "maneto" means "mannite"; but we are not quite sure.

307/92. *Verax.*—The Hair-dye may be made as follows:—

No. 1.

Pyrogallic acid	..	..	..	5ss.
Spirit	..	..	..	3ss.
Water	..	..	..	3j.

Dissolve.

No. 2.

Nitrate of silver	..	..	..	9j.
Solution of ammonia, a sufficiency				
Water to	..	..	..	3jss.

Dissolve the silver in $\frac{1}{2}$ oz. of water and add ammonia until the precipitate is redissolved; then make up with water.

This will conform with your directions, viz.:—

Before using the dye, the hair must be thoroughly cleansed and perfectly free from the slightest grease. (This is most important, if you wish to be successful.) Procure two small saucers, and two dye-brushes (common toothbrushes will do). When the hair is perfectly clean and dry, pour a small quantity of No. 1 into a saucer, and apply to the hair, care being taken that it is thoroughly damped. Let the hair get perfectly dry, and treat it afterwards with No. 2 in the same manner. Great care must be taken that a separate brush and saucer be used for each liquid. An hour after applying No. 2, wash the hair or beard with soap and water, and apply a little brillianine.

102/40. *G. D. Coy.*—We must decline the task you set us.

101/57. *A Practical Unregistered Chemist.*—We take note of your statement that you "know some unregistered men whose qualified opponents are not fit to hold a candle to." We do not wish to dispute this interesting fact, but you must remember you are likely to be a prejudiced witness. Anyway, we think we may without excessive bigotry decline to admit a controversy on the subject into our columns.

101/30. A Midland correspondent referring to the report of a statutory meeting of a Nottingham limited liability drug-store, an abstract of which we published last week, asks if we do not consider the scheme "a bootiful arrangement." Mr. Stanford's demoralising example is evidently having effect.

102/33. *Emperor.*—You can gather our opinion about labelling poisonous proprietary medicines if you will read the replies to "Legal Queries" last week. Your dispensing question is too elementary, and you can get an authoritative statement in regard to your label by sending it to Somerset House.

96/10. *George Anderson (Alleppey, Travancore).*—Annatto-making—There are several ways of manufacturing annatto. You can treat the seeds and pulp with hot water, leave them to macerate (adding a little of an antiseptic substance), then pound the mass with a wooden pestle, strain off the seeds, leave the pulp to settle, decant the water, dry the colouring-matter, and shape it any way you like. Or you may crush the whole of the ripe fruit, treat it with hot water, soak it for some days, strain off the seed, leave the pulp to ferment for a week, pour off the water, dry, and make into cakes. This is flag annatto. The process of fermentation somewhat detracts from its value. Or, again, you may make a very

superior kind by rubbing the fruit with oiled hands till the pulp is separated and reduced to a clear paste, then scrape it off, and dry it in the shade. But we doubt whether you will find annatto-making a paying business.

96/36. *Union.*—(1) The finest Lemons for Manufacturing Purposes (we presume you mean for essential-oil making) are the Sicilian. But the manufacturing is all done in Italy, and the only lemons sent to England are for eating purposes. London is the principal market. (2) We should think you could powder the dried and expressed pulp of lemons in any mill. But why powder it? (3) We cannot possibly give estimates for the apparatus used for extract-making, without knowing what material, and how much of it, you want to treat. If you will look through our DIARY or Summer issue you will find a number of advertisements of makers of pharmaceutical apparatus. You should refer to these. (4) That depends upon the heat you generate.

102/35. *Ajax.*—If you suspect that the handkerchiefs have been marked with an aniline ink, you had better soak them in methylated spirit for a night, and if the stain is not removed then, try the effect of solution of hyposulphite of soda or chlorinated lime. To Remove Blackheads from the face, use a watch-key to press each of the heads out, and a lotion of perchloride of mercury (1 grain to 3ij.) dissolved in eau de Cologne or rectified spirit 1 part, water 2 parts. To be dabbed lightly on the parts with a piece of lint every other night.

101/69. *Boots.*—A cheap Violet-powder.—Potato-starch and powdered orris-root (1 to 8) perfumed with oil of rose-geranium qs. To Colour Benzine a deep yellow colour you may use saffron, annatto, or an oil-soluble aniline colour.

101/92. *Syrupus.*—Liq. Croci, for colouring mixtures:—

Saffron	..	..	..	4 oz.
Cochineal	..	..	..	$\frac{1}{2}$ "
Proof spirit	..	..	..	1 gal.

Macerate for a week, and filter.

101/35. *Spes* has been in the habit of putting up an arsenical Weed-killer, but does not find it satisfactory. He has been told that perchloride of mercury is about the best substance, and wishes a formula. Try this:—

Perchloride of mercury	..	..	4 oz.
Common salt	..	..	3 lbs.
Strong commercial hydrochloric acid	..	16 oz.	
Water (boiling) to	..	1 gallon	

We cannot conceive that methylated spirit would be any advantage, and it would add needlessly to the price.

104/2. *Colchicum.*—Your formula would make excellent Gout and Rheumatic Pills, but we should recommend you to reduce the quantity of extract. colchici acet. by at least one-half, as you would not be justified in recommending 3 grains of the extract for a dose in any proprietary medicine: it would be in excess of the B.P. dose, and might in certain cases do positive injury. We should suggest the substitution of blue pill for part of the colchicum. Of course, if you wish to recommend it for the cure of any particular diseases, you must make a proprietary article of it.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

98/60. Spirit Cagliari: what is it?

99/37. What is Papier Fayard; how made?

101/57. Makers of a non-starchy food for infants.



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South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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EDUCATIONAL.

THE next issue of THE CHEMIST AND DRUGGIST will be the annual Educational number. The editor desires to make the information regarding local facilities for pharmaceutical education in provincial towns as complete as possible, and he would be obliged if secretaries of associations or schools would send particulars of such facilities by Monday first.

The publisher also wishes it to be known that this issue provides an opportunity for enterprising firms directly addressing a class of buyers, such as directors of hospitals

chemical laboratories, and the like whose business is well worth cultivating. Advertisements should be received at the office not later than Tuesday next.

Summary.

A VERY good collection of recipes is given in this number

No meeting of the Pharmaceutical Council was held this month.

AN inquiry regarding Papier Fayard has elicited several practical replies.

WE give a list of the retiring members of the Irish Pharmaceutical Council.

WE give a summary of the Shop Hours Act, 1892, which came into force on September 1.

THE cholera scare, so far as this country is concerned, has abated, and our notes have shrunk accordingly.

WE are able this week to settle the question in regard to acetum scillæ recently referred to by a correspondent.

A BIRMINGHAM drysalter has paid the Pharmaceutical Society 5*l.* and expenses for having sold Cooper's sheep-dip.

IN an Editorial Note we comment on the part played by the wholesale section in the proceedings of the British Pharmaceutical Conference.

A DRUGGIST'S traveller in Liverpool has got six months' imprisonment for embezzling 734*l.* from his employer in the course of eighteen months.

IN our Correspondence section "Molecule" defends his plan of campaign against our criticisms. Another chemist warmly supports him.

A FRENCH contributor communicates some noteworthy facts in regard to the capabilities of assistants to chemists in the South of France.

SOME interesting analytical evidence in regard to salt in beer has been given by Dr. Attfield in a case under the Sale of Food and Drugs Act in Wales.

A NUMBER of Liverpool chemists have been found to be inadequately informed in reference to the Medicine-stamp Act, and have had to pay for their ignorance or carelessness.

A JAMAICA chemist sends us a short contribution giving a curious hint as to a simple means of getting quit of weevils, moths, and such-like objectionable visitors to druggists' stocks.

THE Irish Pharmaceutical Council are indignant with the Lord Lieutenant on account of the reduction by him of penalties imposed in the case of infringement of the Irish Pharmacy Act.

SOME very interesting dispensing queries are discussed in our Correspondence columns, and a settlement is desired on the question whether zinc-chloride injections should be sent out clear or milk-white.

FURTHER notes in reference to the estimation of morphia in laudanum are given in our Correspondence; and Mr. Gerrard makes an important correction in our report of his process for the estimation of grape-sugar.

THE General Order concerning the drawback on exported flavouring-essences and perfumed spirits has been issued by the Board of Inland Revenue this week, and is printed in full in this number. It grants practically all that has been asked for.

OUR drug-markets are fairly active this week. The principal movement has again been in articles used as cholera remedies or disinfectants, but there is every indication that the demand for these is on the wane, and that the high prices which held when the epidemic was expected to break out almost every day can no longer be maintained. Bleaching-powder is the only exception to this rule.

English News.

Chemical-manufacturers' Scales.

The Secretary of the Manchester Chamber of Commerce has approached the Manchester Office of Weights and Measures with the inquiry whether scales and weights used for mixing purposes exclusively fall within that section of the Weights and Measures Act which enjoins absolute accuracy of the instruments used in the measuring and weighing of goods. "It is a fact," says the Secretary, "that weights and scales are extensively used in chemical-works for the simple purpose of mixing proportionate quantities of raw materials used in the various processes, and not in the weighing of goods sold; and that the manufacturers find it quite impracticable to keep their mixing scales and weights absolutely correct, in consequence of the corrosive action of the materials dealt with, but exactness in these operations is not requisite." The Weights and Measures Committee have promised to consider the matter.

The Middlesborough Chemical-trade.

Messrs. Sadler & Co. (Limited), chemical-manufacturers, of Middlesborough, have issued their annual report and balance-sheet for the year ending June 30. The accounts show a credit balance of 13,103*l.* 17*s.* 1*d.*, which has been applied in the following manner:—Interest on debentures and loans, 5,656*l.* 5*s.* 2*d.*; depreciation and renewals, 5,617*l.* 19*s.* 2*d.*; directors' (one-half of the amount voted) and auditors' fees, 650*l.*; balance to be carried forward, 1,179*l.* 12*s.* 9*d.* The directors say that the year has been marked by a very serious shrinkage in the prices of the company's products, with the exception of bichromes, which have now been put on a satisfactory and profitable footing by an arrangement amongst the English and foreign makers.

Embezzlement by a Druggist's Traveller.

In the Liverpool Police Court, on September 2, before Mr. Kinghorn, deputy stipendiary magistrate, Reginald Malcolm Stuart Day, commercial traveller, was charged with embezzling several sums of money belonging to his employer, John Thompson, wholesale druggist, Hanover Street. Chief Inspector Marsh prosecuted on behalf of the police, and Mr. Neale appeared for the prisoner.

Mr. Marsh said that the prisoner was a traveller and collector for Mr. Thompson, and in these capacities had received certain sums of money from customers all over the country, which he had failed to hand over to his employer.

Henry Holland, a Middlewich chemist, stated that on March 14 prisoner called upon him, and received from him 74*l.* 2*s.* on Mr. Thompson's behalf. On June 13 witness further handed prisoner 56*l.* 6*s.*

William Gabites, chemist, of Upper Warwick Street, Liverpool, stated that he paid prisoner 14*l.* 5*s.* 7*d.* for Mr. Thompson on May 23.

Isaac James Nicholson, Mr. Thompson's cashier, said that prisoner had received 250*l.* a year with travelling expenses, and his duties had been to solicit orders and to collect accounts. On March 19 prisoner gave him a statement of the cash he said he had received during a journey he had just completed. The sums he had received from the witness Holland did not appear in the statement, and prisoner had made no explanation about it since. The same was the case with regard to the money paid by the witness Gabites. After the books had been made up and passed, prisoner had added entries which appeared to show that these sums and other sums had been properly accounted for. The total amount for which prisoner had not accounted was 734*l.*

In reply to questions from the Bench, Mr. Thompson now stated that prisoner had been in his employ for nine years. Up to two years ago he had well and efficiently discharged his duties. About eighteen months ago, however, he had taken to drink and loose company, and these had been the cause of his fall from rectitude.

Mr. Neale, for the prisoner, said that was so. Prisoner's prospects had been ruined by his conduct, and he (Mr. Neale) hoped that the Bench would take this fact and that

of his previous good character into consideration in passing sentence.

Mr. Kinghorn said he fully realised these facts. At the same time, he realised that it was the prisoner's previous good conduct that had gained him the responsible position which he had abused. He (Mr. Kinghorn) would not be doing his duty by society if he let it be supposed that previous good conduct and an expression of contrition freed persons from the results of such actions. Day must go to prison for six months.

Helping Himself.

At the Edmonton Bench on September 1, Henry Frank Sugden, 42, a veterinary surgeon, of 33 Truro Road, Wood Green, was charged with stealing from 4 Commerce Road, Wood Green, a bottle containing oil of dill, value 2*s.*, the property of James Celissier Douglas, chemist. Mr. Douglas said the defendant entered his shop with a friend on August 30, and the friend called for a "pick-me-up." He was supplied, and meanwhile the defendant conversed about drugs, and after a time went towards a cupboard in which chiefly poisonous drugs were kept. Witness tried to stop him, and the prisoner caught him by the throat and forced him aside. The prisoner's friend said, "Don't choke the old chap," and the prisoner released him, took a bottle out of the cupboard, and left the shop. His friend called to him to restore the bottle, and afterwards promised witness to bring it back. Neither of the men, however, returned, but shortly after witness met the prisoner outside the Nightingale Hotel. He fetched a constable and gave him into custody. In cross-examination witness said he had known prisoner since last May, when he was introduced as the Hon. Henry Sugden, grandson of Lord St. Leonards. Since then prisoner had only made one purchase of witness, and that had never been paid for. The policeman said when he took prisoner into custody he said, "I haven't got the bottle, and know nothing about it," but immediately afterwards produced the bottle from his pocket and offered it to prosecutor with the remark, "You sold it to me." The Chairman said the Bench were not satisfied that the prisoner intended stealing, and dismissed him. He added that it was a discredit to behave as the accused had done.

Sheep-dips are Chemists' Trade.

The Pharmaceutical Society is making a fair addition to its income out of the illegitimate traders at Birmingham. A local drysalter, to oblige a stranger, procured for him a packet of Cooper's sheep-dip. His amiability cost the obliger 5*l.*, plus expenses.

Stuck to his Uniform.

Walter Parker, a stableman, lately employed by the Wanga Company (Limited), which seems to be on the track of the Squah Company, was charged before the Kingston-on-Thames Magistrates on September 2, with having stolen two uniforms and a pair of top-boots, value 14*l.* 10*s.*, the property of his employers. He had been discharged on the previous Saturday, and it was alleged that he had taken the things away with him. Detective Fuller stated that he arrested Parker in High Street, Barnet, on the previous day, when, in answer to the charge, he admitted that he took the uniforms away, but alleged that money was owing to him, and that he was going to take them back again. Witness produced a coat, vest, and hat, profusely adorned with gilt lace, which were found at the prisoner's lodgings, but the remainder of the uniform had not been discovered. Parker was in the Barnet Militia, and did not bear a very good character. Sentenced to a month's imprisonment with hard labour.

Chemists and their Wives.

William Henry Denny, a retired chemist, living in the Barking Road, appeared at the West Ham Court on Monday to answer a charge of assaulting his wife. Mrs. Denny said she came home on Sunday, from her sister's, at about 11 P.M. Her husband struck her in the face in the passage. They had been married over thirty years, and this assault was not the first by a hundred. Prisoner said that it was all through his wife having a man calling at the house to take her for a walk. During the three years he had been out of business she had been going on like that. He wanted a

separation. The defendant was remanded for further evidence.

At Epsom Police Court, George Radcliffe Keeling, chemist, of Epsom, summoned his wife, Ellen Elizabeth Keeling, for the discharge of an order made on May 12, 1890, at Epsom Petty Sessions, by which he was ordered to pay 30s. per week towards the support of his wife until such time as the order should be waived or discharged. Mr. Harte, for the plaintiff, applied for an adjournment. His principal witnesses, he said, were in Yorkshire. He also said he intended to take opinion of counsel whether it would not be wiser to withdraw the summons altogether and go into the Divorce Court. The Bench refused the application, and Mr. Harte thereupon withdrew the summons, and the Bench allowed the defendant 3l. 3s. costs.

His First Drunk.

Albert Lewis, 53, a travelling herbalist, who wore turban and white surplice and had a general Hindustani appearance, admitted to the Loughborough Magistrates that he had been drunk in the market-place of that town, where, according to the police-officer, he had been selling some powder which was to heal all diseases. Albert was very repentant, and so disgusted with and ashamed of himself that the Alderman let him go on his promise to leave Loughborough.

A Coroner who Knows the Law.

An inquest was held at Cambridge a few days since, respecting the death of a woman who had killed herself by taking laudanum, which she had bought from the shop of Mr. Deck. Mr. John Bonnett, Deputy Coroner, said there was one point upon which the jury might wish to be informed. He had himself seen the chemist who sold the laudanum to the deceased, and had suggested that the assistant who served Mrs. Wheal with the poison should be at the inquest. He was not, however, there. He (the Coroner) would like to inform the jury that by the Pharmacy Act it was unlawful for a chemist to sell a poison of that kind unless the bottle bore distinctly a label with the name of the article, the word "poison," and the name and address of the seller. On the bottle now produced he found the words, "Laudanum. Poison. Arthur Deck, chemist, King's Parade, Cambridge," plainly printed. Therefore it had been a perfectly legal sale, as all the requirements of the Act had been complied with. Laudanum was not a poison which necessitated entering the name of the purchaser in a book, but could be sold as it had been in this case. Therefore, he did not think it was necessary to adjourn the inquest for the purpose of summoning the chemist or his assistant to give evidence. He believed that everything had been done to make the sale a legal one.

From Manchester.

Mr. Peter Allen, one of the proprietors of the *Manchester Guardian* and *Manchester Evening News*, who was buried in Prestwich Churchyard on Monday, was in early life connected with the drug-trade. He was for many years engaged with Messrs. Gale, Baker & Warde, wholesale druggists, London.

Mr. G. W. Pratt, chemist and druggist, Manchester, has been appointed to succeed the late Mr. Barnaby as visiting apothecary at the Chorlton-on-Medlock Dispensary.

The next session of the Manchester Pharmaceutical Association is to commence on October 12. As in previous years the meetings will be held in the rooms of the Chemical Club at the Victoria Hotel. At present the membership is between seventy and eighty, and Mr. A. Blackburn, the hon. secretary (address, 7 Exchange Street, Manchester), asks us to say that he will be glad to hear from gentlemen who may be desirous of joining. In some previous years there has been a sad lack of papers to read and a still more sad lack of audience to read them to. Last session showed a considerable improvement in these two respects, and it is expected that a still greater advance will characterise the coming session. It appears that papers enough have been already promised to keep the Association going during the whole session.

The valuable prizes offered by Mr. Wm. Stones, in the form of herbaria of medicinal plants, have not yet aroused the apprentices and assistants of Manchester and the district to any extraordinary display of activity. Only about a

dozen of them have entered for the prize competitions which were announced in this journal on August 6. The last date for receiving names is September 19. Students who still desire to compete should read the paragraph referred to on page 196 for particulars.

An Analyst's Charges.

The South Stoneham Rural Sanitary Authority, at their last meeting, discussed the charges made by Mr. Angell, analyst, with respect to a recent inquiry at Eastleigh. Mr. Angell had sent in a bill for twenty guineas for services rendered in connection with the sewerage works. The charge was considered too high, and Mr. Angell was requested to send in particulars, which were read out at the present meeting. Mr. Harris said he thought it was money enough, and Mr. Willmar said it was a great deal too much, while Mr. Culme-Seymour remarked that the charge for the analyses (seven guineas) seemed excessively high. Mr. Payne observed that it seemed to be a lucrative profession, but Dr. Pern observed that the charges for the analyses were the usual ones. After further discussion it was decided to pay the bill.

A Grocer's Sixpennyworth.

A Blackburn grocer is determined not to be outdone by the prize-tea shops. He announces that for twenty-eight days he will sell $\frac{1}{4}$ lb. of tea for 6d., and will give with it "ten packets of blacklead, twelve boxes of matches, one tin of coffee, two baking-powders, and one tin of mustard." And he assures the editor of the *Grocer* that on this transaction he still has $7\frac{1}{2}$ per cent. profit for himself.

Pasteured Five Years Ago—Dead Now.

Two brothers were bitten by a mad dog at Amberworth, near Huddersfield, five years ago, and were treated by Pasteur a few days afterwards. Five weeks later one of them, Fred Lindley, died of hydrophobia. On Thursday last week, while going to work, the other brother, Herbert, aged 17, picked up a stone and threw it violently, explaining, when asked, that he felt a pricking sensation inside, just as he felt in Paris when operated upon. Throwing the stone, he said, had taken the sensation away. On Sunday he showed an aversion to liquids, and on Monday had a convulsion. He then suspected what was the matter, and told his parents not to bother: he was going to Heaven to rest. He was removed to the infirmary and died there on Tuesday. The medical evidence given to the jury on Wednesday was that it was an undoubted case of hydrophobia, and a verdict was returned of death from hydrophobia, caused by the bite of a dog five years ago.

October Examinations.

Candidates for the Minor and Major next month should note that, under the new regulations, applications and fees must be sent to Mr. Bremridge, 17 Bloomsbury Square, W.C., not later than September 16.

Wine-licences

have been granted to Mr. J. W. Aplin, chemist, Chislehurst; to Mr. Albert Archer, chemist, St. Mary Church, Torquay; to Mr. Arthur Ogleby, chemist, Barnsley; to Mr. Williams, chemist, Tunbridge Wells; to Mr. Aspinall, chemist, Wigan; and to Mr. H. Drewery, chemist, Wombwell. Mr. Crooke, Walsall Drug-stores, Park Street, Walsall, applied at the Brewster Sessions of that town for a licence to sell medicated wines to be consumed off the premises. The applicant being neither the owner nor the occupant of the premises, the application was not granted.

At the Todmorden Brewster Sessions, Mr. J. C. Stevenson, chemist, Todmorden, applied for an off spirit-licence for his premises at Pavement, in addition to the wine-licence he already holds. The Todmorden Band of Hope Union opposed the application, and, in order to get over a technical objection raised, the applicant's solicitor asked for an adjournment, which was granted until September 22.

PYTHON OIL.—The Sinhalese regard the oil which is obtained by boiling down the fat of the python snake as one of their most precious medicines.

Irish News.

The Council Election.

The following members of the Council of the Pharmaceutical Society retire by rotation next month, but are eligible for re-election, and will offer their services again:—George H. Grindley, M.P.S., Patrick Merrin, M.P.S., William Hayes, M.P.S., Samuel Gibson, R.D., Johnston Montgomery, M.P.S., Henry Conyngham, M.P.S., William F. Wells, jun., M.P.S. These, with the exception of Mr. Gibson, are all pharmaceutical chemists. Candidates for the Council must be proposed and seconded by members or associates of the Society, and the names sent in to the Registrar not later than September 17. The election will take place at the annual general meeting, to be held on Monday, October 3, at 7.30 P.M.

Perfecting the Evidence.

In the Dublin Police Courts on Tuesday last, before Mr. Byrne, Q.C., Mr. Clay, solicitor for the Pharmaceutical Society, and Mr. Wylie, for Messrs. Samuel and Walter Boyd, attended by agreement to have the evidence taken in the late prosecutions for breaches of the Pharmacy Act on July 23 and 26 last placed in due form, with a view to any further steps which may be taken in the matter.

Reported to the Council.

The Under-Secretary to the Lord Lieutenant (Sir West Ridgeway) has reported the case of the sale of tartar emetic in mistake for tartaric acid by a chemist and druggist to the Council of the Pharmaceutical Society. It is difficult to understand, however, what steps they can take in the matter. It will be remembered that the family of the Rev. Mr. Irwin, of Castlederg, suffered severely in consequence of the mistake, and that the child of a servant, born since its mother partook of the poison, has since died. The inquest on the child is adjourned till September 12, and it is then expected that the report of the analysis of the stomach and intestines will be submitted. The shopkeeper who is stated to have sold the poison is said to have been a chemist and druggist registered under the Pharmacy Act of 1890.

Pharmaceutical Examinations.

Candidates for the Preliminary examination, to be held on Monday, October 3 next, are required to give seven clear days' notice of their intention to present themselves, and also must lodge the fee of 2*l.* 2*s.* prior to giving such notice.

Candidates for the Licence examination, to be held on October 5, 6, and 7 next, are required to give fourteen clear days' notice of presenting themselves, and send bankers' receipt that the fee of 5*l.* 5*s.* has been lodged to the credit of the Society.

Registered Druggists' Examination.

At the examination held in Dublin on Thursday, September 1, the following were successful:—J. Crawford, W. K. Fayle, T. J. Jackson, J. O'Dea, R. J. Savage, E. H. Woods. Two candidates were rejected.

Medicine Contracts.

The Board of Guardians of Dungannon Union have re-appointed James Nithery, pharmaceutical chemist, Dungannon, contractor for medicines and medical appliances, &c., to the workhouse hospital and various dispensaries of their districts.

The Boards of Guardians of the following Poor-law Unions and Dispensaries are open to receive tenders for the supply of drugs and medical necessities. The tenders will be decided upon on the appended dates:—Balrothery Union, September 14; Navan Union, September 14; Limerick Union, September 14; Kells Union, September 17; Strokes-town Union, September 23.

Poisons in Workhouses.

A female nurse attached to the Macroom Workhouse is alleged to have administered iodine internally to a patient instead of externally as directed. The nurse says the patient took part of the iodine under the impression that it was a

cough-mixture. The Local Government Board, under whose notice the case has been brought, animadvert strongly on the stupidity of not keeping poisonous preparations in safe custody, and direct that in future similar compounds must be kept under lock and key. The case is likely to form the subject of a sworn inquiry.

The Council-meeting.

At the monthly meeting of the Pharmaceutical Society held on Wednesday, September 7, sixty-five registered druggists were proposed and seconded by Messrs. Gibson and Boyd as associate members of the Society. Of this number six were objected to by various members of the Council as having been convicted of offences against the Pharmacy Act, and were accordingly rejected. Four others were also rejected for not having paid their fees; the remainder were elected. Mr. Wells proposed twenty pharmaceutical chemists and druggists for membership. Reports of the various prosecutions were placed before the Council, and it was announced in the case of the two penalties of 5*l.* each inflicted on Mr. Gorman, of Bangor, recently, that the Lord Lieutenant and Privy Council had, on memorial, reduced each of the penalties to 1*l.* A letter of remonstrance was ordered to be sent to the Lord Lieutenant, pointing out the injustice and impropriety of such interference with the proper carrying-out of the law as laid down by Act of Parliament.

Scotch News.

Aloes for Gregory.

A young woman was admitted to the Edinburgh Royal Infirmary at the end of last week who had taken a large dose of aloes in the belief that she was taking Gregory's powder. A few hours' treatment and the use of the stomach-pump sufficed to restore her. She had stolen the drug at a chemist's in the town.

Edinburgh Pharmacy Athletic Club.

The third monthly golf-competition for the Dick Challenge medal took place on Saturday last, on the Braids course, in somewhat unfavourable weather. Mr. J. P. Gibb was the winner, Mr. T. D. Burt being second.

Well Chronicled.

Mr. Thomas Robinson's succession to Mr. Pottage's Glasgow business seems to have aroused the interest of the Glasgow press, the *Evening News* "Echoist" having startled the denizens of the St. Mungo by announcing a "miss of Pottage" in the next P.O. Directory: while the *Southern Press*, *Modern Church*, and *Scottish Pulpit* regard the event as one for eulogistic references to the new proprietor. Mr. Robinson is a Yorkshireman.

French Pharmaceutical News.

(From our Paris Correspondent.)

RELIGIOUS PHARMACY OR PHARMACEUTICAL RELIGION.

—The French priests are admirable in their ingenuity, and they have quite a gift for knowing what is likely to take the public fancy. They have at times been prosecuted for the illegal sale of medicines, elixirs, and the like, and now, taking advantage of the fear of cholera which fills the minds of so many people at the present time, a religious newspaper inserts the following announcement:—"ANTICHOLERIC SCAPULARY.—These scapularies, on which are embroidered the likeness of the Virgin Mary, are marvellously effective in protecting the faithful against indisposition from cholera. They have also been blessed by our Holy Father the Pope. N.B.—The length of the material enables the scapulary to cover the stomach. Being placed on this part of the body diarrhoea is immediately stopped. The anti-choleric scapularies may be obtained through the post by sending 4*fr.* 50*c.* to Abt  G—, retired Naval Chaplain, Toulon (Var)."

THE RESPONSIBILITIES OF PHARMACISTS AND DOCTORS.—Referring to the paragraph under this heading in the "French

Pharmaceutical News" of February 6 last, it is perhaps worth while recording that the St. Etienne doctor has been acquitted of the charge of "poisoning by imprudence" that was brought against him. The medical experts laid down that it is difficult to precisely specify the limit at which nitrate of aconitine is dangerous. They found also that the aconitine delivered by the pharmacist was more poisonous than the official aconitine. The doctor was shown to be in the wrong because he had given the deceased verbal instructions as to the manner the medicament was to be taken, but the patient, having been a herbalist, was held to be able to better understand the way medicine should be taken than an ordinary person. For these and various other reasons the doctor was acquitted, while part of the responsibility was saddled on the pharmacist.

HIGH RENTALS.—The rents of shops in Paris, especially in the very central quarters, are excessively high. One or two of the English pharmacists count amongst the largest rent-payers in proportion to the size of their premises. As already stated in *THE CHEMIST AND DRUGGIST*, the rent of a well-known pharmacy near the Place Vendôme is 1,000% a year. A French firm of perfumers and soap-makers have, however, just opened a shop forming a corner to the Boulevards and the Place de l'Opéra, the rent of which is 1,400% per annum. The premises are by no means large, and nothing is sold but the specialties of the house. Doubtless the position is looked upon as giving an excellent advertisement, and it is, perhaps, moderate at the price.

Foreign and Colonial News.

NEWFOUNDLAND COD-LIVER OIL.—The Newfoundland Parliament has taken steps to encourage amongst the cod-fishing people the use of the Norwegian system for making the oil.

SUCCI'S SUCCUS.—Succi, who is fasting at Naples, sent samples of his "secret sustaining-draught" to the Central Hygienic Office in Rome, asking to be allowed to sell it. The Hygienic Department has, however, declared that according to Italian law the mixture can only be sold by pharmacists upon medical prescription, as analysis has proved that it contains poisons.

U.S. TRADE-MARKS.—The following were registered at Washington on August 23:—"Pink-iron," for pills, by W. T. Hanson Company, Schenectady, N.Y.; "Anti-dandruff," for a scalp-wash, by Lem. A. Smith, New York; "Worm Syrup," and a signature for the same, by Dr. David Kennedy Corporation, Kingston, N.Y.; "Marguerite," for toilet preparations, by Marguerite V. Botts, Philadelphia; "Elixir of Bananas," on a label, for a constipation remedy, by W. F. Harris, Adrian, Ill.; "Dodd's Kidney Pills," on a label for the same, by J. A. McKee, Toronto; "Syrup Oatmeal Phosphate or Oatmeal Syrup," on a figure of a cask, for a phosphate beverage, by Rose Bros., Camden, Me.

ANTIPYRIN AND ITS OFFSPRING.—According to the *Pharmaceutische Zeitung* a large number of antipyretics introduced during the last two or three years are simply more or less disguised forms of antifebrin. Thus "antikamnia" contains from 70 to 85 per cent. of antipyrin with 15 to 20 per cent. of bicarbonate of soda and traces of tartaric acid and caffeine; "antinerin" is composed of antifebrin 50 per cent., salicylic acid 25 per cent., bromide of ammonium 25 per cent.; "exodyne" of antifebrin 90 per cent., bicarbonate of soda 5 per cent., salicylate of soda 5 per cent.; "phenolid" of antifebrin 50 per cent., bicarbonate of soda 50 per cent.; and "antikol" of antifebrin 75 per cent., bicarbonate of soda 17½ per cent., tartaric acid 7½ per cent.

THE DOCTOR WOULD NOT FIGHT.—On the occasion of the official inspection of a pharmacy in a large provincial town of Hungary, one of the visiting inspectors, a physician, made some disparaging remarks on the fact that the pharmacist used business note-paper with the name of his firm printed upon it. The inspector appears to have regarded this as an advertisement unworthy of a professional man. The apotheker felt offended, and promptly sent his two assis-

tants as seconds with a challenge to the doctor's residence. The physician declined to fight a duel, on the ground that he had made the disparaging observation in the exercise of his public duty, and further brought a charge of breaking the peace against the pharmacist. The latter has taken out a cross-summons against the doctor for "insulting his honour."

PROPOSED HYGIENIC REFORMS IN TURKEY.—Dr. F. Zanni, a well-known Constantinople pharmacist, who will be remembered in pharmaceutical circles as one of the chief participants in various international pharmaceutical congresses, has addressed a memorandum to the Turkish Minister of the Interior, in which he calls attention to the necessity for enlarging the powers and increasing the means at the disposal of the Upper Council of Hygiene, which was established in Turkey about eleven years ago. Mr. Zanni proposes the establishment of a new Department of Health, the head of which should be a hygienist of note, and have as his advisers a Board composed of the Director of the Imperial School of Medicine, the President of the Medical Society, the chief Sanitary Inspector, and several medical men, professors, and pharmacists. The new Department would have charge of the administration of the pharmacy laws, of the analysis of food and drugs for public purposes, and of the medical police. By way of inauguration of this new department, the Sultan, Dr. Zanni thinks, should decree an International Conference of Public Health and Hygiene to be held at Constantinople. This is a specimen of the questions which Dr. Zanni would have the Congress deliberate upon: "The creation of a system of control on the hygienic condition of each traveller on his arrival at the first frontier station of a country. Under this system any man who undertakes a journey abroad would be obliged to carry a passport, certifying that he is not suffering from any disease, and stating the date of his last examination." We are afraid the century is a little too old for Dr. Zanni's Congress.

PRIZES FOR CHEMISTS.—The Industrial Society of Mulhouse (Alsace) has at its disposal several sums of money bequeathed to it by local manufacturers for the purpose of encouraging the improvement of Alsatian industries. Several of these prizes (which will be awarded in the course of 1893 and 1894) are for chemical subjects. Apparently, citizens of all nations are allowed to compete, and no special language in which papers must be written is indicated. Essays for the competition must be sent, before February 15, 1893, to "M. Le Président de la Société Industrielle de Mulhouse." Among the prizes to be awarded are the following:—A medal of honour for the best paper on the chemical composition of the bodies created by the action of sulphuric or hydrochloric acid upon vegetable oils, especially olive and castor oils. A medal of honour and a sum of 1,000f. for a substance which shall be able to replace, in the manufacture of dyed linen, the use of dry egg-albumen; the substitute must be procurable at a much lower price than egg-albumen, and produce colours at least as fast as does the latter. A medal of honour and 5,000f. for a colourless blood-albumen which shall not be coloured by the action of steam. A silver medal for the best essay on the chemical changes which are caused in wool by the action upon it of hypochlorites, and of chlorine and its oxygen-compounds generally. A medal of honour for a theoretical and practical treatise on cochineal-carmines, showing whence arises the inferiority of the products obtained by methods indicated in handbooks of chemistry as compared with those actually sold in commerce, and indicating why the whole of the colouring-matter is not transformed, and should not be transformable into carmine. A medal of honour for the introduction of an artificial indigotin which shall be able to compete with natural indigo in all its applications.

THE CONSTITUENTS OF STROPHANTHUS.—J. J. Hofman has obtained from green strophanthus-seed, by treatment with petroleum ether, 32 per cent. of a fatty oil, while the brown seed, treated in the same way, yielded 29 per cent. The specific gravities of these oils were 0.9125 and 0.9313, the iodine-absorption numbers (by Hübl's method) 83 and 96, the saponification numbers 183 and 193. The bulk of the oil appears to consist of the ester of oleic acid. Of odorous fatty acid there were only very minute traces present.

ported to the Isle of Man, the following course is to be adopted:—

27. When the strength has to be ascertained at the laboratory the officer must prepare a copy of the original notice for transmission to the collector of Customs at Douglas, and forward the original notice to the principal of the laboratory, who, after inserting therein the ascertained strengths, will forward it to the collector at Douglas, in order to enable him to charge the insular duty. Both notices will then be returned to the proper collector of Inland Revenue, for payment of drawback, &c.

28. If the strength be determined by the officer and found correct, only the original notice need be sent to the collector at Douglas.

29. In cases of extreme variation of strengths, whether found by the officer or at the laboratory, the notice will be sent to the collector at Douglas by the Board, when the basis for calculation of drawback has been fixed.

FLAVOURING ESSENCES.

30. With regard to these essences an allowance for waste of 4 per cent., is to be made upon those prepared by maceration or percolation, the same as in the case of tinctures; and upon those prepared chiefly by the addition of flavouring ingredients to the spirits, an allowance of 2 per cent.

31. The drawback of duty will be at the rate of 10s. 6d. per proof gallon, with the usual allowance of 4d. per gallon.

32. The sizes of the bottles will be restricted to $\frac{1}{2}$ oz., 1 oz., 2 oz., 4 oz., $\frac{1}{2}$ pint, 1 pint, 2 pints, and 4 pints.

33. A case may contain flavouring essences of different kinds, but all the bottles in the same case must be of the same size.

34. When the size of the bottles is not less than 5 oz., they must be packed in cases containing not less than 2 bulk gallons, and when the size of the bottles is not greater than 4 oz., they may be packed in cases containing not less than 1 gallon.

35. Schedule of flavouring essences in respect of which the special allowance of 4 per cent. for waste may be granted under the provisions of this General Order:—

Essence of celery.	Essence of tonquin.
" chocolate.	" vanilla.
" coffee.	" lemon, made
" ginger.	with spirits and lemon-peel.
" horehound.	Essence of orange, made
" orris.	with spirits and orange-
" tamarind.	peel.

PERFUMED SPIRITS.

36. An allowance of 4 per cent. for waste is to be made on perfumed spirits as prepared for sale (except upon certain airticles hereinafter mentioned); but in order to become entitled to this allowance the exporter must make a declaration on Form III.—5, that the perfumed spirits have been made from pomade extracts, or from other macerated substances prepared in this country, and that they do not consist of anr have not been manufactured from imported perfumed spirits.

37. The drawback of duty will be at the rate of 10s. 6d. per proof gallon, with the usual allowance of 4d. per gallon.

38. To meet the requirements of the trade the sizes may begin at $\frac{1}{4}$ oz., and increase by multiples of $\frac{1}{4}$ oz.; but the bottles in each internal package must be of uniform size and of the same strength, and must contain at least 3 oz.

39. The contents of the bottles are to be checked by taking not less than six of each size for ascertaining the average contents of the bottles of that size, and the total contents for drawback and allowance shall be calculated from such ascertained average, and not from the nominal capacities of the bottles.

40. No case is to weigh less than 42 lbs., after the same has been packed and made ready for exportation.

41. The regulations concerning perfumed spirits shall apply also, as far as applicable, to the following preparations; but the sizes of the bottles, except in the case of eau-de-Cologne, lavender-water, and Florida-water, shall begin with 1 oz. and increase by multiples thereof:—

Eau-de-Cologne.	Dentifrices.
Lavender-water.	Hair-washes.
Florida-water.	Brilliantines.
Toilet-vinegars and waters.	

42. The strength of these preparations must be ascertained by the hydrometer.

43. These preparations are not entitled to the allowance of 4 per cent. for waste; but the usual drawback of 10s. 6d., with the allowance of 4d. per proof gallon, will be paid.

By the Board,

ROBERT MICKS,
Secretary.

CHOLERA NOTES.

THEY DID NOT DIE OF CHOLERA.

Mr. Theo. H. Tismey, of Eastbourne, sends a remarkable letter to the *Pall Mall Gazette* in regard to the treatment of cholera. He states that a brother of his, who practised in Calcutta, used to "prescribe a 1-per-cent. solution of nitro-glycerine (a well-known Pharmacopœia drug), the patients taking a wineglassful every fifteen minutes until relieved; alternately he administered galvanic action with Helmholtz's battery. None of his patients thus treated died; on the contrary, recovery was almost as sudden as the seizure. He had several theories respecting this remedy. One, which he most favoured, was that the application of the galvanic action caused a slight explosion of the nitro-glycerine, effecting either the discharge from the alimentary canal of the cholera bacillus or its dislocation and dispersion into some other part of the system, where it was rendered innocuous." Considering that the dose of the pharmacopœial solution is from $\frac{1}{2}$ to 2 minims, the wineglassful dose of Mr. Tismey is pretty wide of the mark; but the ingenious and amusing theory regarding the combined action of the nitro-glycerine and the galvanic current is quite sufficient to put the remedy out of court.

ABOUT THE MICROBE.

Parisian scientists have of late been very attentive to the causation and prevention of cholera, and several papers on the subject have been communicated to the Academy of Sciences. M. Pasteur, in presenting a copy of Dr. Daremberg's book on the subject, strongly supported the author's protest against the pollution of the water-courses by drainwaters, and equally against the pollution of the soil by the distribution of these waters on land under cultivation. Daremberg thinks that the germs of cholera, in the form of the bacillus which produces it, can remain living and virulent in the soil for several years, and eventually lead to the spread of the disease. Thus the cholera in the environs of Paris would have originated in cholera-germs preserved since the last epidemic, in 1884. At the same meeting M. Ferran made some observations on a new chemical function of the comma-bacillus. The growth of this microbe is always rapid and luxuriant in the ordinary culture-solutions; if they contain milk-sugar, it is incomparably more so; but the growth ceases entirely as soon as the solution becomes acid by the development of lactic acid, and the vitality of the microbe is extinguished. It seems reasonable to employ lactic acid in lemonade against cholera (as the Paris city authorities have suggested), and to aid its action by the anexosmotic power which morphine offers us; the alkaloid would, perhaps, hinder the absorption of the toxic substances, and would prolong the action of the lactic acid by opposing its rapid elimination.

PRECAUTIONS IN THE EAST-END.

At the usual fortnightly meeting of the Guardians of the parish of St. Matthew, Bethnal Green, held on Tuesday, August 30, a letter was read from the district medical officer asking for a conference with the Board, so that steps might be taken to combat any outbreak of cholera in the parish. The Board remitted the matter to the Dispensary Committee with powers to act; and this committee, with Mr. A. P. Barnard, chemist, as chairman, met in consultation with the medical officer on the Thursday following, and resolved, on the recommendation of the medical officers, to keep their dispensary open day and night for four weeks; that an extra dispenser should be obtained for night duty at a salary of 50s. per week, their permanent dispenser undertaking extra duty during that time. They gave their

dispenser instructions to take into stock, at the dispensary, extract of meat (Liebig and Valentine), brandy, and disinfectants. They also instructed their Clerk to communicate with the Asylums Board as to the removal of patients, and with the Vestry, as Sanitary Authority, concerning hospital accommodation.

GERMAN DRUGGISTS AND THE SUNDAY REST ACT.

The German Sunday Rest Act prohibits work of all kinds in shops or factories during the hours of Divine service. Certain Berlin wholesale drug-firms have just petitioned the chief of police to be allowed exemption from this clause during the cholera epidemic, giving as their reason that they were so overwhelmed with orders for disinfectants that they could not cope with them unless allowed special indulgence in the matter of working-hours. Their request has been refused.

RAILWAY GUARDS AS CHOLERA DOCTORS.

The Prussian Minister of Railways has issued an order to the railway administrations commanding them to keep every guard in charge of a passenger-train supplied with an ounce bottle of a mixture of laudanum and ether, from which the guard is to administer 20 to 30 minim doses (preferably on a piece of sugar) to any passenger in his train who shows symptoms of cholera. The *Pharmaceutische Zeitung* wants to know how the guard is to know whether a passenger is suffering from cholera or from any other complaint, and protests against entrusting railway servants with the indiscriminate distribution of a drug the sale of which by pharmacists, except upon medical prescription, is severely prohibited.

PHARMACISTS AND THE EPIDEMIC IN HAMBURG.

According to a writer in the *Pharmaceutische Zeitung*, one of the results of the outbreak of cholera in Hamburg will be the introduction into the Reichstag of a Bill for placing the power to adopt protective measures against infectious diseases in the hands of a central authority, thereby taking away the autonomy now possessed by Hamburg and other free cities in this matter. The writer, after drawing a harrowing picture of the devastations of the plague in the ancient city, describes the preventive measures generally resorted to by pharmacists. A 5-per-cent. solution of carbolic acid is sprinkled on the floor of the pharmacies at frequent intervals, and near the desk for sales over the counter a basin with corrosive-sublimate solution (3 in 1,000) is kept for the frequent rinsing of the hands. No bottles are taken back from customers during the epidemic. Smoking and, as far as possible, all direct contact with customers are also avoided. The following prophylactic has been found very useful:—

Hydrochloric acid	30 grains
Pepsin	30 "
Aq. menth. pip.	6 oz.
Syr. zingiber.	1 "

Take half a tablespoonful every two hours.

Feet and legs should be rubbed morning and night with spirits of camphor.

No pharmacist has died of cholera in Hamburg thus far.

DISINFECTANTS IN GERMANY.

A RECENT commercial report of the *Pharmac. Zeitung* has the following:—"While in Russia, unaccountably enough, the slightly active 50-60-per-cent. crude carbolic acid has been officially prescribed for disinfecting purposes, the German law properly orders the employ of crude 100-per-cent. acid; and for this kind, which is already very scarce at present, a further strong demand is sure to manifest itself. That bleaching-powder should be assigned such an important place in the German order is astonishing, as it is notorious that this preparation is particularly one of which the disinfecting power is considerably affected by age and method of storage, and that it is difficult to gauge its efficacy. The advance in carbolic acid has been still greater than was foreseen, and this applies to crystals as well as to crude acid. For many years that drug was neglected to such a degree that neither manufacturer nor trader could make

any profit out of it; now it has suddenly risen 75 per cent. in value. Crystals can hardly be had for immediate delivery, and of crude acid only the low-percentage kinds are offered freely. Crude 100-per-cent. acid, which consists of the really active parts, unmixed with valueless tar oils, is scarce, and is kept by the manufacturers for conversion into 50-60-per-cent. crude acid—a variety of which immense quantities are being used in Russia. A further strong demand for 40-per-cent. crystallised and 100-per-cent. crude acid was certain to arise, for the latest reports from the stricken districts left no doubt of the extension of the plague and the great increase of fatal cases. There has been an important advance in corrosive sublimate, which is ordered in large quantities for disinfecting purposes in Russia and Germany. Manufacturers are unable to keep pace with this demand. Permanganate of potash, also demanded for disinfection, is likewise dearer. There has been a strong inquiry in Germany for peppermint herb, which has a great popular reputation as a prophylactic for stomach and bowel complaints. The harvest of the herb has been a good one in Germany, but in spite of this the price has risen, and every pharmacist's order to his wholesale house includes a request for the herb. Peppermint oil has advanced from the same cause."

Business Changes.

MR. HUES, Handsworth, has purchased the business at Malvern Wells, formerly owned by Mr. Wakefield of that place.

MR. A. H. ELLITHORNE, chemist, of York Place, Ball's Road, Birkenhead, has opened a branch pharmacy at 26 Wellington Road, Oxtou.

MR. SMITH, until lately assistant with Mr. Chase at Five Ways, Edgbaston, has succeeded to the business of Mr. Hues, at Handsworth, Birmingham.

MR. BREWIS, who has managed the laboratory of Messrs. Boileau & Boyd, wholesale druggists, Dublin, for some years, has accepted an engagement with Messrs. Dakin & Co., of London.

MR. D. R. THOMAS, who has been the managing partner in the firm of Cousins, Thomas & Co., Oxford, for the last eight years, has just succeeded to the whole of this old-established business.

MR. THOMAS PARKIN has sold his business at Bolsover, Chesterfield, to Mr. Greaves, of Clowne, and has purchased from Mr. Holmes, of Ringwood, Hants, the business hitherto carried on by the last-named chemist.

MR. J. C. POTTAGE'S homœopathic business at 47 St. Vincent Street, Glasgow, will in future be in the hands of Mr. Thomas Robinson. The business has been in existence for thirty years, and during the last five years Mr. Robinson has been manager.

MR. FRANK DERRY, who has for the past three years acted as advertisement-manager to the Guy's Tonic Company, has left that firm to act in the same capacity for Mr. Roscoe C. Spurin, the proprietor of the new preparation for the teeth, "Dorothy Dentifrice." This preparation, which has had a good success in the West of England, is now brought to London, and, we believe, is to be pushed vigorously. It is sold in 3d. packets, and extremely attractive showcards are given with it.

HYOSCINE AND SCOPOLAMINE.—At a recent meeting of the Silesian Society for National Culture, Professor Ladenburg made a communication in regard to Schmidt's observations that hyoscyne and scopolamine are identical bodies. He does not agree with that view, but admits that scopolamine is found in commercial hyoscyne. He stated, further, that there is in scopolamine an alkaloid which has a very great resemblance to hyoscyne, but it is not identical, for hyoscyne is $C_{17}H_{23}NO_3$, and the alkaloid in question is $C_{17}H_{21}NO_3$.

Trade Notes.

THE Chemists' Association (Limited) (formerly Thompson, Walters, Hole & Co., Limited), Cartain Road, are now connected with the telephone, No. 11,391.

MESSRS. E. BREFFIT & CO. (LIMITED) have registered a design for a price-card for van-boxes, bin-cases, &c., the feature of which is that on the front page of the card is a drawing of a bin-case, the lid of which is made to open, showing inside (on the opposite card) the internal arrangement of the case.

BESIDES the prize to consumers offered by the Natural Food Company (Mr. Peter Tyrer), Long Lane, Borough, which we mentioned in a Trade Note last week, in connection with Dr. Allinson's Natural Food, the proprietor also offers a premium of 5*l.* to the agent who sells the largest quantity to the public between August 1 and December 25, 1892. Particulars of this offer can be had from the company.

MESSRS. CONDY & MITCHELL (LIMITED) tell us that what they meant to convey to our representative at last week's interview was that they might be compelled to go to Germany for their bottles if, as they feared, the English makers were unable to keep up the supply. Thus far they have bought their bottles in England.

MR. JAMES TOWNSHEND, of Exeter, has his specimen almanacs for chemists ready. These include an illustrated "universal" almanac with good pictures and interesting reading-matter, a cunning little purse-almanac, and a novelty in the shape of a bouquet-almanac, produced with "gophered" gilded edges.

THE very effective picture of the Walachian girl with a pitcher of Franz Josef water, by Thumann, which we illustrated in our Summer issue, and which Messrs. Hertz & Collingwood have adopted as a showcard, is now, we understand, ready for distribution to chemists who will exhibit it. It is a lithograph in twenty-three printings, and the firm tell us the original painting cost 1,500*l.* The colours are subdued, and the reproduction is perfectly accomplished.

BLAUD'S PILL IN TABLOIDS.—We have already mentioned the fact that Messrs. Burroughs, Wellcome & Co. have introduced a new tabloid, in which the ingredients of a 4-grain Bland's pill are combined without excipient, providing a cream-coloured mass. It is only this week that we have had the opportunity of examining them. The first thing that strikes one about these tabloids is their small size compared with the usual Bland's pill, but we have found that the average weight is between 4 and 4.1 grains—a commendable degree of accuracy, we should say. The colour of the tabloids is due to the fact that the alkaline carbonate and ferrous sulphate are prevented from reacting until a tabloid is brought into contact with water, when the characteristic pea-green ferrous carbonate is produced. In air-free water the carbonate formed is but slightly coloured, showing that the ferrous salt is remarkably free from oxidation. We have also noticed that by gentle friction the carbonate which is formed comes off, and immediately the white surface below begins to assume the green colour. Hence it may be expected that assimilation of the iron will proceed steadily, and without unduly neutralising the acid contents of the stomach.

NEW COMPANIES.

SCARBOROUGH CLIFTON STREET AERATED-WATER COMPANY (LIMITED)—Capital, 2,000*l.*, in 5*l.* shares. Objects: To purchase the Clifton Street aerated-water manufactory, and to carry on business as manufacturers of and dealers in all kinds of aerated and mineral waters, &c. The first subscribers are: G. T. Eaman, 8 St. Helen's Square, Scarborough (twelve shares); R. Cowton, St. Lawrence, The Valley, Scarborough (ten shares); G. Evesham, Castle Road, Scarborough (ten shares); J. Coulson, Castle Road, Scarborough (ten shares); H. Vipan, 12 Dean Street, Scarborough (two shares); D. Robinson, Scalby, Scarborough (ten shares); and J. Dales, Gristhorpe, Scarborough (two shares). There shall not be less

than two nor more than five directors, and the first are G. T. Eaman and G. Evesham. Qualification, 50*l.*; remuneration, 15*l.*, divisible. Office: 29 Westborough, Scarborough.

BOROUGH MINERAL-WATER MANUFACTURING COMPANY (LIMITED).—Capital, 5,000*l.* in 2*l.* 10*s.* shares. Object: To adopt and carry into effect an agreement made between H. W. Clegg of the one part and J. W. Brown, on behalf of this company, of the other part, and generally to carry on the business indicated by the title. The first subscribers (who take ten shares each), are: J. W. Brown, Rawtenstall, innkeeper; H. W. Clegg, Waterfoot, mineral-water manufacturer; J. H. Edmondson, Waterfoot, innkeeper; W. Dearn, Haslingden, innkeeper; J. Holt, Lumb Benchurch, innkeeper; D. Ashworth, Waterfoot, innkeeper; and G. E. Hargreaves, Haslingden, innkeeper. There shall not be less than five nor more than seven directors; the first to be elected at the first general meeting. Qualification, 25*l.* Remuneration, 7*s.* 6*d.* each for each board attendance. Registered office: The Works, Carr Lane, Waterfoot, Lancashire.

Personalities.

THE engraved portrait of Dr. Thorne Thorne, which we published last week, was from a photograph by Messrs. Fradelle & Young.

MR. ALFRED HUGHES CLAYPOLE, pharmaceutical chemist, York Town, has been elected a member of Frimley School Board. He was third on the list, and received 424 votes.

THE Chairman of Directors of the Ashburton Drug Company (Limited), Ashburton, Canterbury, New Zealand, is now in London. His address is H. Friedlander, 60 Fenchurch Street.

THE RIGHT HON. T. H. HUXLEY resents a statement by *Nature* that he was allowed to leave the public service "without the slightest recognition" by the State. He feels "bound, in justice both to Lord Salisbury's and to Mr. Gladstone's former Governments, to point out that it is incorrect." Very substantial recognition was awarded him by both; and the late Lord Idlesleigh, in offering to recommend him for a Civil List pension, expressly put it as an honour.

A DERBYSHIRE paper gives some particulars of Mr. Pochin, the chairman of the Sheepbridge Coal and Iron Company, a director of the Staveley Coal and Iron Company, of the M. S. and L. Railway Company, and of other concerns. Mr. Pochin commenced business in a small way as a chemist in Manchester, and has prospered and grown wealthy. Some years ago he purchased the estate of Bodnant, on which he has spent large sums, and now it is one of the largest, best-managed, and most charming estates in Wales. Trees have been planted in hundreds of thousands. On a commanding knoll, almost enshrouded in trees, Mr. Pochin has spent 10,000*l.* on a mausoleum externally built of cream-coloured stone, in the Classical style, and internally constructed of the choicest marble, in different colours, interspersed with precious stones.

MARRIAGES

BRETT—NICHOLLS.—On September 3, at Holy Trinity Church, East Finchley, Mr. Samuel Brett, of THE CHEMIST AND DRUGGIST staff, and for some time the resident agent for that journal in New York, to Miss Millie Nicholls, of East Finchley.

TATE—CRAIG.—On August 31, by special licence, at Glenmount, Whitehouse, James Tate, M.P.S.I., Belfast, to Helen (Ellie), seventh daughter of the late Hugh Craig, Belfast.

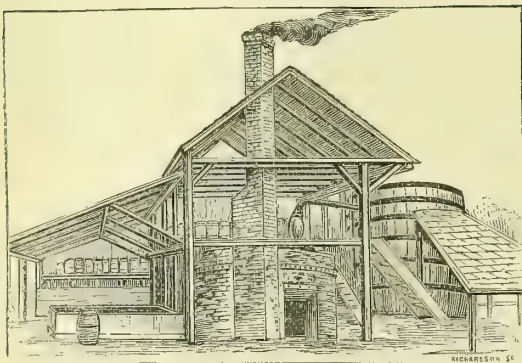
DEATHS.

HILL.—On August 13, Alfred Hill, chemist and druggist, Norwich. Aged 70.

TAYLOR.—On August 9, Thomas Taylor, chemist and druggist, Bristol. Aged 90.

A MISSISSIPPI TURPENTINERY.

FORMERLY most of the turpentine shipped from the United States came from North Carolina, but the forests in that State are now well-nigh bled and burned to death, and the turpentine industry has found a new home in Mississippi, where the town of Purvis has become one of its chief strongholds. Many visitors go down to Purvis to spend a holiday in its balsamic pine-woods; and from the accounts of a visit to one of the principal distilleries, recently given



THE DISTILLERY.

by one of these holiday-makers in an American journal, we glean the following particulars:—The turpentine orchards, as the forest plots whence the resin is obtained are called, vary considerably in size, but those of any magnitude contain from 10,000 to 15,000 acres. These are divided into "crops," consisting of 160 acres of land each, or about 10,500 turpentine "boxes."

BOXING AND SCARIFYING.

The first step in opening up an orchard is the cutting of boxes, which is begun about the middle of December, and each year afterwards new boxes are cut on new timber. These boxes are made by taking a slice out of the tree near the ground, leaving a pocket-like opening. Later on, another set of axemen come and cut a small chip out of each corner of the box in order to give it roundness and enable it to hold the flowing sap. This process is called "cornering boxes." The cornered boxes measure 14 inches wide, 7 inches deep, and 4 inches across. Generally only one box is cut to a tree, but if the tree is large more are put on.

About the middle of March, when the weather is warm



SCARIFYING THE TREES.

enough to cause the sap to flow, the "chippers" are sent out. To each man is assigned a crop of boxes, which he is expected to chip over once a week. Commencing from the

edge and centre of the box, the tree is scarified in V-shaped abrasures, with an instrument called a "hacker," which is an open, semi-circular piece of sharpened steel attached to a short handle. On the end of this is fastened an iron ball, which gives impetus to the stroke made by the workman. Once a week one of these "streaks" as they are called, must be put on each side of the centre line of the box on the side of the tree, in order to keep the sap constantly flowing. As each new streak is put on, the arch mounts higher and higher, and in two or three years it reaches such an altitude that the tree has to be abandoned.

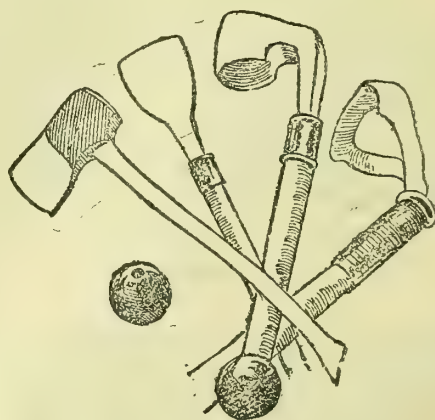
Formerly, when turpentine was higher in price, the tree was scarified to a much greater height than now, the workmen mounting ladders in order to reach the desired altitude. The trees do not lose their vitality by being scarified for turpentine. The process does not even injure their usefulness for lumber. The tree which has been used for turpentine once, however, cannot again be tapped until after an interval of fifteen or twenty years.

COLLECTING THE TURPENTINE.

When the fourth streak is put on the tree, which is four weeks after the chipping commences, sufficient "crude," or sap, has run into the box to enable the "dippers" to start to work. "Dipping" can be done by women and children. Sometimes whole families work together, being given as many crops to dip out as they can undertake. The instrument by which the dipping is effected is a flat, heart-shaped piece of steel, attached to a long handle. The workman places this paddle into the box, and with a peculiar twist of the wrist brings out the contents, which he places into a bucket. The full buckets are emptied into the barrels, which hold 480 lbs. of "crude" each. The still runs from one to three charges per day, requiring eighteen barrels of "crude" to the charge. From each charge is distilled from two and a half to three and a half barrels of spirits of turpentine, according to the newness of the trees. The balance consists of resin and chips. The first year's bleeding of the tree yields what is called "virgin dip," which contains a larger percentage of turpentine than the dip of any succeeding year. The resin which is made from this is also of a finer quality. As each year passes, the percentage of turpentine and the quality of resin deteriorate.

THE DISTILLING.

In the fall of the year the accumulation on the side of the tree is scraped off and distilled, but it yields a small percentage of spirit and a poor resin. The distillery itself is an exceedingly simple structure, its main features being a brick-built furnace with a tall chimney, and a rather clumsy copper still communicating, by means of a still-head and worm, with a big cooling-vat and container. Over the furnace, and near the head of the still, is a platform con-



BOXING, HACKING, AND DIPPING TOOLS.

taining several barrels of a white, paste-like substance—the crude turpentine as it flows from the trees, and which requires distilling in order to separate the essential oil or spirits of turpentine from the resin. About eighteen barrels of crude turpentine go to a charge, which is boiled for four

hours. The stillman, by putting his ear to the side of the pipe whence the steam issues from the cooling-vat, can judge whether the brew is progressing favourably. Great care has to be taken in keeping the fire at the right heat, and in keeping a sufficient quantity of water in the still, as the resin, if scorched, becomes valueless. The "low-wine," or water of distillation, which is exceedingly bitter, is highly esteemed locally as a consumption-remedy.

TURPS AND RESIN.

The discharge-pipe empties into a barrel, which, by means of a short wooden pipe, connects with a second similar receptacle. From this second barrel the turpentine is finally drawn into a third, which is rolled into the store-shed, and is in its turn emptied into the tank which conveys the spirits along a line of rail, passing underneath the platform to the nearest market. The liquid as it flows from the still into the first barrel is divided into a thick, yellowish, turbid and frothy part, filling about two-thirds of the barrel, and the "low-wine," which sinks to the bottom. The latter is drawn off by a tap at the bottom of the barrel, while the remainder, minus the froth, passes into the second barrel in a clean, warm, pungent stream. When all the volatile oil is drawn off the charge is allowed to cool for a couple of hours. The cap is then removed from the mouth of the boiler, and one of the hands, taking up a wire net with a long handle attached, runs it several times into the orifice, bringing it round with a sweeping motion, and hauling up quantities of straw and chips, which are dumped on the ground. The still man then descends the platform, and unscrews a cap on the side of the furnace, just over the resin vat. From this opening there comes rushing out a boiling hot, ruby-coloured stream, which changes to amber as its sprays scatter to right and left. This pours into a wire strainer set to receive it, under which is another strainer covered with cotton batting, and when it has penetrated these two it drips into the vat underneath, set partly in the ground.

The resin has to remain in this vat several hours for final cooling before being placed into the barrels, which it otherwise would burst.

LEAVES FROM A RECIPE-BOOK.

ANOTHER subscriber has very kindly placed at our disposal several recipe-books which have been compiled by his father and himself. In the books we have met with many CHEMIST AND DRUGGIST formulæ which have been tried and not found wanting, while the following have not, as far as we can recollect, yet appeared in these columns. The selection is of a somewhat miscellaneous character; but it is all the better for that. This is an instalment.

Pot Pourri.

Rad. calam. arom.	3ij.
Fol. rosæ	3ss.
Flor. lavand.	3ss.
Caryoph. contus.	3ss.
Sem. coriand.	3ss.
Moschi	gr. x.
Ambergris	gr. iv.

M.

Pott's Cerate.

Pulv. litharg.	3xvj.
Sapon. Cast.	3ij.
Aceti albi	3xxxij.

Dissolve, and evaporate the vinegar; then add to the following, previously melted:—

Cere flavæ	3x.
Ol. olivæ sec.	3xvj.

Mix well.

Odor Delectabilis.

Aq. flor. aurant. conc.	3iv.
" rosæ conc.	3iv.
Ol. lavand. Ang.	3j.
" caryoph.	3j.
" bergamot.	3ij.
Moschi	gr. ij.
Sp. vin. rect.	3xx.

M.

Ol. Odoriferum.

Ol. origani	3j.
" caryoph.	3j.
" lavand.	3j.
" citron.	3iv.
" amygd. amar.	3ij.
" cassiæ	3iv.
" limonis	3iv.
" jasmin.	3j.
" bergam.	3iv.

M.

Honey Paste.

Ol. amygd. dulc.	3ij.
Cetacei	3ij.
Mellis	3j.
Otto rosæ	gtt. xv.
Ol. lavand.	gtt. vij.

M.

Linim. Succini.

Camphoræ	3ij.
Ol. caryoph.	3j.
" succin. rect.	3ij.
" olivæ opt.	3xx.
Liq. ammon. fort.	3iss.
Aquæ	3xv.

Digest the camphor in the essential oils until dissolved, then add the olive oil, shake well, add the ammonia, and, lastly, the water, shaking well together.

This makes a unique cream-coloured "white liniment," which is of special value as an embrocation for whooping-cough and chest-complaints generally, while it also makes a good "rubbing-bottle" for sprains, rheumatism, and the like. If properly made it never separates, and is of the consistence of cream. Those who have not so far made a liniment a speciality should try this one.

Essence of Anchovies.

Pound 1 lb. of anchovies in a mortar; put them into a pipkin with 4 oz. of the best vinegar, and boil for a few minutes; then pulp through a hair sieve. To the portion that passes through the sieve add 2 oz. of salt, the same quantity of flour, and sufficient water to give it the proper consistence. Boil them together for a few minutes, and colour the mixture with annatto. A little cayenne pepper is sometimes added.

Chutney Sauce.

Stoned raisins	3iv.
Sour or crab apples	3viij.
Brown sugar	3iv.
Powdered ginger	3ij.
Common salt	3ij.
Cayenne pepper	3ij.
Garlic	3j.
Vinegar	a sufficiency.

Pound the solid ingredients together in a mortar until the whole is reduced to a pulpy mass, then add enough vinegar to bring the whole to the consistence of cream, and bottle for use.

Aqua Mellis.

(1)

Ol. bergam.	3iss.
" limonis	3j.
" lavand.	gtt. xlv.
" caryoph.	gtt. xlv.
Spt. vin. rect.	3viij.
Tr. iridis	3iv.
Aq. flor. aurant.	3iv.

M.

(2)

Gum. benzoin.	3xvj.
Storacis calam.	3iv.
Caryophylli	3viij.
Calami arom.	3xij.
Cort. aurant.	3xij.
Sem. coriand.	3xij.
Rad. iridis	3viij.
Fabæ Tonkæ.	3ij.
Spt. vin. rect.	O vj.
Aq. flor. aurant.	O ij.
Aq. rosæ	O ij.

Macerate for forty days, and filter.

[FRENCH, GERMAN, AND ENGLISH ASSISTANTS.

BY A CONTINENTAL PHARMACIST.

HAVING had for many years in my employment pharmaceutical representatives of the three nations named above, I have had good opportunities of judging their respective characters and abilities. Although "comparisons are odious," it is sometimes interesting to consider the points of difference between men of different nationalities, engaged in the same occupation, and to observe the characteristically different ways in which they will set about the performance of similar duties.

PHARMACIEN.

Amongst French assistants we have two classes—namely, first, men who, after remaining three years as apprentices in purely French pharmacies, seek situations in Paris, or in some first-class English establishment on the Riviera, previous to preparing for the examinations, which will occupy three years of student life; and, second, men who have no intention of going into business on their own account, and no ambition to secure a diploma which would better their position even as assistants.

The former will not generally engage themselves for any lengthened period, whilst the latter are always on the lookout for permanent situations. From an employer's point of view, the assistant of the second category is generally the more valuable, as he usually gives more attention to the ordinary routine of a business than his more ambitious *confrère* would care to do.

French assistants, like those of every other nation, are largely influenced by the men with whom they have been apprenticed. *Malheureusement*, the greater number of apprentices commence their career in some little pharmacy where the greater part of their time is employed in handing over the counter 2 sous' worth of flowers for tisane, or in retailing chloride of lime (*poudre de javelle*), or quillaia-bark (*bois de Panama*).

The odour predominant in a French pharmacy is invariably that of *chlore*. This chemical is largely used by our *blanchisseuses* to whiten the linen, which it soon destroys. Having had no experience in dispensing, or in the ordinary duties required in a first-class pharmacy, they have a second apprenticeship to undergo on leaving their first situations.

I might mention that indentures are not drawn up in France as in England. An engagement is sometimes made by the two parties on *papier timbré*, but this arrangement is far from satisfactory, and, consequently, is not often employed. A verbal agreement is adopted more frequently than a written engagement. It results from this lax method of binding an apprentice that after remaining one year with his first master, he often leaves him to go elsewhere, when he expects to earn a small salary as improver. Some of these youths, when properly trained, are excessively quick at learning, and are also good at retaining the information they acquire. I refer especially to southerners.

One interesting characteristic (not the least important) of French assistants is their invariable good temper, and desire to live in harmony with those with whom they are surrounded, irrespective of national prejudices or differences in opinion in political or religious views. They are quick-tempered, and resent immediately any attempt at bullying; but they are equally quick in forgiving an injury, and I have never yet met with a sulky French assistant. He is superior to the average English or German assistant in some branches of the profession. He makes better syrups, turns out cachets quicker and more elegant in appearance, and is more attentive to the filling-up of shop-bottles, drawers, &c. Unless he has had some experience in a cosmopolitan pharmacy, he cannot undertake to dispense prescriptions written in Latin. French prescriptions are written in the language of the country. Some French assistants are exceedingly good salesmen, although many consider it *infra dig.* to attempt to sell anything to a customer which he does not actually ask for.

APOTHEKER.

Within twenty-four hours after his arrival the German assistant has mapped out in his mind's eye a better position for

every individual bottle and pot which adorns the pharmacy, and unless his employer keep a strict look-out, he (the employer) will be unable in a day or two to find any article in its original place. If permitted to reorganise the pharmacy, he goes systematically to work, but his labours are not usually crowned with the success which one expects as the result of so much time and energy being spent on the attempt.

His ideas are practically useless. If you do not chance to fall in with his plans and suggestions, he invariably turns crusty and sulks for an indefinite time. Unlike his French or English *confrère*, he is never willing to admit a fault or acknowledge himself in the wrong, however clear may be the proof. At the dispensing-counter he is at his best, but he is utterly useless as a salesman. It is sometimes painful to notice the length of time he requires to reply to a customer, even when the client is one of his own countrymen. He appears and acts in the pharmacy as though his sole occupation consisted in dispensing, and looks cross when called upon to perform any other duty. He reads Latin with greater facility than either his English or French comrades, and is usually master of one or two languages besides German.

Usually good at making emulsions; divides powders quickly and accurately; makes pills quickly, but rarely succeeds in giving them the spherical form which is essential to their elegance. His productions in this branch of pharmacy are apt to look as though they had been pinched out of the mass, guimauve or liquorice-powder being freely added to fill up the interstices. He is never at a loss to replace any drug which happens to be out of stock by another "equally good"; has not the remotest idea how to wrap a bottle or any kind of parcel.

Before leaving his situation he invariably provides himself with specimens of every label and wrapper in the pharmacy, and after making himself generally disagreeable for the space of six months to all around him, starts off for home without wishing either the principal or his fellow-assistants goodbye. Most humble in his correspondence when seeking a situation, and most arrogant when he thinks he shall require no further favour.

CHEMIST AND DRUGGIST.

If a qualified man, and has lived a year or two in a good West-end establishment, the English assistant can compare favourably with either of the before-mentioned. He soon makes himself at home either at the front counter or behind the scenes. Generally speaking, he is very conscientious and accurate in his work. He is good at preparing mixtures, ointments, and pills. The last he turns out well, and silvers or coats to perfection. With emulsions he is not generally so successful; he soon, however, perfects himself after a few lessons. Unfortunately a bit too conservative in his ideas, he probably strongly objects to using a card to clean out a mortar, although it may often replace a spatula for that purpose to perfection.

Persists in folding powders *à l'Anglaise*, although the method adopted by continental chemists is far better. Dislikes to be called away from his work to serve a customer, although he may know that his services cannot be dispensed with. He rarely knows any other language besides his own, and is somewhat indifferent about attempting to master the language of the country in which he takes up his temporary residence. One of the correspondents of THE CHEMIST AND DRUGGIST, since gone over to the majority, argued that German assistants were superior to their English *confrères*; my experience, as well as that of many of my friends who employ both, is quite to the contrary, consequently we always offer a higher salary to the latter.

Some of your readers may think that I am slightly prejudiced in my comments on the German assistant. I am not so, however, and have given my views after careful consideration and minute inspection of the individual merits of the parties referred to.

A "MODEL of the figure of Lot's wife in salt" will appear in the Kansas Court of the Chicago World's Fair to represent the salt industry of the state, which, we infer from this emblem, has come to a sudden stop, and is not likely to progress much in future.

Legal Reports.

SALT IN BEER.

SEVERAL publicans were prosecuted at Bridgend Police Court on Saturday last, under the Sale of Food and Drugs Act, for selling beer to which, it was alleged, salt had been added to the prejudice of the purchaser. In the case contested, Dr. William Morgan, the county analyst, had certified that the beer contained chlorides equivalent to 62 grains of common salt per gallon. Dr. Morgan was called by the defendant's counsel, and was closely examined as to his analysis. He admitted that having found the quantity of chlorides present in the beer, he had assumed them to represent chloride of sodium exclusively. If there were other chlorides, so much the worse for the beer. He said there was a general understanding that the limit of chloride of sodium allowable in beer was 50 grains to the gallon. Dr. Attfield, who was called for the defence, said the certificate was incomplete because the chlorides were lumped together. In his opinion the certificate was useless for the purposes of the Act. The unqualified words "chlorides equivalent to 62 grains of common salt" were liable to mislead non-chemical readers, who believed—erroneously, doubtless—that common salt was added to beer to make the consumer more thirsty, and, therefore, the allusion was liable to prejudice the accused. He (Dr. Attfield) had found 17 grains of salt per gallon in the beer, 29 grains of chloride of potassium, and 28½ grains of chloride of calcium. It would require hundreds of grains of salt per gallon of beer to cause the consumers to be thirsty. There was no recognised standard. When salt was not present in the water used for brewing, naturally it was far better for a brewer to take pure water and put in salt than to take an impure water containing salt, which, for anything he may know, may be derived from sewage. All the summonses were dismissed.

TAKING OVER THE SYPHONS.

At the Edmonton County Court last week, before Judge Abdy, Mrs. Dunn, a widow, now living at 73 Osnaaburgh Street, Regent's Park, sued Mr Douglas, a chemist at Commerce Road, Wood Green, for 4*l.* 16*s.* due on an I.O.U. The plaintiff, acting as the executrix of the estate of her late husband, sold to the defendant for 95*l.* a chemist's business. There was a number of syphons which the defendant agreed to purchase at 2*s.* each, and it was in respect of these syphons that he gave the I.O.U. upon which he was sued. The defence was that the syphons were part of the stock-in-trade, and were included in the purchase which he made for 95*l.* The defendant said he was foolish to sign the I.O.U. The Judge told him he must pay the penalty of his folly. Verdict for the plaintiff, with costs.

BANKRUPTCY REPORTS.

Re JOSEPH NORMAN WISE, Claypath, Durham,
Pharmaceutical Chemist.

At the Durham Bankruptcy Court, on Tuesday of last week, Joseph Norman Wise, chemist and druggist, of Claypath, Durham, and residing in Gilesgate, came up for his first public examination. The following is the debtor's statement of affairs:—Liabilities: Unsecured creditors, 923*l.* 13*s.* 7*d.*; creditors partly secured, 300*l.*, less estimated value, 25*l.*—275*l.*; creditors for rent, &c., 25*l.*; making gross liabilities, 1,248*l.* 13*s.* 7*d.*, and expected to rank for dividend, 1,198*l.* 13*s.* 7*d.* Estimated assets: Cash deposited with solicitor for cost of petition, 12*l.*; stock-in-trade (cost 300*l.*), 250*l.*; trade fixtures, 50*l.*; furniture, 50*l.*; share in Chemists' Aërated-water Association, 1*l.*; book debts (good), 89*l.* 3*s.* 9*d.*; book debts (doubtful), 4*l.* 15*s.* 8*d.*; book debts (bad), 9*l.* 8*s.* 4*d.*; expected to realise, 91*l.* 8*s.* 8*d.*; total assets, 454*l.* 8*s.* 9*d.*, less 25*l.* for distrainable rent, and preferential rates, taxes, wages, sheriff's charges, &c.—429*s.* 8*s.* 9*d.*, which leaves a deficiency of 769*l.* 4*s.* 10*d.* The debtor alleges that his

causes of failure are want of capital, expenses being in excess of profit, and a long illness of himself. The Official Receiver reports that the debtor filed his own petition. He commenced business in May of 1883, with a capital of between 700*l.* and 800*l.* He had kept a cash-book, debtors' and creditors' ledgers, bank-book, day-book, and returns-book. All were posted to date except the bank-book. His banking account had been closed since about June, 1891. He had not within the last twelve months incurred any losses other than those in trade, nor pledged or disposed of any property. He had paid sums on account of trade debts up to the time of filing, and had not discontinued business. He had no capital three years ago, and though he had stock to the value of about 600*l.*, he was then insolvent, as he first became aware that he had not sufficient property to pay all his debts in full when he borrowed 300*l.* from his mother in November, 1888. He had contracted all his present debts since then, but expected to be able to pay them out of the profits of the business. His income for the last three years had been about 100*l.* a year, and his household and personal expenses about 180*l.* a year. The whole of the unsecured liabilities seem to be ordinary trade debts. He seemed to have over-valued his stock-in-trade, fixtures, &c., and as the Official Receiver does not think the assets will, if sold by auction, realise more than 300*l.*, he has obtained an order for the summary administration of the estate. According to the deficiency account delivered, debtor's failure seems to have been partly attributable to his living beyond his income.

In answer to the questions of the Official Receiver, the debtor said that his business comprised two sections—a retail shop and a wholesale trade. In 1888 he found that the wholesale business was not paying, and he gave it up. He had never made an assignment or composition before the present instance. Mrs. Wise, debtor's mother, was entered as a partly-secured creditor for 300*l.*, the security amounting to 25*l.*, but she did not intend to prove the debt until all the creditors were paid in full. He did not think he had over-valued the stock-in-trade and fixtures at 300*l.* He did not call his creditors together earlier on account of bad health during last year. At the time he borrowed the 300*l.* from his mother in 1888 he made out that he was 450*l.* to the bad. He borrowed 100*l.* last year from his mother and 20*l.* in the present year. He put all the money into the business. At the time he borrowed the money he submitted a statement of his affairs.

The Official Receiver said that with regard to the deficiency account which had been furnished him, some of the figures were incorrect. He asked debtor to examine it, and supply him with an amended account before the next sitting. He also asked debtor if he had any further explanation to offer as to why his assets did not reach 10*s.* in the pound.

In reply, debtor stated he did not think he had any more to say except that he thought he would manage to pull through; but that was evidently a mistake. He acknowledged that he had contracted debts without having reasonable hope of paying them.

The examination was then adjourned.

Re NORTHCOTT & SONS, Rood Lane, Drug-brokers.

In the London Bankruptcy Court on Wednesday, on the application of Messrs. Barlow & James, a receiving order was made against the estate of F. Northcott, drug-broker, 13 Rood Lane, trading as Northcott & Sons. The liabilities are stated at 2,300*l.*, and the assets at 102*l.*

ABSORBENT COTTON.—One of the forms of cotton industry that is rapidly developing in the United States is the manufacture of absorbent cotton for surgical purposes. The business is receiving attention from some large mills and it offers opportunity for considerable profits, says the *Textile Record*. The raw cotton is boiled in a solution of potash until all the waxy and greasy material contained in the fibre has been extracted. It is then placed in a whizzer and dried, after which it is put upon the card and run out into laps.

CHOLERA.

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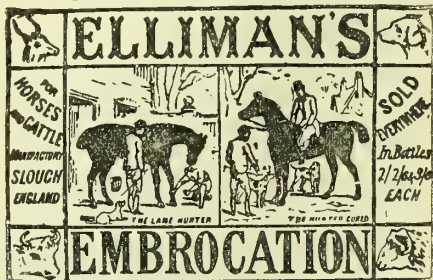
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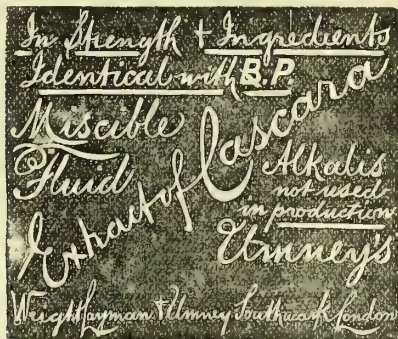


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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Editorial Comments.

THE PERFUME DRAWBACK.

AFTER many months of suspense the question of a drawback-allowance on alcoholic perfumes and flavouring-essences has been settled by the issue of the General Order of the Inland Revenue Department, which we print in another part of this issue. The Order concedes all, or nearly all, the demands of the trade, and, though a few irreconcilables may remain, the great majority of firms connected with the industries to which the Order relates will accept it as a fair solution of their difficulties until the time when the question of free alcohol for all industrial purposes shall have been brought within the domain of practical politics.

It will be remembered that the perfume-drawback question became a matter of public controversy in the autumn of last year, when the Inland Revenue announced their intention to do away with the anomalous privileges enjoyed by a half-dozen or so of the large London perfumers who had been fortunate enough to secure manufacturing space in one of the two or three public buildings recognised as bonded warehouses. The announcement that they were to be put on a level with all their less-favoured colleagues caused the privileged traders to join together for the defence of their monopoly, and it was not until several more or less stormy meetings had been held, and it was found that the Somerset House authorities were not to be nobbled, that a kind of understanding was patched up between the various interests involved and a committee appointed, fairly representative of both sections of the trade, to confer with the Inland Revenue officials upon the details of the new arrangement.

The new Order, it will be seen, makes no reference whatever to the privileged manufacturers. They will be allowed, we take it, to continue their manufacture at their present bonded warehouses, and upon the old terms, if they choose; but for the rest any licensed rectifier or compounder, no matter in what part of the country his works may be situated, can claim drawback under the terms of the new Order by giving twelve hours' notice on a special form to the nearest officer of the Department. The provisions for the sampling and testing of the goods are laid down with the utmost liberality to the exporters, and generally follow the lines of the previous Order concerning the drawback on medicinal tinctures. Where they differ it is mostly on the side of greater generosity to the perfumers. The minimum quantity of goods allowed for export in a single shipment under the terms of the Order is 2 bulk gallons, or about 17 lbs., net weight, which is even less than the quantity (56 lbs., gross) first suggested by the Somerset House officials and accepted as reasonable by the meeting of the trade at the London Chamber of Commerce on January 29 last. With regard to the drawing of samples, too, every reasonable concession is made. In the case of perfumed spirit the officer will test the strength of the spirit to be exported on the spot, and, where the test is found to correspond fairly with the exporter's statements he will return the samples into the bulk without more trouble, so that there need not be any waste or loss to speak of. This is not the case, however, with flavouring-essences, the samples of which must be sent to Somerset House for analysis—the intention of the exception being clearly to prevent the possibility of any employment of methylated spirit in this manufacture. There is no proviso in the Order with regard to the refunding by the Revenue of the money value of samples used for testing. It would hardly be fair to expect the authorities to pay for the samples they require, and the matter is one of very little importance, but it may be remembered that some of the more exacting representatives of the trade at the Chamber of Commerce gatherings distinctly formulated the demand. An abstract of each consignment, we observe, must be sent to the Principal of the Statistical Department, and we may therefore hope, in the course of a year or so, to be able to judge with exactness of the benefits that have accrued to our commerce from the new concessions. Besides the ordinary drawback of 10s. 6d. per proof gallon, plus the "usual allowance" of 4d. per gallon (which is a kind of bounty to our manufacturing industry), a waste allowance of 4 per cent. will be made upon flavouring-essences prepared by maceration or percolation, and upon perfumed spirits, as is now done upon medicinal spirituous tinctures. But, as with the latter, so there are certain exceptions in the new Order. Flavouring-essences, prepared chiefly by the simple addition of flavouring-ingredients to

alcohol, for instance, are only to be given an allowance of 2 per cent.; and eau-de-Cologne, lavender and Florida waters, toilet vinegars and waters, dentifrices, hair-washes and brilliantines made with alcohol, are not to receive any waste allowance whatever.

By the new Order all our perfumers are placed upon terms no less favourable than their French colleagues, and, so far as we are able to judge, rather better than their fellow-manufacturers in Germany. They should, therefore, be able to do something more than hold their own in the markets of the world.

ACETUM SCILLÆ.

A FEW weeks ago a correspondent sent us a query in regard to acetum scillæ, which appeared of sufficient interest to bring to the notice of those who happened to be making the preparation at the time. We now have enough responses before us to provide a definite reply to the query, which, in effect, was, What should be the measure of acetum, or does the Pharmacopœia expect a pint to be produced? As the Pharmacopœia process is one of simple maceration of 2½ oz. of bruised squill in a pint of dilute acetic acid, it is plain that the filtered product after seven days' maceration will fairly represent the activity of the drug, and that the degree of expression to which the marc is subjected will slightly influence the specific gravity of the product. In properly-conducted maceration processes expression of the marc is an economical procedure, and does not add to the strength of the preparation, since the liquid in the marc is of the same strength, or nearly so, as that outside it. This statement is supported by results submitted by our correspondents based on manufactured quantities varying from 3 pints to 4 gallons. Reducing these to the pint standard, we obtain the following figures:—

No. 1.	Volume of the product	18.3 oz.	..	sp. gr.	1.038
No. 2.	"	15.75 "	..	"	1.038
No. 3.	"	19.3 "	..	"	1.039
No. 4.	"	18.2 "	..	"	1.040
No. 5.	"	18.8 "	..	"	1.041

In other replies the writers do not give the volume of the product, and one of these states that he finds its "specific gravity vary from 1.037 to 1.053." Another, who obtained only 16 oz. from the pint, gives its specific gravity as 1.064—an entirely abnormal figure. The results which we have tabulated show that the yield has little to do with specific gravity, and the variation in the latter is very trifling; the higher yields, due doubtless to more efficient pressure, indicating the presence of more extractive matter. It should be noted that in all these cases the specific gravity of the dilute acid was 1.006.

It would thus appear that there is no occasion for interference with the pharmacopœial directions, unless it be the emendation of the last sentence to "The product should measure not less than 18 fluid ounces, and should have a specific gravity of 1.033 to 1.040." Oldberg has shown that it is a mistake to make the acetum by percolation, as that is not only tedious but maceration gives a better product. The German Pharmacopœia stipulates that the acetum made as it directs should contain 5.1 per cent. of acetic acid, and this has led to the interesting observation by Dieterich that after pressure and filtration the acetum contains a trifle less acid than before, thus supporting our observation that the slight increase of density is due to extractive matter removed by pressure. Dieterich's figures deserve quotation. They are:—

	Sp. gr. 1.024	1.022	1.022	1.023	
After maceration	.. 5.10	.. 5.10	.. 5.16	.. 5.16	p.c. acid
After pressure	.. 5.07	.. 5.04	.. 5.16	.. 5.04	"
After filtration	.. 5.07	.. 4.98	.. 5.10	.. 5.04	"

We do not think that the British Pharmacopœia intends much pressure to be applied. The direction is "Strain with expression, and filter"—that is, squeeze the contents of the straining-cloth with the hand. The subject, as a whole, is not a large one, but we have heard it frequently discussed, and these observations may assist in allaying any suspicion that variation in yield is accompanied by variation in medicinal activity.

"THE NAME OF THE ARTICLE."

It has been several times pointed out in this journal that in labelling proprietary medicines containing poison it does not seem to be required by the Pharmacy Act that the particular poison therein contained should be named on the label. The Act requires that the name of the article, the word "poison," and the name and address of the seller, should appear on the label. In the case, then, of any of these proprietary medicines, what is the name of the article? It seems to us that the answer is obvious. The name of the article is Chlorodyne, Powell's Balsam of Aniseed, Winslow's Soothing Syrup, Kay's Essence, Atkinson's Preservative, or whatever name the maker has thought fit to give to his compound. This view, we notice, does not commend itself to the editor of the *Pharmaceutical Journal*. That authority, in commenting on a letter published by him last week says:—

The mere statement that a preparation contains "a poison" would clearly be insufficient, because the Act says "the name of the article," and unless a preparation be so authoritatively associated with a particular name that it can be thereby at once recognised as a preparation of the article of poison which it contains, there would seem to be no alternative but to put on the label the name of the poison. Thus, for instance, in the case of tinct. camph. co. a recognised name of the article is "paregoric," just as "laudanum" is a recognised name of tinct. opii, and either of those names would be, respectively, the name of the article, indicating that it is a preparation of opium. From this view of the matter it would appear that the legal advice upon which Winslow's syrup is labelled as containing "morphine" was sound and judicious. In the Matthias case, the Treasury, in prosecuting, took up the position that the sale of a preparation containing morphine is, *de facto*, a sale of morphine, and that since the name of the preparation—syrup of camphor—was no indication of the presence of poison in it, "the name of the article" required to be on the label was morphine, as that was the article of poison actually sold.

We give our contemporary's argument in full, because we suppose it says as much as can be said for the official view on the point. The contention, as we understand it, is that if an article has an "authoritative"—that is to say, a Pharmacopœia—title, as, for instance, in the cases of laudanum and paregoric, that appellation with the word "poison" is sufficient; but that in all other cases the name of the article must be supplemented by the name of the particular scheduled poison which it may contain. So that the label "laudanum, poison," which chemists all thought in order, has only been in compliance with the Act since that name has been made a Pharmacopœia synonym.

But the interpretation of an Act of Parliament so as to make it accord with somebody's theory of what it ought to say is not permissible. As a matter of fact, the Act says nothing about the Pharmacopœia name, nor about the authoritative name. It demands simply the "name of the article," and what that is is a question of evidence in each instance. The Matthias case proves nothing, as it was undefended.

COMPOUNDING MEDICAL PRESCRIPTIONS.

IRISH pharmacists, as we all know, have the advantage over us in Great Britain that they are legally entitled to the exclusive privilege (saving the similar rights of medical practitioners) of retailing, dispensing, or compounding medical pre-

scriptions. The expression "medical prescriptions" is not defined in the Act, and it is quite conceivable that its interpretation might give rise to a great deal of hair-splitting. In view of the long-deferred hope that we in Great Britain may one day get a similar bone to dispute about, any approach towards an authoritative exposition of the term in Ireland would be welcome. For this reason we cannot help regretting that the Dublin Magistrate, in the actions recently brought before him, shirked the task of deciding whether, in supplying the medicines ordered on the appended prescription, the defendants had infringed the Act in the manner indicated. This was one of the prescriptions on which they were charged:—

32 Stephen's Green, Dublin,
July 14, 1892

Mr. T. FARRELL.

A bottle of Henry's magnesia.

Take a teaspoonful at night in a little milk.

A bottle of Hunyadi Janos mineral water.

Take a wineglassful the following morning with a tumbler of hot water; a cup of warm tea one hour afterwards.

R. L. SWAN.

We presume, though we are not sure, that the defendant firm sent out these medicines with the doctor's directions attached. Clearly this was a "medical prescription," in the sense that it was a prescription written by a medical man, but the same might be said if the doctor sent his boy to the spirit-shop for a bottle of whisky. Does not the "medical prescription" of the Act involve some sort of compounding? Unfortunately, as we have already reported, this was one of the summonses which were withdrawn in deference to the Magistrate's advice.

Another curious point bearing on the interpretation of this expression was recently submitted to us. If a person, not a pharmaceutical chemist, puts up as a proprietary article a medicine compounded from the prescription of a physician, does he thereby infringe the Act? He evidently retails, dispenses, and compounds a medical prescription. The only difference is that he does it for a thousand persons, perhaps, instead of for one. Until recently it was supposed that the saving clause as to "patent medicines" protected such business, but in view of recent developments on this side this is now doubtful.

One other point in connection with this legal privilege deserves attention. At the recent prosecutions in Dublin, the Society's solicitor stated that the proceedings were instituted by the Society for the protection of the public against the danger of ignorant and unqualified compounders; but in the course of the trial it was deposed in evidence that Mr. Furlong's assistant, who actually compounded the prescription, was unqualified, and that Mr. Best, whose employers were eventually fined, was a fully-qualified pharmaceutical chemist. The public may fairly ask how are they protected by an Act which seems to allow such an anomaly as this.

WHOLESALE RESEARCH.

THE recent meeting of the British Pharmaceutical Conference provided an object-lesson to the retail druggists of the country which deserves some consideration beyond the passing references made to it in an *ex-officio* fashion while the meeting was proceeding. We allude to the very large share taken in the proceedings by the wholesale section of the members. Out of twenty-three contributors of papers (ranking associated authors as one each) twelve were directly connected with wholesale or manufacturing houses, and in that capacity had ascertained the facts which they were enabled to place before the meeting. The President himself was a manufacturer of chemicals; several of the most

animated discussions were carried on by the wholesale men almost exclusively, and retail pharmacy, except as audience, was at a considerable discount. It would be bad for the Conference if it had to rely for its pabulum solely upon retailers, for it is questionable if they have the opportunities, which chemists attached to wholesale houses possess, of critically examining commercial medicinal products as they are supplied for distribution to the consumers. The papers by Messrs. Brown, Hodgkin, Naylor and Umney, for example, were such as involved facilities which are but rarely within the reach of retail pharmacists. Yet the subjects of these and other similar papers have a direct influence upon pharmacopœial standards, and are, therefore, of importance to medicine and pharmacy. Up to the present time the Conference has been fortunate in securing this practical assistance from wholesale chemists without the intrusion of the advertising element, which is so objectionable to many. The fact that an author is generally known to be associated with a particular house is, with the appearance of the author, sufficient advertisement if that were aimed at, and it is to be hoped it will remain at that. The matter is recalled to us by an incident which happened at the recent meeting of the American Pharmaceutical Association. Mr. F. A. Thompson, who is one of the chemists to Parke, Davis & Co., communicated a paper which consisted virtually of abstracts from his firm's laboratory note-books, and he said so. The statement aroused some caustic criticisms. If we briefly run over the subject-matter of the paper it will be seen that it was one which a wholesale man only could compile. It dealt with assays of crude drugs and qualitative analyses of chemicals received in original packages from different sources in 1891. The following paragraphs are abstracts of some of the more interesting results:—

Belladonna-leaves.—Twelve samples showed an average percentage of 0.4 atropine and hyoscyamine; maximum 0.5, minimum 0.27 per cent. In 1890 the average was only 0.33 per cent.

Belladonna-root.—Average of total alkaloids, 0.69; maximum 0.9, minimum 0.48 per cent. In 1889 the average was 0.57, and in 1890 one sample gave 1.1 per cent.

Calabar Beans came out very constant, 0.24 per cent. being the average of ether-soluble alkaloids.

Cantharides yielded cantharidin varying from 0.77 to 1.2 per cent.; average, 0.97.

Colchicum-corm was found to be almost uniform in colchicine value—viz., about 0.55 per cent.

Conium-seed.—Nine samples assayed—highest 0.91, lowest 0.17, and average 0.58 per cent. of coniine.

Ipecac-root.—Examined by Dragendorff's process. Emetine—maximum 3.74, minimum 2, and average 2.73 per cent.

Kola nuts had a big range—viz., from 0.72 to 2 per cent. of caffeine and theobromine; average, 1.26 per cent.

Stramonium.—Eleven samples of leaves showed an average of 0.38 per cent. of total alkaloids—highest 0.47, lowest 0.32—and fifteen of seeds an average of 0.35 per cent.; the variation here being wider, however—viz., from 0.17 to 0.5 per cent.

Chemicals.—Amongst the results reported we note variation in the melting-point of atropine sulphate. Some samples melted about 183° C., others fully ten degrees higher. The latter contained bright shining crystals, which appear to be characteristic of mixtures of atropine and hyoscyamine, which the high-melting samples were. Quinine sulphate was found to vary much in water-content—viz., from 6 to 16 per cent., or an average of 11.74. These were mostly of German manufacture. American quinine contained 16 per cent. of water of crystallisation.

That such information as the foregoing is of direct practical value to retailers is obvious, and no excuse is necessary for communications of the kind being made to such representative bodies as the British Pharmaceutical Conference and the American Pharmaceutical Association. It is one means

of tapping the very large volume of research which is annually done in manufacturing laboratories, and medicine and pharmacy will be the better if such results continue to be freely published. Fortunately, in this country we do not face the difficulty which has beset our American brethren, as our authors do not, as a rule, insist upon their firms being mentioned in their papers, and if they do, the spirit of their audiences is such that the procedure is rather to their detriment than otherwise. It is never good policy for anyone to make it obvious that he has "an axe to grind," and British pharmaceutical sentiment is strongly opposed to that being done in public meetings.

THE SHOP HOURS ACT 1892.

THIS ACT, which became operative on September 1, replaces in the statute-book the Shop Hours Regulation Act of 1886 in a permanent and more perfect form. The latter measure had to be re-enacted from year to year. The Act now in force provides that no "young person" (that is, a person under the age of 18 years), may be employed in or about a shop for a longer period than seventy-four hours, including meal-times, in any one week. It further specifies that if any such young person has been employed in any factory or workshop as defined by the Factory and Workshop Act, 1878, he or she may not be, to the knowledge of the employer, employed in or about a shop for a longer period than will, with the time in the factory, complete "such number of hours." [It is presumed that the Legislature meant to limit the total working-hours of the young person to the sixth part of the seventy-four hours per day, but they have expressed themselves in a strangely confused manner in this section.] A shop is defined in the Act to mean "retail and wholesale shops, markets stalls, and warehouses in which assistants are employed for hire," and includes licensed public-houses and refreshment-houses of any kind. For every infraction of the Act the employer is liable to a penalty of 1*l.*, but he may transfer his liability to some other person if he can prove to the satisfaction of a Court that he himself used due diligence to ensure obedience to the Act, and that it was infringed without his knowledge, consent, or connivance. Offences are to be prosecuted and fines recovered as under the Factory and Workshop Act, and county and borough councils may appoint inspectors to execute the Act. All shopkeepers are to exhibit a notice in their shops in a conspicuous position referring to the Act, and stating the number of hours in the week during which a young person may lawfully be employed in that shop. Nothing in the Act is to apply to a shop when the only persons employed are members of the same family, dwelling in the building of which the shop forms part or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

COMMENTARY.

IRON IN BONE BLACK.—Some remarks were made at the Conference meeting, during the discussion on Mr. Hodgkin's paper, on the peculiar fact that after treatment with mineral acids, animal charcoal still contains iron, which is dissolved out by such things as alkaline citrates. In this connection we recall a recent communication to the *Chemical News* by Mr. B. Terne, in which he stated that bone-black does not yield up its iron to solutions of citric acid—anyway, not when a 0.1 or 0.25 per cent. solution of that acid is exposed for twenty-four hours at nearly 100° to bone-black containing as much as 0.5 per cent. of iron. In fact, he finds that fresh, sugar-house bone-black removed all the iron from citric-acid

solutions previously rendered dark yellow by the addition of one-tenth per cent. of that metal. It seems curious that an alkaline citrate can do what free citric acid cannot. How is that explained?

THE ACTION OF THE SYNTHETIC QUININES—It is known that MM. Grimaux and Arnaud have prepared three forms of synthetic quinine—viz, methylic ether of cupreine (methyl-cupreine), ethylic ether of cupreine (ethyl-cupreine or quinethyline), and propylic ether of cupreine (propyl-cupreine or quinopropylene). The physiological action of these compounds has now been tested by M. Laborde (*Répertoire de Pharmacie*), who found that they all possessed physiological properties similar to those of quinine. They are antipyretic and analgesic in varying degree. Their action becomes more pronounced in proportion as the substituted group belongs to a higher series. Cupreine is the least active, then quinethyline (the hydrochlorate of which is sufficiently soluble for hypodermic injection), and quinopropylene is the most powerful of the three. The latter reduces the temperature of the human body four degrees within an hour, and produces also convulsions of an epileptic character.

PROTEID HYDROCHLORIDES.—Dr. Lockhart Gillespie, of the Edinburgh Royal Infirmary, in a paper to the British Medical Association, states that proteids have a weak affinity for hydrochloric acid, and although the combination is by no means strong he suggests that the compounds should be called proteid hydrochlorides. If no free hydrochloric acid be present these bodies strike no scarlet colour with Günzberg's vanillin phloroglucin, with Boas' resorcin, or with Möhr's sulphocyanide reagent. They lose none of their acidity on evaporation to dryness, unlike the free acid. They have however, the same saturating power as the original hydrochloric acid. The percentages of acid to proteid are as follows:—In the case of albumen 1 to 7.5, acid-albumen 7.5 to 9, proto-albumose 11, Deutero-albumose 13, and peptone 17 to 20. Dr. Gillespie considers that during the process of digestion when proteids reach the stomach, the hydrochloric acid is secreted and combines at once with them. Until the albumen molecule combines with at least 7.5 per cent. of acid, it still has the properties of albumen; above that percentage it behaves like acid albumen. This in time splits up into the smaller molecules of proto-albumose, each of which has 11 per cent. HCl attached to them, and so in like manner the proto-albumose divides into Deutero-albumose, and that into peptone.

LIVERPOOL CHEMISTS SHOULD READ ALPE'S "HANDY BOOK."

THE Somerset House officials have been busy in Liverpool during the last few days. Fines have been imposed on several chemists for non-compliance with the Medicine-stamp Acts. Among the articles purchased have been mixtures put up by chemists for bowel complaints and cholera. Three or four chemists have suffered for offering effervescent antipyrin with labels representing the article as a remedy "for nervous headache, &c." Others were brought to book in regard to infants' preservatives, and one for a tic mixture. In another case, a chemist sold fluid extract of sarsaparilla, which was declared on the label to be good for curing certain diseases. This, the authorities said, rendered it liable to stamp duty. The chemist claimed that it was a B.P. article, and thought it was therefore exempt. He was let off this time with a caution. Another chemist was asked for sixpennyworth of antibilious and liver pills, which he tendered in a box of the usual style, with label stating that they would "correct irregularities." The authorities are correcting this irregularity. One sold a bottle of specific duly stamped, but the stamp was not over the cork, and he has had an intimation that it must be properly stamped in future.

NOTES ON THE RIDDANCE OF WEEVILS BY A DEAD LOBSTER.

By ALBERT J. SALMON, Lucea, Hanover, Jamaica.

RATHER a funny subject to write about, and although not pharmaceutical, I think it of sufficient importance to call your attention to it.

Nearly three years ago I experienced great difficulty in keeping certain substances from the ravages of weevils, which are well known for destroying grain. Thousands of these pests, consisting of different kinds, would, in a few days, destroy any fresh supply of seeds, roots, and farinaceous substances; in fact, I had to abandon the keeping of some of these articles.

I spoke to several persons about my grievance, and a friend advised me to hang up a dead lobster in the store.

A dead lobster? Why, what an absurdity! What effect would it have on thousands of these voracious insects? However, I thought it would do no harm to carry out the suggestion.

A live lobster was procured, its appendages tied together, a string passed around the body, and my would-be deliverer hung up in the open air and under a tree. Eight weeks of sun and rain "cured" it. It was drained of its contents, free of all smell, and hung up in the store.

Within a few weeks I observed several moths hovering about, and on opening some of the jars, &c., containing the articles, I found the same kind of moths in them. I had very often seen them, but took no special notice of them. They and the weevils quickly forsook their homes, and ever since I have been able to keep the articles in good condition.

I cannot account for the effect this odourless and empty-shelled crustacean has had on these insects, but it has undoubtedly cured the evil.

Such articles as cattle-food, &c., I now keep in a covered tin with a few toes of the lobster strewed in it.

HOW INDIARUBBER TEATS ARE MADE.

THE manufacture of indiarubber teats is said to be one of the most interesting parts of the indiarubber trade. Girls are largely employed in it, as delicate fingers are a necessity. Three kinds of indiarubber are used in making teats—viz., white, brown (or maroon), and black, those sheets with the fine parallel lines being preferred. These lines are known technically as "print," and are imparted to the rubber by mechanical means, impression-plates being used for the purpose. After the sheets are so printed, they are heated in order to shrink them, and then given to the nipple-cutters, who may cut several sheets at once, using a very sharp die. The pieces, when cut, are, for small teats, nearly heart-shaped; for large ones, cone-shaped. In the former the seam extends from the bottom up one side and just over the crown, the other side being seamless; while in the latter the seam completely divides the teat. Small teats are, therefore, made in one piece, and large ones in two pieces. To cut the latter two sheets are laid together with the print inside. The natural stickiness of the stock holds these pieces together, which helps materially in the making-up.

After the pieces have been delivered to the makers, the next process is cementing. The pieces are neatly laid in piles, and then, by means of a small brush, painted with a cement made of "mixed-sheet" dissolved in naphtha. They are then spread upon tin plates to dry over a small steam-oven.

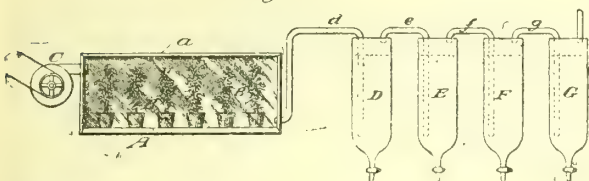
Next the flange at the lower end of the teat is made. For this purpose the cement-brush is again brought into requisition, and the lower end cemented. When dry, the operator with the right thumb presses firmly on the lower edge with an upward motion. This turns it over a little, and, when continued around the stem, makes a small ring at the lower end, a continuation of which brings out the flange. Large teats are cemented, seamed, and flanged, and then turned inside out, so as to bring the print outside. When finished the teats, moulds, &c., are packed in shallow pans half-filled with talc, then filled up with talc and run into the

heater. After this has been done, each worker gets her own lot to sift, and has to remove the teats from the moulds. There is a knack in doing this which only the workers know. The teats are next thoroughly washed and cleaned with potash solution. Then comes the punching of the holes in the crown. This is done by hand. Small punchers are set in standards at each table. The teat is placed upon the punch and hit firmly with a small wooden mallet. For a finishing touch the girls take them again in hand, pack them in paper boxes, and the teats are ready for market. The girls employed take very great care of their finger-nails. These before all other tools are a necessity. If brittle, the utmost care in trimming is taken, and they are washed, scrubbed, and oiled with daily solicitude. A cracked nail is a calamity, as no seaming at all can be done until it is grown to the proper length.

A NEW PERFUME PROCESS.

MR. ROBERT A. CHESEBROUGH, of vaseline fame, has patented a process for extracting perfumes from flowers. The peculiarity of it is that the flowers are not destroyed, but as they grow the perfume-laden air of the conservatory is drawn through some absorbent, such as spirits, whereby, Mr. Chesebrough says, we obtain a perfume free from the contaminating odours which always accompany plucked or crushed flowers. The apparatus is shown in the subjoined sketches. In fig. 1 we have the plant-enclosure, A, which has a glass top and front, a. The plants are represented

Fig 1



by B, the blower by C, and the receiving-vessels by D, E, F and G. The height of the liquid in the vessels is represented by a dotted line, the air being discharged from pipes d, e, f, and g. Fig. 2 is a top plan of the enclosure. Here the con-

Fig 2



servatory is represented by H, the enclosures of the flower-beds by A', the passage-way by a', and the blower and the receiving-vessels by the same letters as in fig. 1.

When the apparatus is to be used it is securely closed and all the parts properly connected; then the blower is set going, and the perfume-charged air heavily laden from the enclosure is first passed through the liquid in the receiver D, which absorbs most of the perfume; then into the next and next, the last receiver G being filled with distilled water, for the purpose of absorbing any alcohol and perfume which may be evaporated from the preceding vessels. When growing plants are employed, the fresh air supplied to the plants and the sunlight through the glass portion of the enclosure will keep the plants in good condition, the necessary moisture being supplied from below, so that the process may be continued throughout the natural life of the plant and the perfume will be of the most delicate nature.

These particulars we take from the patent-specification lodged at the Washington Patent Office; but to what extent the scheme is workable we do not commit ourselves. From a hundred rose-trees it will take a lot of drawing, we judge, to get a pint of rose-water.

AT THE COUNTER.

FLORES ANTHEMIDIS were supplied by a Peckham chemist when "camphor wild flowers" were asked for, and the conf. arom. bottle met the demand for "automatic confession."

"PENNORTH O' NITER BALLS, and d'you ha' to swaller the spettle?" This was asked at the counter of Messrs. Ballard & Co., Farringdon, Berks.

FROM Mr. G. E. Crick, Malden, Essex: "Please I want a bottle of your whooping cough emigration."

THE following prescription was dispensed last week in the East Dulwich Road:—

1*℥*. Sweet nitre.
1*℥*. Lungosajum.

Twopence paid for ingredients; nothing for translation.

THIS recipe, which reaches us from the Mile End Road, may be of value. It seems to us that in somewhat larger supply it would be as useful "for a sweetheart unkind." "F a horse unkind 10 drops hotral roses, 10 drops conealed oil lavender, 10 drops nightrea, on half dram swek last of musk."

"AMONGST other inquiries this week," says a Leicester correspondent, "I find the following:—Oil of varments, salts of sorrow, sweet essence of summer, harmonium, ever-fizzing magnesia. So far it has been plain sailing, but when a lad came in for a pennyworth of hi-tiddley-hi-ti's, I felt nonplussed. Is this some new kind of sweetmeat?"

MR. W. H. JOHNSON, of Salford and Oldham, tells us of a customer whose financial ingenuity is worthy of record. Day after day he sent for the following articles, one being purchased each day:—

1 oz. bismuth. carb.	..	..	..	d.
1 oz. liq. potassæ	..	..	..	8
4 oz. tinct. sennæ co.	..	..	..	1
One pennyworth pulv. tragac. co.	..	..	..	9
2 oz. sp. ammon. arom.	..	..	..	1
	..	..	..	6

The prices were quoted from a store list published in the neighbourhood. Having completed these purchases our economical friend then sent back the whole of his medicinal collection with the following prescription:—

Bismuth. carb.	..	..	..	..	3 <i>℥</i> .
Liq. potassæ	..	..	..	..	5 <i>℥</i> j.
Tr. sennæ co.	..	..	..	..	3 <i>℥</i> j.
Pulv. trag. co.	..	..	..	..	gr. iv.
Sp. ammon. co.	..	..	..	..	3ss.
Aq. menth. pip. ad	..	..	..	..	3 <i>℥</i> j.
Ft. mist.	3ss.	ter die			

—with the request to have it made up from that stock, and charge for the trouble.

THE west-end of Princes Street, Edinburgh, is supposed to be enlightened and its *habitués* cultured. Anyway, it is not long ago that a gentleman entered a pharmacy there, asked for a box of Beecham's pills, and tabled a guinea! The chemist deploras now that he gave a sovereign in change.

AT the counter in New Zealand means money. The Wellington correspondent of *Chemist and Druggist of Australasia* says: A half-caste went to a chemist's shop in Wellington a few days ago and asked for cotton wool to put in his ear. When asked how much he would have, said, "Oh, give me a pound's worth," and, suiting the action to the word, placed a 1*ℓ*. note on the counter. It is needless to say he contented himself with a much smaller package.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

MANUFACTURE AND PROPERTIES OF PYROGALLIC ACID.

P. CAZENEUVE has reported to the Academy of Sciences that on adding to gallic acid double its weight of aniline, the mixture coagals abruptly into a mass, with a rise of temperature. On the application of heat aniline pyrogallate is obtained in long, unstable crystals, from which the aniline may be removed by cold benzene and toluene, leaving pure pyrogallol. He also states that the melting-point of pyrogallol is 132° (not corrected), and not 115° as stated by the text-books. Compare with this vol. xl. page 773.

ALKALOIDAL REACTIONS.

THE following reactions are described by D. Vitali, and are referred to more fully in the *Journal of the Chemical Society* (lxii., page 755):—

Hydrastine, a small crystal, placed on a porcelain capsule and covered with concentrated sulphuric acid (0.5–1 c.c.), turns yellow, and, on stirring, the liquid acquires the same colour; on adding a small fragment of nitre (an excess must be avoided), the colour changes to a more or less intense brownish yellow. Add solution of stannous chloride drop by drop, and the solution acquires a magnificent reddish-violet colour, the intensity of which depends on the amount of alkaloid present. The coloration is not destroyed on dilution with water.

Beberine turns blood-red when treated similarly with concentrated sulphuric acid and nitre, the colour changing to green on the addition of stannous chloride.

Codeine turns dark brick-red when alcoholic potash is added to its solution after treatment with nitric acid, and coffee-coloured when further treated with sulphuric acid.

Narcotine acquires an orange colour on addition of the potash, the colour changing to violet-red on adding sulphuric acid, and red to yellow on diluting with water.

THE ESTIMATION OF URIC ACID IN URINE.

MR. F. GOWLAND HOPKINS, in a paper read before the Royal Society, suggests a process which depends upon the complete insolubility of ammonium urate in saturated solutions of ammonium chloride. The pure chloride is powdered, and added to the sample to complete saturation. After two hours' standing, the whole of the uric acid separates as biurate of ammonium. The urate is then decomposed with hydrochloric acid, and the liberated uric acid determined by any approved method. In contrast to the well-known Fokker-Salkowski process the separation is rapid and complete. Mr. Hopkins has experimented with permanganate solutions for the titration of the separated uric acid, and finds that accurate results may be obtained by their employment. For this purpose the uric acid is dissolved in 100 cc. of water, with a minimum of sodium carbonate, 20 cc. of strong sulphuric acid being then added, and the solution immediately titrated with one-twentieth normal permanganate of potassium. The addition of 20 per cent. sulphuric acid to the previously cooled solution of sodium urate yields just such a temperature (about 60° C.) as is requisite for a determinate reaction. 1 c.c. of the permanganate solution is equal to 0.00375 gm. uric acid.

PASTEURISING FOOD.

At a recent meeting of the Amsterdam Royal Academy of Sciences, Professor T. Forster read a paper on the action of heat upon tuberculous matter. According to former investigations, by "Pasteurising" (i.e., warming liquids to a temperature of 60° to 80° C. for a short time and cooling them immediately), bacteria of Asiatic cholera and typhoid fever are killed at about 60° . From a hygienic point of view, it is of still more importance to discover what is the lowest temperature at which the bacilli of tuberculosis are destroyed. It is established that tuberculosis is produced by the consumption of milk secreted by tuberculous cows. Meat also, coming from tuberculous cattle, sometimes contains infectious matter. By boiling-heat, indeed, the bacilli of tuberculosis are killed. But if meat is prepared in the usual manner, even small pieces of it are not warmed thoroughly

at 100° C.; milk, on the other hand, changes in taste if boiled, so that most people do not like boiled milk. By a series of experiments recently made, Professor Forster has settled that the bacilli of tuberculosis are destroyed by a temperature of 60° C. acting during one hour, and by the action during six hours of a temperature of 55° C. Higher temperatures than 60° —for instance, 80° , 90° , or 95° C.—destroy the infectious matter in milk from tuberculous cows, if they act during ten minutes; "Pasteurising," however, at 80° during one minute does not hurt the bacilli of tuberculosis.

OLEUM RUSCI, THE SOURCE OF RUSSIA LEATHER ESSENCE.

MONS. F. VIGIER communicates a note to *Repert. de Phar.* on "The Oils or Essences of Birch Employed in Medicine," which consists chiefly of a description of birch-bark tar (*goudron de bouleau*), otherwise known as "Degutt," or "Daget," and employed in medicine under the names of *Oleum betulinum*, *Ol. rusci*, *Ol. Russicum*, *Ol. Moscoviticum*, and *Ol. Lithuanicum*. This tar is made mostly in the provinces of Vladimir, Perm, Viatka, and Kostrovna, in Russia, by a process of rough destructive distillation, the apparatus employed being of a primitive description. A distillation takes twenty-four hours to complete, being commenced at a moderate heat only, which is gradually increased. The tree (*Betula alba*) is stripped of its bark in May, and the bark is left standing until the month of December, which is the period selected for distillation. It is very difficult to obtain the tar in the pure state, as it is commonly mixed with coniferous tars, from which it differs by the characteristic of retaining its fluidity, on which account (as well as for its odour) it is used for currying leather. *Oleum rusci* is distinguished chemically by its yielding on distillation a fifteenth of its weight of a peculiar phenol, which possesses the odour of Russia leather; after this part distils over, a large proportion of terebene distils, and the fraction distilling between 250° and 300° is of a very remarkable dichroic character, being of a magnificent red by transmitted, and bright green by reflected light. The tar contains neither acids nor alkaloids, nor any of the benzene hydrocarbons. The tar is imported into Western Europe in barrels of 150 kilos., and there are several factories in Paris and Cannes where it is distilled with water, in order to produce an essence or volatile oil, which is used by glovers and other makers of fancy leather articles for imparting the odour of Russia leather to their goods. The oil is also used to a less extent in perfumery, and the tar has been used therapeutically in the treatment of certain skin-diseases. The essential oil has a brown colour, but on redistillation it is obtained straw coloured, and this redistilled variety is preferred.

Gazette.

PARTNERSHIPS DISSOLVED.

Bernstein & Leuty, Crutchedfriars, City, drug and chemical merchants.

Farrar, J. R., and Martin, R. W., under the style of B. Martin, Southport, horse and cattle medicine makers.

King & Grant, Woburn Sands, Woburn, and Apsley Guise, medical and surgical practitioners.

Mackenzie & Snape, Welbeck Street, Cavendish Square, W., general medical practitioners.

Retallack, W., and Blackett, F., under the style of Player & Retallack, Great Russell Street, W.C., and elsewhere, medical electricians.

Tutt & Gravett, Worthing, mineral and aerated-water manufacturers.

Watkins, E., Hawkins, T. F., and Thomas, D. R., under the style of Watsons, Thomas & Co., Oxford, chemists and druggists.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Denny, Charles John, Regent Street, W., and Blackwater, Hampshire, physician.

ADJUDICATIONS.

Denny, Charles John, Regent Street, W., and Blackwater, physician.

Vincent, John Coombe, Bristol, brush and comb manufacturer.

BRITISH AND FOREIGN CONSULS' REPORTS.

GREECE.

The Greek Drug-trade The Greek official statistics for 1891 have not yet been published. Those for 1890 which our consul at Athens sends over show a considerable increase in the imports of medicines and perfumery over 1889, but a still larger falling-off in the imports of heavy chemicals. The figures showing the imports of pharmaceutical goods into Greece from various countries are as follows:—

Country	Quinine		Other drugs and medicines	
	1889	1890	1889	1890
United Kingdom	23,888	14,080	51,000	112,000
France	24,364	720	94,000	119,000
Belgium	80*	—	—	—
Germany	44,280	29,984	51,000	69,000
Austria-Hungary	13,694	25,080	123,000	141,000
Italy	13,867	7,363	41,000	43,000
	120,943	77,230	360,000	484,000

Country	Soap and perfumery		Heavy chemicals and acids	
	1889	1890	1889	1890
United Kingdom	49,000	74,000	2,806,000	2,723,000
France	36,000	64,000	3,719,000	394,000
Belgium	—	—	203,000	117,000
Germany	2,000	2,000	155,000	83,000
Austria-Hungary	—	—	174,000	150,000
Italy	—	—	255,000	64,000
	87,000	140,000	7,312,000	3,531,000

Quinine. I can obtain no explanation, says Consul Elliott, of the great decline in the importation of this drug, except that there must have been an over-importation in 1889. In view of the simultaneous increase under the heading *Other medicines and drugs*, I surmise that its place may have been taken by antipyrine and similar preparations, but I can obtain no confirmation of this conjecture. It has been suggested to me that sanitation has improved, and this is no doubt true as regards the capital and some other towns; but the bulk of the quinine is consumed in the low-lying country districts. The greatest decline was in the quinine brought from France, the quantity having fallen from 24,364 oz. in 1889 to 720 oz. in 1890.

Chemicals. Although including acids, which obtained a reduction of duty, chemicals show a diminution of 45 per cent., the decrease in British imports being, however, only 18 per cent.

Soap and Perfumery. A small trade, shows an increase. The duty on high-class soaps is nearly prohibitive, even with the reduction stipulated by the French Convention.

JAMAICA.

Manufacture of Lime-juice. The crude lime-juice is obtained either by running the limes through an ordinary cone mill, or by placing them in a squeezer especially adapted to the purpose, which is the simpler and more usual plan.

The juice is then clarified by straining and filtration, when some foreign substance is added to prevent decomposition of the vegetable matter. In this state most of the juice is shipped from the island.

In order to concentrate the juice, it is strained from the seed and pulp, placed in a copper battery and boiled on the same principle as sugar, taking care not to scorch or burn it, as that destroys the acid. The more densely the juice is

concentrated the more valuable it is; but it is not advisable to go too far, as it burns easily without forming a crust on the copper. No iron vessel must be used, as the iron turns the acid black.

In the year which ended March 31, 1891, the amount exported was 53,884 gallons, of which 44,492 gallons went to the United Kingdom, 110 to Canada, and 9,282 to the United States.

The average valuation in the export list is 20 cents per gallon, but the price for the raw juice ranges from 18 to 30 cents, according to the supply and the demand, while the concentrated juice sells according to the percentage of citric acid it contains.

Substantially the same process is adopted in the manufacture of sour-orange juice, which, when concentrated, is valued at from 45 to 50 cents per gallon. Of this 1,102 gallons, the entire amount manufactured during the period above stated, was exported to the United States.

RUSSIA.

The Naphtha Business. The yield of petroleum from the Baku fields is larger this year than it has ever been before, and the existing works are scarcely able to cope with the supply. The house of Chibalaev are constructing near their factory in Baku an immense underground reservoir capable of containing 5,000,000 pounds of naphtha. This reservoir is not to be rectangular, but to take the form of a reversed cone or funnel shape. The firm of Nobel are constructing a still larger reservoir, which will have a capacity of 6,000,000 pounds. The walls will be lined with zinc, and the foundation will be a bed of water, to be obtained by boring.

Mud Baths. A curing establishment of very large dimensions is being brought to completion on the shores of the Kujalnik Liman, an excessively salt and shallow lake distant about nine miles from the city of Odessa, where hot and cold mud baths are administered to persons suffering from rheumatism, skin complaints, and other such like diseases. The effects of these baths are reported to be of great value, and they will, no doubt, in time become of world-wide fame.

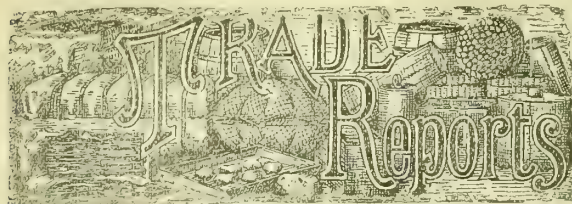
Quicksilver. The only quicksilver mine, situated in the South-Western part of Russia, near Nikitofka station, on the Kursk-Khar'kov-Azov line, Bakhmoot district, in the province of Ekaterinoslav, shows an output of 50,114 tons of ore, or a decrease of 8,404 tons of ore extracted, as compared with 1890. Of this quantity 45,547 tons were kilned, producing 314 tons of quicksilver, 30 tons more than in 1890. At present 350 men are employed, of whom 226 work underground.

The Liquorice Industry. More liquorice is exported every year from the Caucasus (85,000 lb. from Batoum in 1891), and the export seems likely to increase. It is chiefly got in the district lying between Elizavetpol and Hadji Kabul, where it is brought by the natives to depôts established for its reception by the different firms during the winter months, no difficulty being experienced in getting the quantity required. The price to the natives on the spot is about 25s. per ton for green root, and for wood delivered at a railway station 30s. to 32s. per ton. The green root is reckoned to yield about 45 per cent. of dry. With the exception of a few tons all the liquorice exported goes to America.

British Liquorice Works.

In the province of Transcaucasia there are two British factories for the preparation of liquorice-root—those of Mr. Bliss, at Elizavetpol, and Mr. Urquhart, at Udjari—which are employed in collecting, drying, and pressing by hydraulic presses liquorice-roots. Liquorice-paste, which has begun to be manufactured in Mr. Bliss's factory, and is about to be in that of Mr. Urquhart, has not yet been exported from the Caucasus. The number of hands employed by each factory varies from 50 to 300, according to season, at wages varying from 8d. to 1s. 2d. per diem; and at outside collecting stations some 300 more, the greater number being employed in autumn and spring. This does not include the regular staff of two or three engineers, about six machine hands, twenty to twenty-five clerks, and about sixty hands. Nearly all the inhabitants of the district find employment in digging the root at seasons when there is no other work to do.

* Probably all German quinine.



Notice to Retail Buyers:—It should be remembered that the quotations in the section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., September 7.

The London Markets.

ACETANILID.—The price has been lowered to 1s. 7½d. per lb. in bulk and 1s. 10½d. to 2s. 2d. per lb. for bottles, according to quantity and packing.

ACID (CITRIC).—Business was done yesterday at 1s. 5½d. per lb. in the second hand. B.P. acid can no longer be had from the manufacturers at that figure, and is held nominally 1s. 6d. per lb. The following statistics are certainly noteworthy as an indication of the position of the drug:—

Imports of Lemon-juice into London.

	1889	1890	1891	1892
	Pipes	Pipes	Pipes	Pipes
August	189	156	74	130
Eight months	3,474	2,945	1,516	1,825

Exports of Citric Acid from London.

	1889	1890	1891	1892
	Cwt.	Cwt.	Cwt.	Cwt.
August	411	712	355	723
Eight months	3,918	4,371	3,142	5,222
September-October	1,163	1,135	1,150	—
November-December	975	701	878	—

ALCOHOL.—German potato-spirit is dull of sale, and offering at 9d. per proof gallon "c.i.f." terms (in bond), for best brands by 2,000 gallon contracts.

ANISE.—The season for star-anise in China is now at an end. The new crop is due in October, and is already being offered for shipment at the rate of \$32 per picul. *Russian* seed is tending rather firmer, with very little on offer.

BALSAM (CANADA).—Prices are very low now, new crop, bright and thick being offered at 1s. per lb. c.i.f. terms (in barrels) from New York.

BALSAM COPAIBA.—No genuine *Maranham* is at present to be had in New York, and the other varieties are said to be selling rapidly as consignments come in. *Pará* offers at 1s. 7d. per lb. c.i.f. in 1 cwt. kegs. In Liverpool the available stock of *Maranham* has recently been cleared at higher rates. Since then some arrivals have taken place, but these have also been sold at 1s. 7d. for cloudy and 1s. 8½d. per lb. for good bright.

CAMPHOR (REFINED).—The German makers, it appears, have not followed the recent advance in price of their English colleagues; one of them "has no quotations," another offers at 1s. 6½d. per lb. net terms.

CANARY-SEED.—A hundred bags Turkish canary-seed sold at 82s. 6d. at the end of last week. Since then the market has been quiet, but very steady, at 85s. to 90s. for *Spanish*, and 82s. 6d. to 85s. for *Turkish*.

CARAWAY.—*Dutch* seed has advanced to 24s. or 24s. 6d. per cwt. ex warehouse for good bright quality. A considerable part of the supply has been secured by speculators, and prices are still tending higher.

CASCARA SAGRADA.—An advance is reported to have taken place on the Pacific sea-board, and it is asserted that the best parcels offered from there have been bought up by speculators. This year's crop of fine quality is now offered from New York at 30s. per cwt. c.i.f.; last year's at 34s. per cwt. "c.i.f." terms.

CEVADILLA-SEED continues to advance, and the price of veratrine has thereby been seriously affected.

CHLORATE OF POTASH.—Has advanced considerably during the week. From 6½d. up to 7d. per lb. has been paid on the spot here, and 6½d. per lb. f.o.b. in Liverpool.

CINCHONA.—The better position of the bark and quinine markets were probably the cause that a rather larger quantity of cinchona than usual was put up for sale on Tuesday. The catalogues comprised:—

	Packages	Packages
	1,214 of which	1,011 were sold
Ceylon bark	284	207
East Indian bark	76	76
Java bark	184	184
African bark	536	476
S. American bark	2,294	1,984

The small quantities of East Indian, as compared with Ceylon bark, which have been offered recently are accounted for by the fact that our imports of Indian bark take place almost entirely in the first half of the year. African bark has now become quite an institution at our auctions. It keeps coming over in quantities much in excess of the expectations first entertained, and most of it is of fairly good quality, though generally damaged before shipment. At to-day's sales the holders of bark generally were very firm, and about 15 per cent. of the total offered was bought in at high limits. Much of the bark was of good quality, and there were several very good lots of *Succirubra* and *Ledgeriana* from Ceylon. The average unit value was slightly above that of our last sales—viz, 1½d. per lb., and for a few good parcels higher rates were occasionally paid.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	171,518
" Stuttgart and Frankfurt-o-Main works	60,707
Messrs. Howards & Sons	37,518
Agents for the Brunswick factory	31,335
" Paris (Pelletier) factory	24,090
" American and Italian works	22,259
" Auerbach factory	21,876
Sundry druggists	23,355
Total quantity sold	392,658
Bought in or withdrawn	72,225
Total quantity offered	464,883

It should be well understood that the quantity of bark purchased affords very little clue to the quantity of sulphate of quinine represented by the purchases of each firm. The following prices were paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary woody to fine bright quilly stem and branch chips, 1½d. to 3½d.; one parcel, 4d.; dull chips and shavings mixed, 1½d.; good to fine strong shavings, 2½d. to 4d.; dust, 1½d. to 1½d. per lb. Grey varieties: Very thin and poor to good strong quilly stem and branch chips, 1½d. to 4d.; dusty root, 3½d. to 3½d. per lb. Yellow varieties: Dull small and dusty branch chips, 3d. to 4d.; good strong quilly branch and stem chips, 5½d. to 6½d.; good bright root, 6½d.; dust, 2d.; broken quill, 4½d.; low Calisaya chips, 1d. to 1½d. Hybrid varieties: Ordinary to fair quilly stem chips, 2d. to 3½d.; fair root, 3½d. to 4½d. per lb. *Renewed.*—Red varieties: Good to fine quilly branch and stem chips, 2½d. to 4d.; ditto spokeshavings, 2½d. to 4½d. per lb. Common weak to fine strong quilly grey stem chips, 2½d. to 7d. per lb. Fair to fine bright yellow stem chips, 5½d. to 9d. per lb. Hybrid stem chips, 3½d. to 4d. per lb.

EAST INDIAN CINCHONA.—*Original*: Partly damaged dull quilly mixed chips, $1\frac{1}{2}d.$ to $2d.$; damaged root, $2d.$ per lb. Dull to fair quilly grey stem and branch chips, $2\frac{1}{2}d.$ to $3\frac{1}{2}d.$; damaged ditto, $1\frac{1}{2}d.$ to $2d.$; dusty root, $3d.$ per lb. Fair yellow stem chips, $4\frac{1}{2}d.$ to $5\frac{1}{2}d.$ per lb. Hybrid chips, $2\frac{3}{4}d.$ per lb. *Renewed* red stem chips, $3d.$ per lb. Good quilly grey stem and branch chips, $6d.$ to $7d.$ per lb.

JAVA CINCHONA.—Yellow dusty stem chips, $3\frac{1}{2}d.$ to $4d.$; good ditto shavings, $6d.$ per lb.

AFRICAN CINCHONA.—Bold, partly broken, and irregular red quill, $3d.$ to $3\frac{1}{2}d.$ per lb.; damaged ditto, $1\frac{3}{4}d.$ to $2\frac{3}{4}d.$ per lb.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian Calisaya, in rather irregular brown to fine bold silvery quill, $5\frac{1}{2}d.$ to $8\frac{1}{2}d.$; chips, $3\frac{1}{2}d.$ per lb.

The total exports of cinchona from Java during the month of August were 490,000 Amsterdam lbs., against 678,000 lbs. in August, 1891. The following results of sales show the general tendency of the auctions:—

	Per cent. s.2.	Per lb.
20 bales Original succirubra shavings..	146	sold at $1\frac{1}{2}d.$
13 " " " stem chips	140	" $1\frac{1}{2}d.$
29 " " officialis chips ..	222	" $3d.$
21 " " succirubra " ..	232	" $3d.$
33 " Renewed officialis " ..	361	" $4\frac{1}{2}d.$
15 " " succirubra " ..	252	" $4d.$

CLOVES.—Zanzibar cloves for shipment have been a little firmer this week, with sales at $2\frac{1}{2}d.$ per lb. for January-March shipment. At auction Zanzibar cloves were quiet but steady with small sales at $2\frac{1}{2}d.$ to $2\frac{3}{4}d.$ per lb. for medium to fair. Common to good picked Java sold at $4\frac{1}{2}d.$ to $6\frac{1}{2}d.$ per lb.

COCAINE.—Manufacturers are now willing to accept 18s. per oz. for hydrochlorate in bulk.

COCA-LEAVES.—Fine green *Truxillo* are being offered from New York as low as 1s. 4d. per lb. c.i.f. terms. Further arrivals of 49 bales of Java coca-leaves have taken place at Amsterdam.

COCA-BUTTER.—At the monthly auctions on Tuesday 300 2-cwt. cases of Cadbury's cocoa-butter sold at an advance of $1d.$ to $1\frac{1}{2}d.$ per lb., from $13\frac{3}{4}d.$ to $14\frac{1}{4}d.$ per lb. being paid.

COPPER (SULPHATE).—Flat and easier. Good brands may now be bought at 14l. 7s. 6d. per ton in London, or at 14l. 10s. per ton f.o.b. Liverpool.

CORIANDER.—There has been a somewhat better demand for coriander-seed, and holders are not willing to accept less than 8s. 6d. per cwt. ex warehouse.

CUBEBS.—Sixty bags were imported in the *Benalder* from Singapore this week, and ten in another vessel.

CUMIN.—Morocco seed remains neglected, and is obtainable at low prices. Malta seed, however, is scarce and dear, particularly for good quality.

DAMIANA-LEAVES.—In New York there is scarcely any stock left, and the new crop is not due till January. Meanwhile from $9\frac{1}{2}d.$ to $12d.$ per lb. is quoted for common to fine green, and much higher prices are likely to prevail before long.

ERGOT OF RYE.—The market is still irregular, but the general opinion appears to be that there is a fair prospect of an early and strongly-marked turn for higher prices. There are sellers of good *Spanish* at 2s. 6d. per lb., and of old *German* and *Belgian* at 2s. 2d. per lb. on the spot. Some new crop *Russian* ergot, we hear, is being offered at 2s. 6d. per lb., c.i.f. from Odessa, shipment any time up to November.

GLYCERINE.—Prices are still falling, and the makers agents now offer double-distilled (German), S.G. 1,260, at 44s. per cwt., perhaps 43s. for quantities.

GUM ARABIC.—Although genuine Soudan sorts are now coming in more freely in Liverpool, holders are disposed to be firm. From 77s. 6d. to 85s. per cwt. has been paid. *Senegal* gum has sold in Liverpool at 55s. per cwt., but for delivery sellers would be willing to make a reduction in price. For *Brown Barbary* 40s. has been accepted, and in *Niger* arabic business is dull.

HONEY.—It is said that the new crop of *Californian* honey, which is now being shipped from San Francisco, is of exceptionally fine quality, but not very large. Choice white new season is offered at 44s. c.i.f. from New York, or 39s. c.i.f. (Sailer) from San Francisco.

INDIGO.—Estimates of the new season's indigo crop in British India place the output in Lower Bengal at 14,000 maunds, against 30,814 maunds in 1891. This result, it is said, is almost the worst on record. The Behar crop is not likely to be more than half of that of 1891, the North-West will be about the same, and the Benares yield may show a slight excess.

IPECACUANHA.—It is said that there are no sellers now at "any reasonable rates"; 7s. per lb. may still procure a barely fair seron or two of *Rio* root, but most of those who have anything to sell want 7s. 6d. per lb. Our stock of *Cartagena* is nearly all owned by one holder, and he asks 6s. per lb.

JABORANDI-LEAVES.—Good green leaves are scarcely to be had. *Pilocarpine* has been raised to 44s. per oz. by manufacturers.

JUNIPER BERRIES.—The new season has opened in Italy at very low prices—viz., 5s. per cwt., f.o.b. Leghorn, and business has been done at these quotations. The cause of the present low range of prices lies partly in the fact that France, where large quantities of this article formerly found an outlet, is now closed against the drug by a prohibitory duty.

LIME-JUICE.—The arrivals of lime-juice from the West Indies remain rather heavy, over 120 puncheons having been received this week. There are at present sellers, but no buyers, of fair quality at 1s. 4d. per gallon on the spot.

OIL (CASTOR).—Italian oil is offered at 36s. 3d. per cwt., f.o.b. Leghorn, for extra *flore* tasteless Italian; and at 33s. 3d. per cwt., f.o.b., for extra *flore* water-white, September October steamer shipment. "A fair business" (says a Calcutta correspondent, writing on August 16) "has been done at a slight decline, the market closing firmer."

OILS (ESSENTIAL).—Oil of *Star anise* is a little cheaper, business having been put through at 5s. 5d. per lb. c.i.f. for arrival, a price which was recently refused. The crop of *Rosemary* in Spain has been a good one, and the price is now low—3s. per lb.—while *Dalmatian* oil may be had at 1s. 4 $\frac{1}{2}$ d. to 1s. 10d. per lb. according to quality. The prices of French oil of *Lavender* and *Spike* are rising, the news of the almost total loss of the crop, which we gave several weeks ago, being fully confirmed. *Turkish* geranium oil is dearer, and held for 10s. per lb.; for foreign oil of *Coriander*, 19s. per lb. would be taken (which is lower), and oil of *Cubeb* has followed, to some extent, the decline of the raw material, and is offering at 19s. per lb. For French oil of *Pennyroyal* 3s. 6d. per lb. is now wanted, and in America hardly any is to be had at present. The price quoted from New York is 10s. 6d. per lb. English-drawn *Sandalwood* oil may be had at lower prices—viz., 15s. 6d. per lb. English-drawn *Dillseed* oil has been reduced in price.

OIL (OLIVE).—We hear from Leghorn that that market keeps very firm on account of the damage done to the growing crop. At present there is not much demand, but higher rates are generally expected as the season proceeds.

OIL (PEPPERMINT).—There has been a good deal of business done this week in American (HGH) oil for arrival at 12s. per lb., c.i.f. terms. On the spot the market showed a tendency to greater firmness early this week, when 13s. per lb. was the quotation; but the tone is now decidedly easier, and there are sellers (but no buyers to-day) at 12s. 9d. per lb. Messrs. Schoellkopf, Hartford & MacLagan write from New York, under date of August 25:—"The new crop is now being distilled. In Wayne co. it will be above the average, and in quality will be very fine. In Michigan, where the great bulk of the oil is produced, the crop will fall short of last year, but not to any great extent. As to quality, it will also be superior, for, as Japan oil is practically shut out by the duty of 3s. 4d. per lb., this season's oil from Michigan will be much purer than Michigan oil used to be. In fact, this year it will be a difficult matter to distinguish Wayne co. from Michigan oil. As to price, we firmly believe that no

decline from quotations lately ruling would have been seen had it not been for the large speculator, who used to be the great 'bear,' but who for the past two years has been a 'bull,' and tried to control and 'corner' the HGH brand, turning 'bear' again this week, and sacrificing his large holdings of Hotchkiss, at from 11s. 6d. down to 11s. The forcing on the market of from 500 to 800 cases of HGH has, of course, completely demoralised the position; and at present there is no knowing what the result will be. Lower prices, however, seem inevitable."

OPIMUM.—This has been a very quiet week for opium so far as the London market is concerned, and the only business reported in *Turkey* is a little soft shipping at prices ranging up to 8s. 6d. per lb. There are also some few orders for druggists' opium about, but they have not yet been executed. *Persian* is very difficult to obtain, and holders have raised their prices in some instances to 10s. per lb. for fine quality. A Smyrna letter of September 3, which comes to hand as we go to press, says that the purchases for account of the Dutch Government are expected to commence in a few days, and the large holders hope that prices will then advance. The course of the Smyrna opium market during the month of August is thus described:—"With an active trade prices have advanced from 5d. to 6d. per lb. during the month. This rise originated in speculative and obligatory purchases, but was afterwards maintained by direct orders, owing to the improved position of the drug in the consuming markets. During the second half of the month, however, there has been less business doing; and although our dealers are still very tenacious, some small holders have consented to a reduction of 1d. per pound on last week's prices, which were for new Yerli opium 7s. 6d. per lb.; Karahissar, 7s. 2d. per lb.; Yerli talequale, 7s. per lb.; current ditto, 6s. 8d. per lb.; slightly ditto, 6s. 9d. per lb.; and old selected ditto, 6s. 9d. per lb. (all prices f.o.b., and loss in weight included). Should buyers continue to keep off a few days longer, the price may recede another penny or two on these quotations."

ORRIS.—We hear from Leghorn, under date of September 3, that "the position of the market is unchanged, sellers and buyers being unable to come to terms; but we are still of opinion that the former must give way, and think that next week business will be practicable." Owners of new-crop root, which is just about to come to market now, are asking high prices; but until business has actually taken place the position remains very uncertain. The Verona crop is said to be small this season.

QUICKSILVER.—Remains fairly steady without much alteration at 6l. 7s. 6d. per bottle from the importers and 6l. 6s. in the second-hand.

QUININE.—There is not much trade passing on the spot, and though one hears daily of business having been done, it is impossible to trace most of these so called sales. For German bulk in second hand 9½d. per oz. has been paid on the spot, and 9¾d. for December delivery, while for January 10d. per oz. is asked. The manufacturers' prices are unchanged.

RHUBARB is still arriving much in excess of the requirements. This week's imports amounted to 125 cases.

SALICINE.—Rather lower, and dull of sale.

SCAMMONY-ROOT.—A parcel of 30 bales sold in Liverpool lately at 27s. 6d. per cwt.

SHELLAC.—The spot and speculative markets have been firm, with only a little business however. Orange lac has been sold at 83s. 6d. for September TN, and 84s. 6d. for October TN, with buyers rather than sellers at those figures. Auction on Tuesday 1,323 cases were offered, of which 790 sold, (two-thirds "without reserve") with excellent competition at steady prices for second orange. Fine orange was somewhat irregular; button dull and sluggish of sale. The following prices were paid:—ASSL orange, fair pale but caky, 86s. to 89s. per cwt.; second orange, unworked fair to good pale flat, 81s. to 84s.; broken livery to fair flat reddish, 79s. to 82s.; ordinary first button, 90s.; good seconds, 87s. to 88s.; resinous thirds and blocky fourths from 74s. to 40s. per cwt. Since the sales there has been a good private demand for garnet AC, of which 200 cases have been sold at 75s. per cwt. cash terms. Button lac has sold for arrival,

near at hand, and September-October shipment at 88s. per cwt. c.i.f. terms, and for TN November and December delivery 84s. 6d. has been paid.

SILVER NITRATE.—Steady at 2s. 1½d. per oz. for pure.

SODA ACETATE firm and scarce for immediate delivery, although offering at somewhat lower rates for future shipment; on the spot 18l. 5s. has been paid.

SPERMACELE.—American refined has been sold at 1s. 5d. per lb.

SUGAR OF MILK is lower. White crystals or powder, 63s. 6d. per cwt.

TEA.—The China market is a dragging one and there is but little fresh to report. Dealers find the country demand very slow, and retailers appear to be using Congous more and more sparingly in their blends. Pangoongs under 7d. are very cheap, and ought to sell readily enough, but they are out of fashion, and it looks as if there would be a surfeit of almost all but finest Congous this year. Assams are firmer for lower grades, and the terminal market has advanced several points. In sale there has been good competition for common Assams and Ceylons alike, and a distinctly better tone. Fine Assam Pekoes are cheaper, but any stand-out liquoring broken Assam and Ceylon Pekoes are wanted and very firm.

TONQUIN BEANS.—In London the market is quiet, and bold black *Angosturas* are offering at 6s. to 6s. 2d. per lb.; while *Parás* are quoted at 1s. 3d. to 1s. 9d. for ordinary foxy mixed; and at 2s. to 2s. 9d. for fair black to fine frosted. About August 20, eight tons of new crop *Angostura* beans arrived in New York and were all sold, it is said, at the parity of 10s. per lb. to local consumers. The new Pará crop is due in the course of the present month, meanwhile holders are firm at 2s. 10d. c.i.f. for frosted, and 1s. 9d. per lb. for ordinary black beans.

TURMERIC.—There have been small sales of *Bengal* finger at 2Cs., and of fair bulby mixed *China* at 18s. per cwt.

VANILLA.—Reports from Mauritius say that there was no stock left in the island on August 11, and add that "the article will be very scarce this year."

WAX (CARNAUBA).—Yellowish wax is reported to have been sold at 50s. per cwt. in Liverpool.

WAX (JAPAN).—There are now sellers of good pale squares at 37s. per cwt.

Thursday's Market News.

42 CANNON STREET, E.C., September 8.

London. Business has been fairly brisk this week, but without any such sudden alterations in price as signalled the last days of August. The advance in disinfectants is still fairly well maintained, but signs are not wanting that it will be of short duration. Chlorate of potash has suddenly experienced a strong run, due to the discovery that supplies had run very short. Citric acid is a trifle firmer, and so is quinine. Permanganate of potash and carbolic acid maintain their advance; bleaching-powder is even a little dearer still. Sugar of milk is rather cheaper, and we notice that among the minor chemicals the following have recently undergone price-modifications in the manufacturers' lists:—Higher: pilocarpine, veratrine, thymol crystals, all lithium preparations, antimon. tart and hydrokinone. Lower: Soda hyposulph., crude antimony, amyl nitrate, benzoate of ammonium, barium nitrate, bromide of sodium, sulphonol, acetanilid and chloride of zinc. Methyl. ether is also lower. In drugs the principal alterations are in camphor, which is again a little higher in some positions, though lower in others; ipecac., which has further advanced, and peppermint oil (HGH), in which a large business has been done. Cinchona has slightly improved in value. Manna is likely to be at famine price. Chamomiles and saffron are dearer, and so are cascara sagrada and damiana-leaves. New valerian-root is offering at lower rates. Lime-juice is dull and easier. In essential oils, star-anise, coriander, and cubeb oils are lower, pennyroyal, lavender, Turkish geranium, and lemon higher, in

price. In outside articles there is little change. Gambier is dearer, shellac fairly steady, pepper, chillies, soy, and cocoa butter higher. Arabic gums are irregular, and mostly easier. Nutmegs and mace are lower. Gum olibanum, sulphate of copper, linseed oil, rape oil, and cotton oil are also easier.

The Bank rate keeps unaltered at 2 per cent. Bar silver is worth 38½d. per oz. to-day. The Bombay exchange is 1s. 2½d.; Calcutta, 1s. 2½d.; and Shanghai, 3s. 9½d.

Liverpool. We are informed by our Liverpool correspondent that the advance in canary-seed has been temporarily arrested. Bleach is running up nimbly, and seems likely to become dearer still. All Sierra Leone chillies have been cleared off the market. Quillaia is still coming in, and shows no improvement in value. Guinea grains are also lower, with fresh arrivals. Chlorate of potash is dearer, and only obtainable in second-hands now. Castor oil keeps dull, and beeswax remains firm.

New York. Our New York correspondent, writing under date of August 31, states that the tone of the market is good, and that there is a general upward tendency in drugs and chemicals, which in several lines finds expression in slight advances. The cholera scare has caused some of the *Carbolic-acid* dealers to decline orders for the present on the ruling basis, which has advanced to 13c. in drums, in anticipation of an unusually heavy demand. This expectation is justified by the preliminary circular of warning and instructions promulgated this morning by the City Board of Health. In these instructions carbolic acid is the only disinfectant mentioned, to the great disappointment, no doubt, of the agents of the various proprietary disinfectants. Lysol, by the way, has had quite a good reading notice in the way of a cable from Vienna quoting the Austrian Board of Health as giving a most favourable report as to its value in cholera. The cable appeared in several of the dailies. *Peppermint oil* forms the most striking exception to the generally firm tone of the market, and is unsettled, at \$250 for HGH \$230, for Wayne county bulk, and \$215 for Western bulk. The tendency of the market, however, is rather towards firmness, and the tone is somewhat better than at last writing. *Sassafras oil* is scarce, and hardly obtainable, at 38c. Prime grades of *senega* are held in the country at about 30½c., equal to 32c. spot; and here 32c. to 37c. is quoted, but no business reported. *Mexican sarsaparilla* continues scarce and firm, at 16c. to 17c. *Golden seal* is quiet, at 23c. *Jalap* is jobbing at 33c. to 35c., with no export business reported. *Balsam tolu* is in good supply, and the demand exceedingly limited. The last sales from first hands were at 22½c. The European flower crops are engaging attention, and the usual bull reports are being actively circulated. *Angostura tonquin beans* are reported in first hands, though it is related in some quarters that about 30,000 lbs. are still at primary sources and will come forward. On the spot jobbing lots fetch \$225 to \$250, according to holder and quality. *Vanilla beans* are active in a jobbing way at steady values. *Opium* is in good demand, with sales this week of about 30 cases at \$162½ to \$165, and the market has strengthened to \$165 as bottom. This week some 60,000 oz. of foreign *Quinine* has sold at 18½c. to 18¾c. in bulk. *Nitrate of silver* has declined to 53c. to 54½c. *Quickilver* is easier, with sellers at 54c. *Cubeb-oil* declined to \$325. *Shellac* is moving better at improved prices. *Ipecac* is slightly firmer at \$160. *Celery-seed* is offering to arrive at 8½c.; spot stocks are limited, and 17c. is asked. Russian products are generally very firm in tone. The market is reported to be practically bare of Russian *Cantharides*, which are nominally quoted at 85c. to 90c. per lb. About 1,500 lbs. of German *Ergot of rye* have sold at 55c. per lb.; Spanish is held at 60c. to 70c. per lb. *Lycopodium* has been sold at 41½c., since when an offer of 42c. has been refused. *Citric acid* has been reduced ½c. per lb. by the makers. *Cream of tartar* is unsettled owing to competition between the domestic manufacturers. *Spermaceti* has advanced 1c. per lb. and is now held for 32c. to 33c. for block, and 33c. to 34c. for cake.

ACID (CARBOLIC) is still as scarce as ever on the spot, and for 95 to 98 per cent liquid acid from 2s. 3d. to 2s. 6d. is the quotation; one maker, we believe, has been as high as 2s. 9d., but has since come down a little; for early delivery, however, it is possible to buy at 2s. *Crystals*, 39° to 40°, are

quoted at 6½d. to 6¾d.; 34° to 35°, for immediate delivery, at 5¾d., which is slightly dearer.

ACID (TARTARIC).—The market remains very dull at 12½d. for English B.P. acid; and from 11½d. to 11¾d. for other qualities in second-hand.

BLEACHING-POWDER is still very scarce on the spot, at 107. 5s. to 107. 10s. per ton in casks. In Liverpool to-day's quotation is 97. 15s. f.o.b., at which business is said to have been done.

CAMPHOR (CRUDE).—The market is firm but quiet on the spot, 145s. being asked for Japan and 132s. 6d. for ditto August-September shipment. China camphor on the spot has advanced to 140s., and for early arrival 122s. 6d. c.i.f. is quoted, which is rather lower.

CAMPHOR (REFINED).—The German agents will still sell at 1s. 6½d. per lb., net, to-day, but they say that they are not sure that that will be the price to-morrow.

CHAMOMILES.—Belgian flowers have advanced in price. For finest quality of the current crop 67s. 6d. per cwt. is now asked (3s. more than last week), and for ordinary asked to fair quality from 50s. to 55s. per cwt.

CHILLIES are firm, with more inquiry. Common *Zanzibars* have sold privately at 35s. per cwt.

CHLORATE OF POTASH.—There has been quite a rush of orders, and purchases especially for American account have been very heavy. On the spot 7d. has been paid here and 7½d. is now wanted; in Liverpool sales have also been made at 6¾d. per lb., f.o.b. Liverpool, from now up till the end of the year. The manufacturers are said to be over-sold, and to-day 7d., f.o.b., Liverpool is asked.

CREAM OF TARTAR.—Dull at 85s. for powder and 83s. 6d. per cwt. for best white French crystals.

CUMIN-SEED.—A considerable quantity of Malta seed sold last week at 42s. 6d., and since then 45s. has been paid. It is expected that prices will rise further.

GALLS.—China galls have sold at 52s. 6d. per cwt. on the spot for fair quality.

GUM ARABIC.—At to-day's auctions very large quantities were offered. The demand for East Indian gums was rather poor except for siftings, which sold well, while Ghatti gum was also steady. Common to fair soft Cawnpore Amrad drop brought from 29s. to 32s.; ordinary red to fine pale Kurra-chee, 32s. 6d. to 60s.; common to good pale siftings from 21s. to 30s. Ghatti sold at from 20s. 6d. to 53s. for common and dark to fine pale. Australian gum brought from 19s. to 30s. 6d. for common dark to good frosted red; small to good soft bold ambery mixed and pale Cape gum sold at from 43s. to 57s., and good to fine siftings at 35s. to 42s.; very good clean amber Mogadore sorts realised only 75s. to-day, which is rather easier; brown Barbary is worth from 47s. to 52s. for good to fine quality. Genuine Soudan sorts of new import are now offering at 75s. per cwt., but it is expected that that price will hardly be maintained, as there are said to be large quantities on the way to this country, and about 1,200 packages have recently arrived in Trieste.

IPECACUANHA.—Rio root does not seem to be quite so firm to-day. Sales have been made at 7s. 2d. to 7s. 3d. per lb. for fair stout, but there are now sellers at 7s. per lb. for fair quality. For fine plump *Castagena* root 6s. per lb. is said to have been paid, which is comparatively a very high price.

MANNA.—We hear that the new crop has not yet arrived on the market in Italy, and what there is of it is not expected until the middle of September. The rains have spoiled the greater part of the harvest, and the *Gerace* manna is an entire failure. The weather is still said to be very rainy, and this leaves little hope that anything will be saved. Quotations are mostly nominal: one firm here quotes from 247. to 244. 10s. per cwt., c.i.f. terms, for bold new manna.

MERCURIALS.—There has been no change in the price. Vermilion is now quoted at from 2s. 2d. to 2s. 4d., according to quantity.

OILS (ESSENTIAL).—Star-anise oil has sold at 6s. per lb. on the spot and at 5s. 5d. per lb. c.i.f. to arrive. The last

available lot of French *Pennyroyal* oil on the spot has been sold at 5s. 6d. per lb. Italian oils are dearer; for *Bergamot* 10s. f.o.b. was the last price paid. In *Lemon* a very fair business has been done, and now the increased price of 9s. per lb. f.o.b. is asked. *Menthol* keeps steady at 9s. 9d. to 10s. per lb. Further sales of about 50 cases HGH *Peppermint* oil, at 12s. landed terms, for shipment, are reported to-day. Wayne County sells at 10s. 3d. per lb. in London. English oil of peppermint is easier. The season opened at 32s., but from 29s. to 30s. per lb. would buy now. *Lavender*, however, is very dear, and holders ask from 52s. to 55s. per lb. for it. French *lavender* is a very small crop this season.

PERMANGANATE OF POTASH continues to be exceedingly scarce on the spot, and those who cannot wait must (and do) pay 85s. for small and 90s. for large crystals, to second-hand holders. But the combination agents are hurrying forward supplies at 75s. to 80s. (for 10-cwt. lots) for small and large crystals, and when these arrive the second-hand people's innings will be cut short.

QUICKSILVER is slow of sale at 6l. 7s. 6d. from the importers, and 6l. 6s. in second-hands.

SAFFRON has gone up to 28s. 6d. or 27s. 6d. per lb. for good *Valencia*, 25s. to 26s. per lb. for second quality, and 18s. per lb. for Alicante. The agents say that they expect a further advance of at least 50 per cent. before the end of the year, as the acreage planted this year has been much smaller than in 1891.

SOY.—China is a little firmer privately, and 1s. 3d. per gallon has been paid on the spot.

VALERIAN-ROOT.—For old root as much as 58s. 6d. per cwt. has lately been paid, and there is now no more to be had. The new crop is offering at from 37s. 6d. to 38s. 6d. for delivery at the end of this month, and at 34s. for delivery at the end of October. The harvest is said to be a small one, and prices are not expected to fall below the opening rates.

THE LIVERPOOL MARKET.

BLEACHING-POWDER.—In consequence of the active demand the makers have advanced the price almost daily, and now 9l. 10s. is asked in softwood casks. There is every prospect of higher prices.

CANARY-SEED.—There is a temporary lull in the advance in this article, but 82s. 6d. to 85s. is still the value of good bright seed, both *Spanish* and *Turkish*. A parcel of 117 bags of *River Plate* offered at auction to-day, and failed to get even a bid in consequence of its unsatisfactory condition.

CHLORATE OF POTASH.—This has steadily advanced during the week, and now only second-hand parcels are to be obtained at 7d.

COLOCYNTH.—A parcel of fine bold apples has been sold at 1s. per cwt.

OIL (CASTOR).—This is still flat, and moves off slowly at 2½d. to 2⅞d. for good seconds Calcutta, while 2½d. to 2⅞d. is asked for first pressure French.

GUINEA GRAINS continue to arrive steadily, and as low as 20s. has been accepted for a small lot of good seeds.

QUILLATA.—There have been further arrivals, and value of good thin bark ranges from 16l. to 16l. 10s.

WAX (BEES').—Chilian remains firm at 7l. to 7l. 10s. for yellow, and 6l. 10s. to 6l. 15s. for grey. A small parcel of fine yellow *Brazilian* offers at 7l. 2s. 6d.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, September 7.

CONTRARY to general expectation, our market has been well sustained this week. Manufacturers' agents have bought 30 cases, for which they have been obliged to pay full prices—viz., the parity of 6s. 5d. per lb., f.o.b., for ordinary kind of old manufacturing talequale, and 6s. 4d. per lb., f.o.b., for new crop ditto.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of drugs in the port of London on August 31, 1892 and 1891, and to the imports and deliveries during the first eight months of the years 1892 and 1891.

Article	Stocks		Imported		Delivered	
	1892	1891	1892	1891	1892	1891
Aloes ..os & pkgs	6,432	7,476	2,009	1,453	2,679	3,717
" ..gourds	1,077	1,249	—	315	28	241
Anise, star.....chts	197	98	304	425	149	374
Arrowroot .....cks	7,408	6,312	13,708	10,747	9,228	11,319
" ..bxs & tins	417	1,576	1,395	630	1,931	1,249
Balsams ..cks, &c.	1,853	2,248	1,063	1,123	764	1,049
Bark (Cinchona), S.American cases	58	333	27	21	341	46
" ..bils, &c.	25,183	25,963	8,735	7,831	10,043	8,059
E.I., Ceylon, and Java .....os	256	319	215	486	247	450
" ..bils, &c.	18,484	24,447	24,310	30,237	27,838	30,064
Borax.....pkgs	261	261	—	55	—	55
Calumba	713	715	530	123	464	717
Camphor	3,396	5,611	5,153	7,344	6,089	7,335
Cardamoms ..chts	679	470	2,146	1,395	1,911	1,517
Coco. Ind. bgs, &c.	1,032	552	1,098	433	556	156
Cream of Tartar cks	10	16	5	16	5	23
Cubebes .....bgs	65	90	297	106	316	259
Cutch .....tins	2,976	2,879	2,422	1,655	1,815	1,700
Dragon's Blood cchts	123	110	206	129	176	113
Galls, China .....os	1,715	2,266	1,994	1,231	1,908	1,586
Trky & Persn. ....cks	3,303	4,664	3,125	8,010	2,110	7,440
Gambier .....tins	602	959	7,437	6,432	8,379	6,377
Gums—						
Ammoniac pkgs	218	49	273	15	142	29
Antai & Copal pkgs	10,688	6,252	15,261	8,123	10,550	11,330
Arabic.....	11,771	15,915	13,343	16,538	19,094	17,058
Asafetida....	339	396	276	35	457	172
Benzoin	2,481	3,072	1,700	2,390	2,326	2,238
Damar	4,109	5,042	3,081	2,693	3,223	4,239
Galbanum....	31	34	—	19	5	35
Gamboge	187	42	360	170	208	158
Gustasium....	242	165	166	341	51	207
Kino	7	10	10	14	20	37
Kowie .....tins	1,350	1,160	2,344	2,422	2,039	1,999
Mastic .....pkgs	14	32	—	40	17	26
Myrrh	232	441	178	531	336	512
Olibanum	5,211	6,175	6,823	6,711	5,810	4,828
Sandarac	1,061	491	1,444	1,057	917	769
Tragacanth	2,353	4,928	3,910	4,556	5,237	5,052
Guttapercha.....tins	2,746	2,913	1,481	1,792	1,374	1,342
*Indiarubber, E.I.,	252	352	550	790	638	614
Madagascar	151	122	243	221	205	190
S. American	83	83	184	164	152	134
African, &c.	195	241	265	301	305	295
Ipecac. ....cks & bgs	295	275	1,441	787	1,161	763
Jalap .....bils	35	72	317	179	81	217
Lac Dye .....chts	4,905	5,032	—	—	67	62
Nux Vomica pkgs	1,638	692	3,043	1,241	1,875	1,157
Oils—						
Castor .....cks	118	137	422	530	379	549
" ..os	2,171	3,294	2,318	5,765	3,544	4,318
Coccol-nut.....tins	1,639	2,478	2,361	4,667	2,703	3,349
Olive .....cks, &c.	1,267	1,213	2,117	3,351	1,644	2,783
Palm	3	3	56	34	71	38
Rhubarb.....chts	698	503	1,080	623	859	965
Safflower ..bils, &c.	136	278	26	—	135	97
Sarsaparilla.....bils	351	190	826	648	794	765
Senna .....bils, &c.	1,710	2,836	1,244	1,681	2,378	2,756
Shellac, Orange cchts, &c.	27,097	25,740	20,865	17,267	20,529	27,545
Garnet.. ..	7,017	3,126	11,623	5,445	6,539	6,361
Button.. ..	5,581	6,186	5,836	8,155	6,742	7,465
Total cchts, &c.	39,695	35,052	33,324	33,868	33,810	41,371
Sticklac cchts, &c.	280	623	555	200	626	1,842
Turmeric, Beng. tins	64	710	18	—	399	442
Madras, &c., ..	297	151	511	49	331	394
Total .....tins	361	861	629	49	730	836
Vermilion, cchts, &c.	53	23	53	100	26	112
Wax, bees' ..bils & c	1,831	1,505	3,372	2,540	2,393	1,879
" ..sras	1,465	830	2,030	1,144	1,526	1,179
" ..cks & c	42	14	28	6	—	16
" ..oakes	—	—	—	—	—	—
" Japan ..pkgs	586	464	725	76	749	794

* Liverpool stock: Para 582 tons, other sorts 814 tons; total 1,396 tons, against 2,182 tons last year and 503 tons in 1890.



Memoranda for Correspondents.

Always send your proper name and address; we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Opium Questions.

SIR,—Permit me to correct a very obvious error in my letter of last week. The last line should read—

"Marc contained 1.6 per cent. of morphia."

It is clear that the total alkaloidal content must be the sum of the weight actually obtained and of that assumed to have been carried off in solution.

Yours very obediently,

Dover, Sept. 2.

J. F. BROWN.

SIR,—In your issue of August 27 Mr. Linford and Mr. J. C. Umney both give their views on tr. opii B.P., and from their letters I gather that the sole object to be aimed at is the correct percentage of morphia which the tincture ought to contain—granting that the process used shall thoroughly and completely exhaust the marc. If the morphia percentage is the only consideration, have we not liq. morph. hydroch. of a definite alkaloidal strength?

* But does not the therapeutic value of tr. opii depend in no inconsiderable measure on the other constituents of the gum? This being so, I venture to suggest that we are not justified in curtailing the quantity of opium or in augmenting that of proof spirit simply to adjust the strength of morphia to .75 per cent. The process I usually follow for the exhaustion of the opium is essentially the same as that used by Mr. Linford, but instead of adjusting the strength after the tincture is made, I estimate the percentage of morphia in the dried opium, using as a diluent powdered opium of a very low morphia value (4 per cent. only), so that I have a powdered opium of 10 per cent. strength, and at the same time a tincture containing in full the other alkaloids and extractive matter of the B.P. quantity of gum opium.

G. F. MERSON.

20 West Grainger Street, Newcastle-on-Tyne.

"Molecule's" Plan of Campaign.

SIR,—Will you kindly allow me a little more of your valuable space to correct an editorial misconception of the "Plan of Campaign," as sketched in my letter of last week. To see ourselves as others see us is often a fearsome sight, and in your desire to be humorously critical you have credited me with ideas I never saw before, and which I did not intend my letter to convey. Perhaps I was not sufficiently lucid, but I distinctly said the "Association's laboratories," not the Pharmaceutical Society's. Apparently connecting the scheme at all with the Society was its weak point. I expected, and even hoped, to be canterised in your Correspondence columns. I fear your comments will deter any who may see a shade of feasibility in my suggestion from expressing their opinions. From personal experience and the perusal of many letters in your columns, I judge that the benighted vision of chemists leads them to reverse your dictum and say, "Bloomsbury Square simply sits still while chemists undertake the troublesome detail of supporting it." This is not, however, exactly what I make out, and although I have lapsed into the gratuitous weakness of "writing to the papers," I have not reached such a stage of doddering imbecility as to expect Blooms-

bury Square to make my living for me. Many years ago I saw some manuscripts in the handwriting of one of the most famous chemists of the early part of the century; these manuscripts displayed an enormous amount of thought and research, and they were all connected with the production of an infants' food. This was not in my mind when I wrote my "Plan of Campaign," nor has it ever occurred to me that Messrs. Dunstan and Dymond would descend to such investigations as occupied the mind of a chemist called Justus von Liebig. Thanks for your amusing banter; it taught me much, and while I learnt I laughed, but, reluctantly dropping my fancy for the benign smile of the Pharmaceutical Society, I am not yet convinced that my scheme is utterly foolish and ridiculous.

September 3.

MOLECULE. (107/32.)

SIR,—I cordially agree with the suggestions of "Molecule," and hope that he will not be discouraged by the playful remarks in your Editorial Comments on "Plans of Campaign," but rather stimulated to further effort. Similar ideas have been in my mind for months past—in fact, so closely do his opinions correspond with my own in most respects, that some chemists with whom I have conversed on the subject would be inclined to credit me with writing the letter.

One point he has not noticed which should not be lost sight of—namely, that the loss of public confidence from which the chemist of to-day suffers is, to a large extent, due to the offensive and contemptuous manner in which many of the patent-medicine manufacturers, in advertising their goods, caution the public against purchasing spurious imitations offered by unprincipled vendors.

I would suggest that the plan he has sketched could be better carried into operation as a limited liability concern than as a branch of the Pharmaceutical Society. Any undertaking of the kind would have the moral support of the Society, and probably the active assistance of some of its most prominent members, but it would have a greater chance of success if worked by a separate body.

Fancy a series of proprietary articles—sound preparations and fair value—advertised by the Association and simultaneously pushed by 25 per cent. of the chemists (themselves the joint proprietors) in the United Kingdom, and offered at the same price everywhere! Could the medicines fail to sell? If a company with such objects in view were formed I would subscribe to the share capital. Some of "Lymph's" proposals, such as the supplying of drugs and sundries to shareholders, could be advantageously worked in—not, of course, his scheme for devoting a portion of the profits to founding a fund for opposing the action of the Inland Revenue authorities. That would be in the last degree impolitic. Such action, though at times irritating, is in the main salutary, and helps make us sharp.

Yours faithfully,

E. LOVELY.

A New Method for the Estimation of Grape Sugar.

SIR,—Permit me to correct an error into which I inadvertently fell in communicating to your representative the formulæ for the above test. Formula No. 1 should read 69.30 grms. of copper sulphate instead of 34.65 grms., or just double the amount.

The error arose through supposing that taking half the water (500 c.c.) used in making 1,000 c.c. of Fehling's solution and dissolving in it the 34.65 grms. of copper sulphate was the same thing as doubling the copper salt. A little reflection, however, soon makes it evident that such is not the case, for the 500 of product has to be diluted with a further 500 of the alkaline solutions, which reduces it at once to the ordinary strength of Fehling's solution. I am sorry to have made this slip, and hope it has not misled any of your subscribers.

I remain, dear Sir,

Yours truly,

A. W. GERRARD.

North London or University College Hospital,
London, W.C., Sept. 7.

The Irish Examiner in Pharmacy.

SIR,—A fortnight ago a query appeared in your journal, over the signature "M.P.S.I.," asking the Registrar of the Pharmaceutical Society of Ireland whether he had

accepted an application for the post of examiner from Mr. T. W. Robinson whilst that gentleman was still Vice-President of the Society.

Your last issue did not contain the required information from Mr. Ferrall, but Mr. McCormack, ignoring the real question at issue, writes to say "it did not matter so long as his letter of resignation was on the agenda, also his application for examiner."

It seems to have escaped Mr. McCormack's usually acute understanding that a man cannot legally have his application for an office and his resignation of a position incompatible with that office on the same agenda-paper, as the application may not be received or considered until the resignation is formally accepted.

I contend that this admirable rule, which provides that members of Council shall not be eligible for election as examiners, was expressly framed to prevent such appointments as that of Mr. Robinson. In order to preserve the reputation of the Society, the confidence of the public, and the respect of the profession, it is essential that a person elected examiner shall be one about whose qualifications there can be no question, and whose selection is due rather to the super-eminent of his abilities than the partiality of his colleagues.

There seems to be a strange reticence about giving the names of the seven other candidates for the post for which Mr. Robinson was, we are told, unanimously chosen. Can Mr. Ferrall see any objection to letting members know who are these gentlemen who were so completely eclipsed by the effulgence of that "practical knowledge of pharmacy" which Mr. McCormack claims for his friend Mr. Robinson?

Yours sincerely,

JAMES C. MCWALTER.

19 North Earl Street,
Dublin, September 3.

The Irish Council Election.

108/33. "One Who Knows" writes to point out that the representatives of certain wholesale firms in Dublin and Belfast [who, we presume, are candidates for election] are seeking the votes of unwary chemists and druggists for their own purposes. This is an accusation which might be levelled at most candidates in most elections; and as our correspondent does not give us the names of the persons whom he is accusing, we must decline to print his letter. For the benefit of unwary chemists and druggists, however, we may say that the pith of it is that these wholesale druggists who now pose as the representatives and champions of the druggists really injured the legitimate ones by creating, under the 1890 Act, by the inducements of their travellers, a considerable number out of publicans, provision-dealers, and other traders. If wholesalers are preferable to retailers, "One Who Knows" is able to point out at least half-a-dozen genuine wholesale drug houses in Dublin alone from which to pick candidates. He further relates that "when lately visiting a friend in a large country town, he required some Rochelle salts, and called at one of the newly registered druggists' for it, but found they did not know of the existence of such a thing. The 'drug' assistant was busy sorting pigs' cheeks out of a barrel, and the same roof covered a public-house or general grog-shop."

Water-analysis.

SIR,—I must apologise for again trespassing on your space, but Mr. Wanklyn's letter in your last issue calls for some reply. I thank him for his courteous reply to my letter, but must remind him that 1876 is not 1892, and that Dr. Frankland's process is by no means universally rejected now. Why, the weekly reports on the metropolitan water-supply entail about 2,500 combustions annually. In my laboratory we perform about 1,200, not to mention many other chemists' work. No doubt the permanganate method does measure the albuminoid matter of germs, but it certainly does also measure varying amounts of nitrogen from all other sources. I cannot accept the statement that Frankland's process does not give an estimation of the true amount of nitrogen and carbon present, or, at least, so near the truth as to fall within the limits of careful experimental error, and I fear that although Mr. Wanklyn has demonstrated the impossi-

bility of this to his own satisfaction, he has not done so to very many of us. In conclusion, I only have to say that if only one process can be employed I should prefer to use Wanklyn's: the drawback to the combustion process is that the sources of error are certainly many, and it will only yield accurate results in the hands of a careful manipulator.

Yours, &c.,

10 Ascham Street.

ERNEST J. PARRY.

The Cholera-mixture.

SIR,—In your last issue you gave the Board of Health formula for diarrhoea-mixture. I find you give *P. cretæ* aromat. "Squire's Companion" states "*pulv. aromat.*" I understand latter to be synonymous with *pulv. cinnam.* comp. Which is the correct formula?

September 6.

JACQUE. (109/69.)

[We have never seen the mixture made with anything else than *pulv. cretæ* aromat., and we should think that is correct, as the prescription was first published when that compound powder was known as "*pulv. aromat.*" It was so given originally, but we generally give the modern title to the powder in this connection.—*Ed. C. & D.*]

Another Explosion.

What is there in this Lamplough's salt

To "go" without a warning?

I put the bottle ready wrapped

To send away this morning.

The squire declared for headache

"It's the only stuff" he trusted.

It's really most provoking

That it has gone and "busted."

Salop.

PILL-DRIVER.

It Pays to Read the Trade Reports.

A subscriber (103/57) writes from Burton-on-Trent:—"Your occasional quotations of bird-seed (canary, hemp, &c.), would be a greater help if they appeared regularly. Through THE CHEMIST AND DRUGGIST I was enabled to buy canary-seed at 36s. per qr., its very lowest. My harvest is now on, thanks to you."

Country Chemists' Charges.

SIR,—I had the following prescription to dispense last week:—

Lin. belladon.	..	..	..	..	3j.
Lin. chloroform.	..	..	..	..	3j.
Lin. opii	..	..	..	..	3j.

M. Ft. liniment.

When I handed it to my customer he told me he had often had it made up at a chemist's in a neighbouring town and always paid 8d. for it, including bottle. I thought I was charging a very moderate price—viz., 1s. 6d. (as he seemed a poor man). I should be glad to know if it is usual to use methylated liniments for dispensing.

Yours faithfully,

A PHARMACEUTICAL CHEMIST. (100/69.)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Zinc chloride Injection.

93/31. *Dum Spiro Fumo* wishes to know what appearance this injection should present:—

Zinci chloridi	..	..	..	..	gr. iv.
Aq. ad	..	..	..	..	5viij.

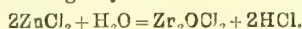
Ft. inject.

He says certain dispensers send it out clear by using ac. hydrochlor. Others filter it, and others, again, send it out with the sediment and a shake-the-bottle label.

[This query ought to produce useful discussion, so as to result in uniformity in appearance. Of course, distilled water should be used. We think the correct method would be to dispense as written; at any rate, an indication should be noted on the prescription if any variation be made.]

The use of acid in certain cases has much to commend it, and should it have been a strong solution—say, about 40 grains to the ounce, sometimes prescribed for its caustic and antiseptic effect—the prescriber might be asked to sanction the addition of acid.

As to filtering, if it be wrong to add to a prescription, it is still worse to take from it any ingredient which may have a possible therapeutic effect; but it may be noted that in this case the chloride is supposed to react with water somewhat in the following way:—



If this does take place it is only to a very limited extent.]

A Translation.

96/38. *W. H.*—Your Italian prescription reads thus:—

	Grammes
Tinct. iodin.	10
Glycerini.	10
For external use.	
Polygala virginica (senega)	5
Make a decoction, strain to 125 grammes. Add—	
	Grammes
Tinct. cinchonæ.	10
Aq. flor. aurant.	25
Potass. acetat.	5
M. Ft. mist.	
Take a tablespoonful every three hours. [Assume 30 grammes = 1 oz.]	

Copaiba and Magnesia Pills.

98/52. *Puzzled* writes:—Would any of your readers say how these pills ought to be dispensed?—

Balsam. copaibæ	m 238
Magn. carbonatis	gr. xvij.
M. Ft. mass. et divid. in pil. 66.	

[Use calcined magnesia rather than the carbonate, and, if time be an object, use 30 instead of 18 grains. Mix, and set aside for a few hours until the mass assumes a suitable consistence. The smaller the quantity of magnesia used the longer will it take. In the quantities given it would take fully twenty-four hours.]

Pil. Hydrarg. Subchlor. Co.

101/51. *Aloin* has made a batch of these pills recently, and finds that in the course of a few days they have become blue on the outside, while they retain their usual red colour inwardly. He wishes to know what chemical change has taken place? We should judge the change of colour was due to oxidation of the guaiacum resin; were they massed with castor oil as ordered in the Pharmacopœia, or was any powder containing sugar or starch used to roll them in?

An Explosive Mixture.

SIR,—A short time ago the following prescription was handed in:—

Sodii biborat.	5iv.
Hydratis chlorat.	5ij.
Atropinæ	gr. iv.
Spt. vini rect.	5j.
Aq. sambuci ad	5xij.
Ft. lotio.	

It was duly sent out, and after two very hot days the customer returned with the bottle broken saying it had not been required and been placed on one side, but had in the evening burst with considerable violence, and wished to know the reason. The only explanation I could give was that chloroform had been formed by the action of borax on

chloral and the strong heat had caused this to burst the bottle—was this correct? J. F. K. (108/15.)

[That is very probably the explanation. Sometimes aqua sambuci ferments, but it is unlikely that it would in the presence of antiseptics like chloral and borax.]

An Effervescent Mixture.

SIR,—Will you kindly say how the following prescription should be dispensed?—

Magnes. sulph.	5j.
Pot. bromidi	5ij.
Tr. aurant.	5ij.
Liq. sacch.	5ij.
Sol. sal. efferves. ad	5viij.
M. 5j. t.d.s.	

J. H. M. (76/43.)

[Send the sodium bicarbonate of the usual saline mixture in powders.]

Bismuth and Tragacanth Mixture.

103/69. *Devon* dispensed the following prescription, which was returned in a few days as a solid glutinous mass, and he has noted in the "Art of Dispensing" that pulv. tragacanth. co. is generally free from this objection. He wishes an explanation, and to know whether by using bismuth. carb. he could prevent it becoming so thick:—

Bismuth. subnit.	5iss.
Pulv. tragacanth. co.	5ij.
Liq. morph. hydrochlor.	5ss.
Ac. hydrocyan. dil.	5ss.
Spt. chlorof.	5j.
Aq. ad	5viij.
Ft. mist.	

[We have never noted this thickening to so great an extent, and fail to reproduce a mixture like "Devon's." Of course, if made up with hot water so as to rupture the starch-granules, it would be glutinous; or if, as is possible, the customer had thoughtlessly put the bottle in a warm place or in warm water, the same thing might occur. After making up the mixture we heated some of it, when it became quite a jelly. It has frequently been pointed out that bismuth mixtures made up with gums become slimy. How far the free nitric acid of bismuth subnitrate affects this has not been determined, and we should think that the property of heavy powders of removing amorphous substances from solution has more to do with the sliminess.]

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-6.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

104/56. *W. F.*—The prescription of a medical man would not justify you in selling a preparation made with methylated spirit which you might not sell otherwise. The particular solution you name would not be likely to be allowed. At least, you should not supply it unless you had the consent of the Board.

106/49. *Perplexed.*—You are not correct in stating that the action against your unqualified assistant for selling poison, brought by the Pharmaceutical Society, is "an unheard-of proceeding." Since the liability was established in the High Court in the case of the Pharmaceutical Society v. Wheeldon, in 1890, penalties have been recovered from unqualified assistants in a considerable number of cases. You will have a fair defence if you can satisfy the Court that you were in the shop at the time the sale of the poison was made—that is, if you can show that in any sense you supervised the sale. It would be no defence to show that while the Pharmaceutical Council have been prosecuting

others, one of its own members was carrying on branch shops under the management of unqualified assistants; but it would be a proper thing to bring such a fact to the knowledge of the Court. We do not know if this conduct is still continued. The comments you ask for will be found in the issues of this journal on July 25, August 15, and November 14, 1891. If the case is proved against the assistant, the Judge has no power to reduce the penalty.

106/2. *Cymro*.—The articles you name, being preparations of corrosive sublimate, are, of course, poisons within the meaning of the Pharmacy Act.

108/45. *In Doubt*.—Chlorodyne, whether sold in large or small quantities, requires a poison-label. The question whether the name of the article or the name of the poison must appear is discussed in an Editorial Note. You may sell benzine in small quantities provided that you do not keep more than 3 gallons in all in stock, and that you keep that in separate glass, earthenware, or metal vessels, in quantities of not more than a pint in each, and each vessel securely stopped. There are no legal restrictions on the sale of bitter apple.

107/48. *Vinegar*.—We replied to a question similar to yours on September 5, 1891. There is a general order of the Board of Inland Revenue, dated June 26, 1889, providing that "the preparation of acetic acid for sale as vinegar by any means other than mere dilution with water, renders a vinegar-maker's licence necessary." This order is, so far as it goes, evidence of the recognition of the practice. But we do not think it goes very far. If you sell as "white-wine vinegar" a dilute pyroligneous acid, you should, we think, be liable to a fine under the Sale of Food and Drugs Act. The case would be less strong if you sold the article merely as "white vinegar."

109/21. *One in Doubt*.—The liability of your effervescent saline to medicine-stamp duty depends, in the view of the Board of Inland Revenue, on its composition. If it is made "the vehicle for the administration of doses of a medicinal drug upon the presence of which the character of the preparation mainly depends," the label you send would render it liable (see Alpe's "Handy Book," page 107).

109/29. *J. P.*—The liability of Gregory's powder to medicine-stamp duty depends on what is said on the label. In Alpe's "Handy Book," pages 74 and 75, specimens of liable and non-liable labels are given. The liable one recommends the medicine in cases of indigestion, &c. The name of the preparation being in the possessive case does not, in this instance, involve liability, because the formula is in the Pharmacopoeia.

109/28. *A. J. N.*—"Blank's Corn-solvent" would render the preparation liable to medicine-stamp duty. Liability may or may not be incurred by the directions. This is explained in Alpe's "Handy Book," page 92.

109/57. *Radix*.—Your label undoubtedly renders the mixture liable to medicine-stamp duty.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

107/73. *Ferrum*.—To Etch on Steel, the metal is covered with paraffin wax, the design made upon that, and the steel then dipped in dilute sulphuric acid.

101/10. *Smelling-bottle* wishes to know how to cure or prevent the Development of a Mousey Odour in smelling-bottles perfumed with lavender. He has used both lavender-water and oil of lavender, and various samples of ammonia and ammoniated alcohol. [We have never noticed the odour complained of: we should suggest the use of translucent ammonia and the addition of otto of rose or of rose-geranium oil to the perfume.]

104/23. *C. F. S.*—To render Drawing-paper Temporarily Transparent you might try moistening it with a mixture of 1 part of linseed oil to 7 parts of turpentine or a solution of white of egg in water.

102/17. *A. S.*—We should recommend you to increase the quantity of carbolic acid in your tooth-powder to 6 drachms, to reduce the white soap to 1 oz., and to keep the powder for some time in a wide-mouthed bottle or jar before putting up in boxes. You should also reduce the quantity of otto of rose to, say, 15 minims.

103/63. *I. W. C.*—As gum acacia is insoluble in spirit of wine—is, in fact, precipitated from solution in water by the addition of spirit—we cannot give you a formula for a solution in spirit suitable for using upon musical instruments.

102/66. *J. L.*—Experience in regard to the irritable nature of Methylated Iodine Liniment is by no means so isolated as you indicate—French and American, as well as English workers, having independently corroborated Mr. MacEwan. Your own observation, that "in some eight or nine shops in different parts of England and Scotland, you can only remember two samples which gave the irritating compounds," is very interesting.

104/53. *T. C. L.*—Oil of rhodium is very commonly used by rat-catchers as an attraction, but whether it is used or not at Ballarat we cannot say. The tales about the feats of rat-catchers should be taken *cum grano salis*.

104/48. *Acid. Tart.*—A weak brine—say, 2 oz. of salt to the pint of water—will keep Peas Green in Bottle. You may add a drachm of boric acid to the pint of preserving-solution.

104/65. *W. McI.*—Sulphur Pastilles for Fumigating.—See THE CHEMIST AND DRUGGIST, June 6, 1891, page 812.

103/32. *Inquirer*.—The information will be found in our Educational number.

98/57. *Heliotrope*.—You should have repeated your question. We do not remember it.

105/46. *Radix*.—See reply to "Heliotrope."

105/29. *Cetaceum*.—We must decline to make the analysis you ask for. It could not be of general interest.

103/11. *Ajax*.—For *Crème d'Amandes* see THE CHEMIST AND DRUGGIST, June 18, 1892, page 864.

108/20. *Yorkshireman*.—We cannot make room for a correspondence such as you suggest, especially as, if it came, it would be too much of the nature of advertisement. You will find plenty of field for development if you will study our advertisements.

108/31. *A. B.*—We do not think it is quite fair to assist in the spoliation of makers of medicinal specialties by publishing formulæ for the imitation of their products.

106/15. *H. M. S.*—We think a good many platitudes and some sham sentiments are written and spoken about "cram"; but your defence of it on the ground that youths who want to qualify cannot afford to get a sound education is not good enough for publication in *THE CHEMIST AND DRUGGIST*. Such youths should get into some other business as fast as they can. And do you think it is quite manly to plead for "more scholarships"? On what ground do you demand that we, who are working for our own living, should go out of our way to provide funds to assist in the production of a superfluity of rivals?

108/15. *J. E. K.*—Milk of Magnesia.—We are not aware of any United States preparation which goes by this name. Probably Dalby's carminative is meant.

109/26. *Student of Irish Society.*—Letters written "in haste; please excuse blunders," letters written on both sides of the paper, and letters which only repeat what has been conveyed before, are not very likely to get inserted.

108/58. *Omega.*—Outdoor apprentices are generally taken for not less than three, and for not more than four, years. It is not usual to get a premium with them. For your other question refer back to Legal replies and Editorial, August 20 and 27.

100/33. *Foot-rot.*—We should not like to recommend Nitric Acid in Foot-rot. Have you tried your customer with solution of chloride of antimony or acid solution of nitrate of mercury?

103/74. *F. A. B.* thinks the B.P. process for Estimating Tincture of Opium "is rather too much trouble for a person in business who has not much spare time." Perhaps it is, so try the following modification of Mr. F. W. Fletcher's process (*THE CHEMIST AND DRUGGIST*, xxiv. page 239):—Take 3viiss. (about 400 fl. grains) of the tincture, and evaporate to about half the original bulk. To this add ammonia in excess and 3ij. of acetic ether and ether (mixed), shake well, and after settling separate the etherial layer. This contains all the alkaloids and a portion of the colouring-matter, and on evaporation on a water-bath the residue should weigh not less than 4½ grains. The result will indicate the value of the tincture, and the morphia strength may be taken by inference.

98/74. *Wilts.*—To render your Essence of Ginger, fortified with gingerin, serviceable as a soluble essence for aerated waters your easiest and simplest way is to make a solution of chloride of calcium (1 to 12) with water to about half the bulk of essence, and a solution of phosphate of soda (1 to 8) in the same quantity of water. Add first about half the calcium solution, then half the soda solution; allow the precipitate of phosphate of calcium to subside. Try a few drops of your clear essence in water; if it still clouds, then repeat the process with further quantities of the solutions until you obtain an essence which does not become opaque in water. This process takes out the resin. Of course it will be much weaker, but may be fortified by the addition of an essence of cayenne, prepared in the same manner.

107/27. *Aloin.*—(1) Solution of Mastic for teeth-stopping is made by dissolving a drachm of powdered mastic in an ounce of ether. (2) Mercury Amalgam.—Precipitate copper from a solution of copper sulphate with clean bright iron; wash the precipitate and, under hot water, combine with it about its own weight of mercury. Keep this under water, and, when required, warm in the water and squeeze out the surplus of mercury.

100/6. *Black Art.*—Formula for Plain Collodion for iodising:—

Alcohol-ether ..	..	..	..	..	10 oz.
Pyroxylin ..	..	..	..	..	60 grs

Iodisers to every 1 oz. of plain collodion:—

(1)					
Cadmium iodide ..	..	..	..	..	4½ grs.
" bromide ..	..	..	..	..	2 "
(2)					
Ammonium iodide ..	..	..	..	..	3 grs.
Cadmium iodide ..	..	..	..	..	½ gr.
Ammonium bromide ..	..	..	..	..	1½ gr.

The above formulæ are for negative work.

108/4. *Zylobalsam.*—We expect that your cochineal is the cause of the precipitation in the mixture. Better colour with tincture of cochineal, then you may filter with impunity.

108/5. *Alpha.*—The label for the Gout and Rheumatic Pills of last week should be "one twice a day immediately before food." Colchicum can be pushed too far—in fact, it is advisable that persons taking it should also take a laxative pill at bedtime twice a week.

108/13. *Y.*—(1) Lemon-flavour, we presume for culinary purposes.—Oil of lemon, 1 oz.; rectified spirit, 9 oz.; carbonate of magnesia, ½ oz. Mix, and, after a day, filter. (2) Lemon-juice is best preserved by allowing it to ferment, whereby it is clarified; then add to each gallon a drachm of salicylic acid dissolved in an ounce of rectified spirit, and bottle. (3) Fresh Lemon-peel for making the tincture is sent out in shreds 1 inch long and about ⅛ inch thick. (4) Tincture of lemon is made with proof-spirit because rectified spirit hardens the fresh peel, and the weaker spirit extracts the aroma better.

107/38. *Amos Malory* (New London).—The book is out of print, and an enlarged work, "Pharmacographia Indica," by the late Dr. Dymock, Surgeon-Major Warden, and Mr. David Hooper, is now in course of publication by Kegan Paul, Trench, Trübner & Co. (Limited). The published price has not transpired, but we should think it is about 3*l.* for the three volumes.

105/72. *Sigma.*—(1) Spirit (or Extract) of Ylang-Ylang is made by dissolving 3 drachms of the oil in a pint of rectified spirit. (2) *Marechale Bouquet*:—

Oil of cloves ..	..	..	..	..	mx.
" sandalwood ..	..	..	..	..	mx.
Essence of musk ..	..	..	..	..	3j.
" ambergris ..	..	..	..	..	3j.
Spirit of neroli ..	..	..	..	..	3ij.
Tincture of tonka ..	..	..	..	..	3ij.
Essence of vanilla ..	..	..	..	..	3ij.
Tincture of orris root ..	..	..	..	..	3ij.
Spirit of vetiver ..	..	..	..	..	3ij.
" rose ..	..	..	..	..	3iv.
Orange-flower extract ..	..	..	..	..	3iv.

Mix.

You will find directions for making most of these spirits, essences, &c., in the 1891 DIARY.

105/48. *Ammonia.*—When strong solution of ammonia is mixed with water, the volume increases. The expansion is about 0.5 per cent.

106/30. *Foam.*—Heading for Beer is made with quillaia or senega, preferably the former, 2½ oz. to the pint of weak spirit (S.V.R. 1 and water 2), with the addition of a drachm of solution of ammonia.

109/24. *Hastings*.—In performing Esbach's Albumin-test, the solution used is one of picric acid 10 grammes, and citric acid 20 grammes, in a litre of water. Urine is poured into the tube up to the point U, and the test-solution up to R. If the precipitate does not settle in the twenty-four hours, perhaps the urine is alkaline; if so, it should be acidified with acetic acid in the first instance, or if albumen is very abundant, dilute the urine with an equal quantity of water, and multiply the result by 2.

109/23. *Papier*.—Parchment-paper is made by immersing unsized paper in sulphuric acid (1-3), afterwards in an alkali-bath, and, when washed, calendering it.

101/29. *R. Forde*.—Standard Soap solution for Water-analysis.—Triturate 150 parts of lead-plaster in a mortar with 40 parts of dry potassium carbonate, and make into a cream with rectified spirit. After some time, filter, washing the filter with spirit, and add as much water to the filter as would make it of proof spirit strength. It is now to be tested with the standard calcium-chloride solution (pure calcium carbonate 8 grains, dissolved in hydrochloric acid q.s., evaporated to dryness, the residue dissolved in 16 oz. of water, and this, diluted to a gallon, makes a water of 8° hardness), and diluted until 180 grain-measures give a permanent lather with 1,000 grain-measures of the 8° water.

Information Supplied.

99/37. *Papier Fayard*. Gout Paper.—Euphorbium 3 drachms, cantharides 6 drachms, powdered and digested with 4 oz alcohol, and 3 drachms Venice turpentine added to the strained tincture. Fine paper is dipped into it and dried in the air. Mohr directs 4 drachms of cantharides and 1 drachm euphorbium to be digested in 5 oz. of highly rectified spirit; filter, and add 1½ oz. Venice turpentine, previously liquefied with 2 oz. of resin. To be spread on the paper while warm. I quote from Beasley. J. F. BROWN.

The label "Papier Fayard et Blayn papier chimique du Codex" is a sufficient explanation. In the expired patent (patents on medicinal compounds, &c., were forbidden in France by a law of 1844) the following is the process given:—The paper is first rendered waterproof in the following manner:—Linseed oil, 500; garlic, chopped fine, 30; turpentine, 500; acetate of lead, 50; yellow ochre, 30; red lead, 15. The garlic is boiled with the oil, and stirred continuously. It is then strained, and the other substances added. The resulting preparation is then spread on tissue paper, either with a sponge or a broad camel-hair pencil, such as is used by gilders, and allowed to dry at the ordinary temperature or in a heated room for about a fortnight, the paper being hung on sticks to allow free passage of air. The acetate of lead, yellow ochre, and red lead may be replaced by well-lxiviated red ochre and litharge, rubbed down with oil. When the paper is dry enough the following mixture is spread on:—

	Parts
Olive oil	203
Yellow wax	6 (in summer 10)
Red lead	100 (,, ,, 110)

Heat the oil in a capacious vessel until the vapours commence to rise, add the red lead, stirring continually with a long spatula. After the action has completely ceased remove from the fire, add the wax without ceasing to stir even after it be melted. It is necessary that a whitish froth should form, and no more; the plaster should be neither too soft nor too hard and grainy.

This paper is recommended for pains, burns, and corns.

C. B. G. (109/15.)

The original specification for "Papier Fayard" was:—Linseed oil, 500; garlic, 50; turpentine, 400; acetate of lead, 50; yellow ochre, 30; red lead, 15. This mixture after boiling the ingredients, spread on paper, and dried during fifteen days. The "papier chimique" of the Codex Français is a similar preparation, and probably imitated from the original Papier Fayard et Blayn. VERITE. (109/25)

93/60. *Spirit Cagliari*.—It is possible that the eau hemostatique Cagliari is understood by this. Formula:—

	Parts
Benzoin	250
Alum	500
Water	5,000

Boil six hours, adding hot water to replace waste.

VERITE. (109/25.)

? Spirit cochlearæ.

T. M. C. (109/90.)

Acetum Scillæ.—In connection with the note which we print elsewhere, we have to acknowledge postcards from the following: Messrs. H. D. Kelf (Reading), A. Stooke (Sittingbourne), J. W. Holmes (Retford), H. Barton, E. Yates (Manchester), S. Ward (Batley Carr), A. F. Brookes (Birkenhead), and anonymous correspondents.

EMETINE ESTIMATION.

MR. G. KOTTMAYER, in a critical article on this subject in the *Pharmaceutische Post* (Nos. 24 and 25) comments adversely upon Flückiger's process for the extraction of emetine from ipecacuanha-root, showing that the chloroform residue is not exclusively emetine, and that the drug is by no means completely extracted. Other similar processes are also referred to, especially Kremel's, in which a mixture of lime and powdered ipecacuanha, after treatment with water and drying, is extracted with chloroform. The alkaloidal residue from this contains "resin"—i.e., a substance insoluble in dilute hydrochloric acid. This was found to be the objection to all known processes, and it is necessary to make a correction for the amount of insoluble matter thus retained with the alkaloid. Lloyd's ferric-hydroxide method of assay shares the same objection, the author remarking that it gave but slight satisfaction. He thought, however, that the principle of fixing the organic acids and colouring-matter of the ipecacuanha with a heavy metal a good one, and, in order to determine the emetine value of samples of the Rio, Singapore, and Cartagena roots, he devised the following method:—

Fifteen grammes of the powdered root was macerated in 148 c.c. of rectified spirit and 2 c.c. of hydrochloric acid (sg. 1.12) for four days at 40° C. Then 100 c.c. of the clear tincture was pipetted off, 20 c.c. of alcoholic lead-acetate solution (1 in 10 of proof spirit) and 1.5 gramme of slaked lime added, and the mixture evaporated on a water-bath to a syrupy consistence; 5 grammes of powdered glass was then added, and the whole evaporated to dryness and powdered. The powder was then extracted with chloroform for ten hours, by which time no more alkaloid was removed by the solvent. The chloroform, on evaporation, left a brownish-yellow substance, which was weighed, the alkaloid extracted with 2 c.c. of normal sulphuric acid, and the insoluble portion collected, dried, and weighed, the difference giving the actual amount of emetine. The following results are interesting:—

Rio Ipecacuanha.

Chloroform extract	C-218
Resin	C-338
Emetine	C-210=2.37 per cent.
A second sample gave 2.24 per cent.	

Singapore Ipecacuanha.

Chloroform extract	C-238
Resin	C-240
Emetine	C-198=2.22 per cent.
A second sample gave 2.3 per cent.	

Cartagena Ipecacuanha.

Chloroform extract	C-183
Resin	C-228
Emetine	C-160=1.81 per cent.

We quote these results more as showing the necessity of washing the chloroform extract than for comparison of the different kinds of ipecacuanha. On the latter point it may be desirable to have corroborative work.



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Summary.

THE educational information given in this issue is all fresh, and up to date.

UNDER "Science" will be found useful advice to those who think of going in for degrees.

THE changes in schools of pharmacy owing to the altered dates of the meetings of the examining board are noted.

IN medicine the five years' curriculum is now universal. A medical graduate gives us his views about that matter.

THE veterinary curriculum has been lengthened by a year, and the Preliminary examination made much more stringent.

AFTER October, every Minor candidate will be expected to know all about the poison laws. We make an announcement regarding this.

IN an article entitled "Private Study," the head of a pharmaceutical college contributes sound advice to students.

AN attempt to induce one of Messrs. Newbery's employes to steal patent medicines has been investigated at the Guildhall Police Court.

A VALUABLE circular of advice, drawn up with a view to the prevention of an invasion of cholera, has been written by the Royal College of Physicians at the request of the Local Government Board.

A BIRKENHEAD herbalist has been fined for selling an ointment, "invaluable for cancers," without a medicine-stamp. His defence that his father sold the ointment for years without interference proved insufficient.

THE Sanitary Institute has held its autumn Congress at Portsmouth this week. Sir Charles Cameron, the noted Irish chemist, is President, and delivered an address. An exhibition is held in connection with the Congress.

AT an inquest held at Prescott, near Liverpool, it appeared that poison had been sold by a girl of fourteen, who was left in charge of a chemist's shop. The manager of the business, who had been thirty-seven years in the business, was unable to tell the coroner whether this was legal or not.

OUR French correspondent gives particulars of the fearful colloidion explosion in Paris by which four lives were lost. He also reports his experience with the sanitary authorities in entering France from the eastern frontier, and quotes an interesting interview with M. Pasteur respecting his cholera prophylactic.

WE announce this week the publication of a supplement to Alpe's "Handy Book to Medicine-stamp Duty," bringing the information in that work close up to date; and we also make the preliminary announcement of a treatise on the Pharmacy and Poisons Laws of Great Britain, which we expect to have ready for sale in October.

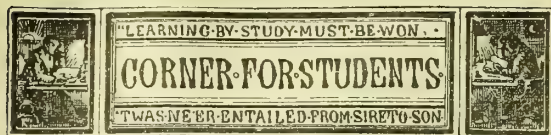
THE Half-priced Closed-letter Company have failed in their first attempt to make a chemist at Ashford pay up 9% on his debenture bond. His case appears to be peculiar, inasmuch as he stipulated that he should not exhibit the Post-office announcement, and in the Judge's opinion this is necessary. That point, however, has to be established.

A LONG report of the Irish Pharmaceutical Council's September meeting is published. It appeared that, without consulting the Council, the Lord Lieutenant had reduced fines imposed on an infringer of the Act. The Council agreed to send a very strong remonstrance to the Castle. Some seventy new members and associates were elected, but several druggists who, it was considered by the majority of the Council, were "law-breakers" were rejected.

EASTERN MEDICINES.

By DAVID HOOPER, F.I.C., Quinologist to the Government of Madras, Ootacamund.

I WAS interested to see a reference to the fruit of *Sterculia scaphigera* in your Summer Number. Although it is generally regarded as a Chinese drug, we have given it a place in the "Pharmacographia Indica," because the tree is indigenous in some parts of the North of India. Two years ago, however, this remarkable fruit was sent to me from Nagore, on the Coromandel coast, and it was described as a drug used frequently by the Mahomedans of Southern India as a demulcent drink. It is imported by Mahomedans at Nagore and Karaikal from Java and Singapore, and it is known by the Malay name of "Oomas-mungoo." My friend Dr. Mootoosawmy has met with it in Tanjore, where it is considered to be a very rare drug and much esteemed. Another remarkable drug imported from Singapore by the natives of Southern India is the petrified crab, mentioned by Daniel Hanbury in his catalogue of Chinese drugs. These calcareous crabs are called in Tamil "kulmundoo," and are said to possess anodyne properties. A remarkable seed is washed upon the coast, and is also said to be anodyne. This is the seed of *Entada scandens*, and is said to be "famous" for inflammatory complaints of the testicle. Anything almost which is remarkable, and about which the native knows very little, is sure to be used in medicine.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise will be a metallic alloy. The alloy must be submitted to a thorough systematic examination, its constituents detected, and all other substances proved absent.

Students' applications for portions of the alloy will be received up to Wednesday, September 21, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, October 1. Each report should contain a concise account of the work done, and should include a list of the constituents detected; in this list any substance detected in small quantity should be distinguished from the chief constituents of the alloy.

REPORTS.

The mixture of salts which formed the subject of the last exercise consisted of 3 parts of zinc sulphate, 2 parts of potassium chromate, and 1 part of nickel sulphate. This mixture originally contained 29.43 per cent. of water, which was present in the original salts as water of crystallisation, and as it was a pasty mass in this condition, it was partially dried until it contained 18.7 per cent. of water. In this state its calculated composition was:—

Zn ..	..	..	..	..	..	13.04
Ni ..	..	..	..	..	..	4.03
K ..	..	..	..	..	..	15.40
CrO ₃ ..	..	..	..	..	..	23.00
SO ₄ ..	..	..	..	..	..	25.83
H ₂ O ..	..	..	..	..	..	18.70
						100.00

The only impurities of any note were traces of iron and chlorine.

The number of students who received packets of the mixture was fifty-five, and the number of reports sent in was thirty-five. The failures in the detection of the several constituents were:—Zinc, 17; nickel, 11; potassium, 1; chromic acid, 1; sulphuric acid, 0.

This exercise afforded a good illustration of the difficulty of devising any general scheme which will answer for the analysis of every mixture of ordinary salts. It showed, too, that an analysis cannot always be successfully carried out in a purely mechanical way. There are some cases in which anybody without any knowledge of chemistry, merely following the instructions of a book, might arrive at a correct conclusion; but in this case it was not possible to make a correct analysis without the exercise of a good deal of judgment.

The powder dissolved to a clear solution in water slightly acidulated with hydrochloric acid. This solution was yellow or yellowish red if but little water had been used, and when sulphuretted hydrogen was passed through it sulphur separated, and the solution became green. This pointed very clearly to a chromate. When the sulphuretted hydrogen was expelled by boiling, and the proper steps taken to oxidise any iron salt present, on ammonium chloride and hydrate being added, a precipitate separated which did not dissolve on adding the latter reagent in excess and warming the solution. Many of our contributors filtered

the solution at this stage and set aside the precipitate to be examined for chromium, iron, and aluminium. To the filtrate they added ammonium sulphide, and obtained a black precipitate, which was reserved to be examined for zinc, manganese, nickel, and cobalt. In many cases this proceeding would have led to correct results, but in this case the separation of zinc and nickel from chromium by means of ammonium hydrate was most imperfect; in fact, under certain conditions—depending chiefly upon concentration and the relative proportions of the reagents employed—nearly all the zinc, and a large part of the nickel, was precipitated along with the chromium. The quantity of zinc left in solution was even so small as to escape detection in the precipitate produced by ammonium sulphide. This was the most fruitful source of error in this analysis. Finding chromium present in quantity, the proper course to pursue was to mix the ammonium hydrate and sulphide precipitates, after washing treat with dilute hydrochloric acid, which left the nickel sulphide undissolved, and precipitate the chromium, with any iron or aluminium present, by adding barium carbonate in excess. The details of the method will be found in any text-book of analysis. This method, properly carried out, effected a perfect separation of the chromium from the zinc; the chromium was found in the precipitate alone, with the excess of barium carbonate and the zinc in the filtrate. The method is one which ought not to be applied to unknown substances without previous practice on mixtures of known composition, as there are precautions to be observed which can only be learnt by practice. It is true that some of our correspondents, without adopting this method, arrived at correct conclusions, but they did not obtain complete separations or sharp results, and it is unsatisfactory to be obliged to make allowances of an indefinite kind for irregularities which are not satisfactorily explained.

PRIZES.

The first prize for the best analysis has been awarded to GEORGE VOGT, 3 Serpentine Terrace, Kendal, Westmoreland.

The second prize has been awarded to W. TILTMAN, care of Messrs. Matthews & Son, Harrow Green, N.E.

Marks Awarded for Analyses:—

G. Vogt (1st prize) ..	98	A. Howard ..	80
W. Tiltman (2nd prize) ..	97	W. Hood ..	80
Belladonna ..	96	Verax ..	80
A. Lander ..	95	G. H. H. ..	79
J. A. Hare ..	94	Moyhitt ..	78
Walton Porter ..	93	Potassium ..	77
Ulexine ..	93	Victory ..	76
John ..	92	Danwer ..	75
H. F. ..	91	Pepsine ..	74
C. E. Ashby ..	90	Sapientia ..	72
Bee Gee ..	88	Nulli Secundum ..	70
Cerium ..	87	P. Macrocephalus ..	69
KCy. ..	85	H. O. T. ..	68
Tyro ..	85	T. K. Dublin ..	67
Aconitum ..	83	J. Rose ..	65
H. Bowden ..	82	F. F. A. Tunbridge ..	60
H. McL. R. ..	80	Slab ..	45
Ornum ..	80		

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

WALTON PORTER.—The mixture did not contain an appreciable trace of magnesium.

ULEXINE.—Your results were more correct than you seem to have supposed. If the chromic acid was so troublesome, why not remove it by reducing the acid with sulphurous acid or alcohol and then precipitating the chromium as hydrate by means of ammonia?

C. E. ASHBY.—Your confirmatory test for iron showed that it was present in very small quantity—too little to account for the black precipitate with ammonium sulphide.

CERUM.—This analysis was rather difficult for a beginner. If an arseniate had been present a yellow precipitate would have formed slowly with sulphuretted hydrogen. The reddish-coloured precipitate with silver nitrate was silver chromate. The yellow crystalline precipitate of ammonium phosphomolybdate presents a very characteristic appearance, and no other precipitate should be mistaken for it.

BER GEE.—It would depend upon the quantity of water employed whether most of the zinc was in the aqueous or in the acid solution. It is not always an advantage to make a separate analysis of the portion soluble in water.

KCY.—The precipitate you obtained with ammonium sulphide was white, so that the nickel must have been precipitated by the preceding group-reagent—ammonium hydrate. Probably you did not completely remove the sulphuretted hydrogen before adding ammonium hydrate; this omission would account for the precipitation of the nickel out of its proper group.

ACONTUM.—In the absence of cobalt, the borax-bead reaction suffices to identify nickel in the portion of the ammonium-sulphide precipitate insoluble in dilute hydrochloric acid. From the results you describe it would appear that you used a reducing blowpipe-flame. The proper conditions to be observed can only be learnt by a careful experimental study of the reaction.

H. BOWDEN.—The barium-carbonate method which you employed ought to have completely separated the chromium and zinc, but you seem to have employed an insufficient quantity of barium carbonate. It is not easy to tell when a sufficiency has been added.

H. McL. R.—The ferrous-sulphate test for nitric acid could not be satisfactorily applied in the presence of a chromate. Chromic acid might readily have been removed by reducing it and then precipitating the chromium as hydrate.

ORNUM.—The precipitate which you supposed to consist of manganous hydrate ought to have been examined by fusion with potassium carbonate and nitrate. The filtrate contained the zinc, but you did not examine it.

A. HOWARD.—When you dissolved the precipitate produced by ammonium sulphide in dilute hydrochloric acid, and added potassium hydrate you obtained a precipitate which you attributed to manganese; but if you had added enough of the fixed alkali you would have found the precipitate almost entirely soluble: the trace which remained was due to iron. The alkaline solution, when acidulated with acetic acid, gave a white precipitate with potassium ferrocyanide, thus proving zinc to be present.

W. HOOD.—It was a trace of iron that gave the colour to the precipitate, which you took for manganous hydrate. If the sodium-hydrate solution which you used contained much carbonate, it would account for the difficulty in dissolving the zinc-hydrate precipitate; but more likely the difficulty was due to the presence of chromium.

G. H. H.—It does not appear, from your report, that you made an analysis of the entire powder. You ought to have completely dissolved the powder in water, with the aid of a few drops of dilute hydrochloric acid.

VICTORY.—When you heated the solution with sulphuric acid and alcohol, the chromic acid, which is a most active oxidising agent, decomposed the alcohol with the production of aldehyde, and if there was not much alcohol present acetic acid would also be produced, so that ethyl acetate would be evolved, though no acetic acid was present in the original solution. The test is, therefore, useless in the presence of a chromate.

DANWER.—The test for nitric acid which you describe depends upon the fact that free nitrous acid liberates iodine from potassium iodide; but inasmuch as free chromic acid does the same thing, the test is useless in the presence of a chromate.

PEPSINE.—The burnt-sugar smell which you thought you observed when the powder was ignited was purely imaginary. The precipitate with calcium chloride consisted simply of calcium sulphate.

SAPIENTIA.—See remarks to "Pepsine."

NULLI SECUNDUM.—There were no red fumes produced on heating the powder with sulphuric acid and copper; you were probably misled by the deep reddish-coloured liquid on the sides of the test-tube. Indigo was instantly bleached, but this effect was due to the chromic acid.

H. O. T.—The yellow colour you observed in testing for phosphoric acid was no indication of a phosphate; there should be a yellow crystalline precipitate.

T. K. DUBLIN.—You omitted a summary of your results.

SLAB.—No possible combination of the substances you found would yield salts of any colour but pure white. The reddish-yellow colour of the original solution and the change to green on passing sulphuretted hydrogen were clear proof of the presence of a chromate.

English News.

The Effects of Inhaling Chloroform.

At the Huddersfield Police Court, on September 7, John Henry Bowskill, aged 28 years, a chemist and druggist, of Mansfield, Nottinghamshire, was charged with having attempted to commit suicide by poisoning. The prisoner went to Huddersfield with the intention of acting as assistant to a medical gentleman. On the previous Saturday he went to stay at the Waverley Temperance Hotel. On Monday he did not leave his bedroom till late in the day, and then complained of being unwell. Mr. Todd, the proprietor, advised him to see a doctor, and he replied that he was going out, and would do so. Some time afterwards Mr. Todd found the prisoner's door fastened, and sent for Mr. Coward, a surgeon. He sent his assistant, who, noticing a smell of chloroform, had the room-door broken open, and then found the prisoner lying on the bed with a handkerchief over his mouth and nose, and he was unconscious, black in the face, and pulseless. He had evidently inhaled the fumes of methylated chloroform, a quantity of which was found in a bottle near him. Mr. Coward's assistant, being unable to restore the prisoner with the ordinary means, sent for Mr. Coward, and they together restored him, but he had a very narrow escape from death. The prisoner stated he had been in the habit of inhaling the drug, and, from correspondence found on him, this statement was found to be correct. Since the occurrence the prisoner had shown signs of melancholia. In giving his evidence Mr. Coward, stated that methylated chloroform was more dangerous than the ordinary kind, and was not used for inhaling. He used nitrite of amyl to restore Bowskill, and that did not heighten the effect of chloroform. He always used that means.

Prisoner said that nitrite of amyl heightened the effect of the drug.

The magistrates remanded him for a week.

Chemists who do not Know the Poisons Law.

An inquest was held on Saturday last, at the Derby Arms, Prescott, Lancashire, before Mr. Brighthouse, concerning the death of a man who had killed himself with oxalic acid. One of the witnesses was a girl named Agnes Jones, 14 years of age, who said she resided with her sister at Mr. Harrison's shop, in Eccleston Street, Prescott. The deceased called about a quarter to two on Thursday afternoon. She was alone in the shop when he came in. He asked for 2 oz. of oxalic acid, and said he wanted it for cleaning brasses. She told him to be careful with it, as it was poison. She labelled it, and wrote on the label the name of the poison. He appeared to be sober.

The Coroner remarked that the girl seemed very intelligent, and had complied with all the requirements of the Act of Parliament.

A Juror: Is a person at the age of fourteen allowed to sell poison?

The Coroner: There is no restriction as to age. This girl seems to have displayed as much intelligence as if she were twenty-one.

A Juror: Is there not something in the Act which compels the seller of poisons to take the name and address of the purchaser?

The Coroner: Not when it is under part 2 of the schedule. The Poisons Act includes two schedules, and it is necessary to do that with the poisons in schedule 1, but not for schedule 2, and oxalic acid is in schedule 2. If the poison is labelled and the label bears the name and address of the seller, as in this case, the Act is complied with.

James Dixon, manager for Messrs. P. and W. Harrison, said he was a qualified chemist, and had been thirty-seven years in the business. On the day in question he was out at dinner, and the assistant girl Jones served him.

The Coroner: Do you think she is entitled to sell under the act?—I think so.

What does it say about selling?—I don't know exactly.

Can anybody sell poisons?—I cannot say about that, but I should think so, if they are registered.

But you ought to know your own business.—I never heard any objections, providing the poisons were labelled.

I am not talking about labelling. Who can sell these poisons?

Witness replied that all registered chemists might sell them, but he did not know how servants were affected.

The Coroner: Supposing the registered chemist goes away on his holidays and leaves somebody who is not registered in charge, could that person sell poison?—Well, I should expect the master to get someone qualified while he was away.

A juror expressed the opinion that every qualified chemist ought to know all about the Act. Witness did not seem to be acquainted with it.

Another Juror: It amounts to this—that he does not know his own duties in that respect.

The Coroner: When did you get your certificate of qualification?

Witness: In the year 1858.

Have you always been in the business since?—I have always kept on the register, and have been qualified to take a shop.

Have you read the Poisons Act?—Yes; I have a copy now.

The Coroner: Just go for it.

Witness left the room, and on his return he handed to the Coroner a wholesale dealer's circular in which the poisons were classed according to the schedules.

The Coroner: This is not the Act of Parliament.

Witness: I thought that was sufficient.

You said you had the Act of Parliament. Have you ever read it?—Well, not exactly.

You said just now that you had.—I said the poisons that were scheduled.

This is only a circular from a wholesale firm of chemists telling you what Mr. Lushington said. We all know that. What I want to know from you is whether, when you go out of the shop, you think anybody, by virtue of merely being there, can sell the poisons under part 1 and part 2 of the Act?—Under part 2 no objections are specified, but under part 1 I don't see how they could.

And why not?—Because under part 1 the poisons have to be registered, and a book is kept for that purpose.

Police Superintendent Bazendale: Is it a fact that you have this girl to sell in the shop during your absence?

Witness: Yes.

Is she thoroughly qualified or capable?—I think so; but she was not appointed by me. She was appointed by my master.

The Coroner: Without the Act of Parliament I cannot say whether you are right or wrong. I don't carry all the Acts of Parliament in my head. Mr. Bazendale has got all the facts, and will inquire into the matter. If you have done wrong you may be summoned, and if you have done right well and good. If this is allowed by the law, the sooner the Legislature has it altered the better.

A Juror: It is a great shame if such things are allowable.

The Coroner (to Witness): Let me give you some gratuitous advice. Get a copy of the Act and read it.

Witness: I will tell my master what you say; I am only a servant.

The Coroner: But you are a registered chemist, and ought to know what the Poisons Act says.

The Coroner, in summing up, said the jury had the facts before them, and it was for them to arrive at a verdict according to the evidence.

The jury consulted in private for about fifteen minutes. They then intimated that their verdict was one of "Suicide whilst in a state of temporary insanity," and expressed the opinion that it was very wrong and dangerous to allow poisons to be sold by any but fully-qualified persons.

The Coroner said he thoroughly agreed with that expression of opinion. He could not exactly say if the chemist in question was within the four corners of the Act of Parliament, but the police superintendent would inquire. He (the Coroner) could only express a hope that Parliament some time during the next twenty years would find time to deal with the matter.

Happy-go-lucky Treatment.

An inquest was held last week at Paddington, before Dr. Wynn Westcott, Deputy-Coroner, concerning the death of a child eighteen months old, after a short illness, of diarrhoea. The child's father, Edward Peedell, 15 Clarendon Street, Harrow Road, said he went to a chemist for a "powder." He told

the chemist it was for a baby "having diarrhoea and sickness," and when the chemist gave him the medicine he asked witness to tell him the next morning how the child progressed. Charles Sharman, a medical practitioner, who saw the child about two minutes after he got to the house, said death was due to exhaustion following inflammation of the intestines and recent diarrhoea. The child's life might have been saved had it been treated by a qualified medical man instead of a chemist, who was not a trained man. A Juryman: Do you agree with the medicine? Witness: I can't say that I do. It is not such as I should have given; but all doctors do not prescribe alike. The Deputy-Coroner: I suppose what the juryman means by the question is that you couldn't swear that the medicine did the child harm. Witness replied that he could not say the medicine did the child harm. It might be suitable for an old man, but he did not think it suitable for a child. He sent to the chemist asking what were the component parts of the medicine, but was not informed. He formed an opinion from the portion of the medicine he saw, but the *post-mortem* examination revealed no proof that the medicine had done harm. The Deputy-Coroner observed to the jury that the treatment of a chemist was something of a "happy-go-lucky" character—it was not that the chemist's medicine did harm, but it delayed the calling-in of a qualified medical practitioner. The jury returned a verdict of "Death from natural causes," and made mention of the fact that deceased had been treated with medicine from a chemist who had not seen the child.

Selling Poison in the Streets.

Mr. F. Price, the county coroner, held an inquest at Withington, Lancashire, on September 9, relative to the death of a child, three years of age, who had died through drinking a poisonous liquid, which the mother of the child had purchased from a hawk for cleaning brass and metal, and which had been kept in a cup, the mother not knowing it to be poisonous. The police have not succeeded in tracing the whereabouts of the person who sold the poison.

A Professor of Chemistry Charged with Theft.

At the Greenwich Police Court, on September 12, Adolf Zimmermann, 25, professor of chemistry, of 19 Nelson Street, Whitechapel, was charged with stealing from the Manor House, Old Road, Lee, a silver scent bottle, value 4*l*. The prisoner called at the Manor House, saw Mrs. Woffram, and said he was out of employment, and asked for assistance, giving as a reference an official at the Royal Military Academy, Woolwich. He was shown into the drawing-room, whilst Mrs. Woffram consulted her husband, and on her return she gave the prisoner 5*s*., said inquiries would be made into his statements, and he was directed to call again. Shortly after he was gone the silver scent-bottle was missed from under a glass-shade. The prisoner was followed and arrested. Mrs. Woffram desired the prisoner might be leniently dealt with, and the magistrate remanded him for a week.

Wine Licences

have been granted to Messrs. John Kemp & Co, chemists, Lincoln; to Mr. Thomas Weaver, chemist, Downe, Bromley; and to Mr. W. Fowler, chemist, Little Leven, Bolton.

Photography in Warwickshire.

A Photographic Survey Council has been formed in Warwickshire, of which Sir J. B. Stone, F.L.S., &c., is president. During the past two years the Council has accomplished some excellent work, and 600 platinotype photographs, collected by the Council, of objects of interest in Warwickshire, may now be seen in the Birmingham Art Gallery. We notice the names of Mr. H. W. Jones, F.C.S., of Wyleys (Limited), Coventry; and Mr. W. Jones, of Messrs. Banks & Co, Birmingham, on the Council.

Death after a Black Draught.

An inquest was held on September 8, by Mr. Wyatt, coroner for East Surrey, touching the death of Alfred Edward Osborne, who died under peculiar circumstances on the previous Friday morning. Mr. G. A. Baldwin, a herbalist, carrying on business at 77 Walworth Road, stated that deceased called at his shop shortly after 8 A.M. on September 2 and complained of feeling queer in his inside. Witness gave

him a dose of sal volatile diluted with water, and afterwards at his own request he was supplied with a black draught, which he swallowed, and then went into the lavatory at the back of the premises. He remained there some time, and on two occasions witness sent out to see if he was all right, and each time he replied that he was. About a quarter of an hour afterwards, however, he was found lying in the lavatory apparently dead, and a medical man was immediately sent for, but it was too late to do any good. Dr. C. E. Baxter, the medical man called, said when he arrived life was quite extinct. He had made a *post-mortem* examination, and found that death was due to syncope, consequent upon phthisis. The jury found a verdict in accordance with the medical evidence.

Sanitary Congress and Exhibition.

The autumn Congress of the Sanitary Institute was opened at Portsmouth on Monday by the President, Sir Charles Cameron, F.C.S., &c., who delivered an address on "The Victorian Era, the Age of Sanitation." In the course of this he spoke of the influence and qualifications of medical officers of health, stating that not long since every medical man was considered perfectly competent to act as an officer of health, but now the model medical officer of health is expected to know more than the ordinary practitioner. He will be something more than a physician or surgeon—he will, in a sufficient degree, be a bacteriologist, a chemist, a veterinarian, a geologist, an engineer, a statistician, and, so far as the sanitary statutes are concerned, a lawyer. Sir Charles also showed how the death-rate had been influenced by improved sanitation, and an important section of his address on the dwellings of the working-classes has created quite a stir amongst the daily papers. In the evening, Mr. Alderman T. Scott Foster, chemist and



THE MAYOR OF PORTSMOUTH.

dentist, the Mayor of Portsmouth, who had "received" the Congress and given a public luncheon during the course of the day, opened, at the drill-hall at Landport, the Health Exhibition which always accompanies the holding of the Congress. The exhibition, which will remain open for a month, contains an exhaustive series of exhibits, covering the whole range of sanitary requirements. A fair number of firms connected with the drug trade are represented, amongst the more notable exhibits being those by Messrs. Armour & Co. (beef-extracts and digestive preparations); Blondeau et Cie. (vinolia specialities); Burroughs, Wellcome & Co. (solioids, tabloids, pharmaceutical preparations generally, and medicine-chests); Cadbury Brothers (cocoa); Johannis Company (Limited); and T. Tyrer & Co., who exhibit many chemicals, camphor, and "Thiocamf," which disinfectant is used in the model dairies near at hand. Other exhibitors of disinfectants are Messrs. F. C. Calvert & Co., H. Ellison, jun. (carboline specialities), Jeyes' Sanitary Compounds Company (Limited), the Sanitas Company (Limited), and J. Tucker & Co. We only noted three filter exhibits—viz., by the Atkins Filter and Engineering Company, Berkefeld Filter Company, Doulton & Co., and C. E. Gittins (Limited). Messrs. R. & J. Beck and J. Swift & Sons exhibit in the bacteriological section some excellent microscopes, &c. Messrs. Brand & Co. and the Mosquera Julia Food Company are represented in the food section. The following awards have been made in

Division D:—*Medals*—Blondeau et Cie., Calvert & Co., Brand & Co., Burroughs, Wellcome & Co. *Certificates*—Burroughs, Wellcome & Co. (malt extract), The Sanitas Company, T. Tyrer & Co., Jeyes' Sanitary Company, and Cadbury Bros.

Drug Contracts.

On Tuesday there was a special meeting of the Holborn Board of Guardians at their offices, Clerkenwell Road, to award the contracts for supplies for the ensuing six months. The Clerk read the tenders for drugs as follows:—Baiss Bros., 32½ per cent. off the Board's list prices; A. S. Hill & Sons, 25 off; Hodgkinson, Prestons & King, 23½ off; Mackey, Mackey & Co., 22½ off; Corbyn, Stacey & Co., 10½ off. Dr. Hunter moved that the tender of Messrs. A. S. Hill & Sons be accepted. As a member of the Dispensary Committee he, with Mr. Geo. Eade (pharmaceutical chemist, of Goswell Road), had taken the opportunity of investigating the drugs as far as they could, not only in the dispensary at the administrative offices, but at all the institutions of the Union, and many things struck them as being open to amendment. Mr. Eade knew more about the prices than he (the speaker) did, and they both came to the conclusion that it was utterly impossible to supply at the price. Messrs. Hill & Sons had supplied the Guardians before, and he moved that they do so again. Mr. J. F. Kelly seconded, remarking, "Have cheap beer, if you like, but don't poison the poor with cheap drugs." The motion was adopted unanimously. It was also decided to refer the tasting of the port-wine samples to the medical officers of the various establishments of the Union with a view to giving the poor the very best that could be got, Mr. Kelly here again remarking "that it was better to do this than to kill the poor with logwood-chips."

Messrs. Sturton Bros., of Chesterton, have secured the contract for the supply of quinine and cod-liver oil to the Chesterton Union Board of Guardians for the ensuing half year.

The Lambeth Board of Guardians, Brook Street, Kennington, invite tenders for the supply of drugs and mineral waters for consumption in their workhouses and infirmary from October 2, next. Printed forms of tender, with full particulars, and setting forth the estimated probable quantities which will be required, may be obtained between 10 A.M. and 5 P.M. at the above office. Tenders must reach the office on or before Tuesday, September 20. Payments in respect of the goods supplied will be made every half-quarter.

Poisonous Proprietary Medicines.

The last issue of the *British Medical Journal* quotes the circular lately issued by the Association of Owners of Proprietary Medicines published in this journal on August 27, and remarks that "it has at first sight a defiant appearance, and may furnish some explanation of the statement lately made in *THE CHEMIST AND DRUGGIST*, that there were defendants ready to meet the Council of the Pharmaceutical Society, and contest the exercise of the statutory powers which it has been called upon to make, in accordance with the present construction of the law. But on examination it will be found that the suggested resistance is more apparent than real. In the first place, the purport of the circular is inconsistent with the fact that in several recent cases of prosecution unqualified sellers, acting under legal advice, have promptly admitted their offence, and paid the penalties incurred. In no case has there been any attempt of defence. The limitation of any contemplated support of their position suggested by the term "suitable case" considerably reduces the probability of real opposition. The third paragraph of the circular virtually lays down the startling proposition that concealment of the fact that preparations contain poison places their proprietors above the law, and justifies retailers in selling such preparations without complying with statutory requirements. It may be that this extraordinary notion arises from some confusion of the obligations respectively of wholesale and retail dealers; but in any case we do not apprehend that it is likely to be of much effect in opposing the more thorough enforcement of the law relating to the retail sale of poisons, which we are glad to see is now in course of being carried out."

In another article the editor again insists on the glory due to Mr. Ernest Hart in this matter. It was only after he, "as Editor of the *British Medical Journal*," undertook to in-

investigate all the poisonous contents of a long list of nostrums which had for years been sold without the caution 'poison,' that the Public Prosecutor and the Pharmaceutical Society, respectively and in sequence, awoke to a full sense of their responsibility, and determined, after much correspondence and a continuous appeal to their duty under Acts of Parliament, to prosecute this matter seriously, persistently, and offer an adequate safeguard to the public, after prosecutions had indeed been, as we have already stated, undertaken by the Treasury, at the instance, we learnt after, of Mr. Braxton Hicks, one of the London coroners, arising out of cases to which his attention had been called by inquest; and great credit is due to Mr. Hicks for more than once calling the attention of the Treasury to the subject, but the prosecutions were isolated and remained unnoticed until the present year, when Mr. Hart laid before the Treasury, subsequently with the approval of the Parliamentary Bills Committee, the series of analyses which he had prepared and had published in the *British Medical Journal*, and put such pressure on the Council of the Pharmaceutical Society as induced them to undertake seriously on their part the duty in this matter which they had for many years wholly neglected to fulfil, in the fear, we believe, that the trade, their constituents, might disapprove from selfish reasons." That sentence deserves quotation if only for its length and complexity. But surely the writer is a little unfair on his Bloomsbury friends. They may have neglected their duty, but they could hardly have been animated by trade motives. Trade interests were all the other way. The writer goes on to inform us that the matter (of getting these medicines analysed) was one "of no small difficulty and complexity, as the analysis of such nostrums in complicated solutions and in relatively small, though toxic, quantities, was such that two successive experts applied to to carry out the quantitative chemical analysis respectively reported themselves unable to fulfil the required conditions of accuracy. Moreover, the first results attained with a check analysis, which the Treasury thought it right to undertake on their own part, for the substances first taken in hand did not give satisfactory results, and had to be repeated." [This sentence is quite unintelligible.] "We are not without hope that this matter, which we shall certainly not allow to fall away from notice, will be carried out now to a successful and widespread conclusion."

Inciting to Steal.

At the Guildhall Police Court, on Tuesday, George Gellis, 35, described as a commercial traveller, was charged on remand, with inciting, on September 3 and 5, John Nicholas Gregora, to steal a quantity of Steadman's soothing-powders and pills. He was further charged with receiving the articles well knowing them to have been stolen. Mr. Humphreys prosecuted. John Nicholas Gregora stated that he was a warehouseman in the employ of Messrs. Newberry & Sons, druggists' sundriesmen, of King Edward Street. He had been in their employ for nineteen years. He had known the prisoner between four and five years. On September 3 he saw the prisoner in King Edward Street, and had some conversation with him. There were two fellow-servants present on the occasion, Gage and Welch. The accused opened the conversation. He said, "I have been to a ball recently, and have bought an estate. I have also bought a shop in Ludgate Hill." This much was addressed to Welch, and he added, still addressing Welch—"Come down a little lower, and I will give you 5*l*." On hearing this Welch left. He (witness) and prisoner then went to the White Hart public-house, in Little Britain, where the prisoner said, "How much do you earn a week?" Witness said, "About 30*s*." Prisoner said, "I can put you up to making 1*l*. a day," adding, seemingly without any meaning, "Steadman, Blair, Cockle." Prisoner went on to say to him, "I'll give you a good price for any 2*s*. 9*d*. articles you can get. You know what I mean; no risk to you." He then asked, "Who has charge of your stock?" The witness replied, "Gage is our head man." Prisoner replied, "I cannot work with John (meaning Gage); he is a fool." Witness then left, agreeing to meet the prisoner on the following Monday at the same place. On the Monday following—September 5—he made a statement to the manager, and to the firm. On this day, as by arrangement, he met the prisoner at the White Hart, Little Britain. After a little conversation the prisoner said, "Have you got anything

now?" He said, "No." In answer to other questions, witness said he could get him some things on the following day, and asked where he should meet him. Prisoner said, "Here." Witness said, "Too open." Prisoner said, "I will show you a quiet place." They then went to the Admiral Carter, Bartholomew Close. It was then agreed that they should meet at the Angel, Islington, on the night following, at 8 o'clock. Witness had already spoken to Detective-inspector Davidson, and by his direction had marked some packets. On September 6 he met the prisoner outside the Angel. They went into a public-house close by. Having had a drink they went into the backyard, and he said, "Have you got anything?" "Yes," was the answer. Accused said, "Give me the parcel" (produced), and witness handed it to him, and he said, "I have not got any money; you must come down to my shop in Fleet Street, when you can have it." They rode in an omnibus, and prisoner gave him a sovereign. He had previously told him he gave 8*s*. a dozen for 2*s*. 9*d*. articles, or he did not mind even 10*s*. This meant for goods the wholesale price of which ranged from 22*s*. to 24*s*. 6*d*. per dozen, or 2*s*. 9*d*. a packet or box. After prisoner had given him the 20*s*. he made out a list of goods he wanted him to bring. Later on he was apprehended. Thomas Crook, manager of Wray's City of London Stores, Fleet Street, stated that he had known the Prisoner for some time. On September 6 he called three times, asking witness to lend him money, stating that if he did not his landlady would turn him out of his lodgings. Eventually he lent him 35*s*. on a parcel of patent medicines, accused stating that he would call for them the following morning and pay the money he had borrowed. Prisoner, who had pleaded guilty, was remanded for a week.

Death from Drinking Aromatic Vinegar.

Mr. Carttar held an inquiry at the Dispensary, Woolwich, on Monday night, into the death of Arthur Austin Lumb, aged 2 years, son of William Lumb, 7 North Kent Grove, Woolwich. The deceased, who was very active for so young a child, had drunk some aromatic vinegar. He was taken by his sister to the nearest chemist, who gave her some fluid magnesia and olive oil. The aromatic vinegar was a pennyworth which an elder brother had obtained to put on a wart.

Mr. Still, chemist, 36 Church Street, Woolwich, said the child was taken to his shop and was given an emetic. He came again next morning, and was not looking ill in the face. Witness looked at his throat, and, noticing some phlegm, supplied a little cough-mixture. Mrs. Still said she had assisted her husband in his business ten or eleven years, and stated that deceased was taken to her and she gave him an emetic. She did not think there was any occasion to have a doctor. Dr. Beard, 2 Eleanor Road, Woolwich, said he was called on Saturday and found the child dying. He had made a *post-mortem* examination and found all the organs healthy. There were no external marks of violence. He attributed death to exhaustion consequent upon having taken aromatic vinegar. He might have saved him if he had been called in some hours earlier. Aromatic vinegar was fourteen times as strong as ordinary vinegar.

The jury returned a verdict of "Death from misadventure."

The Coroner remarked that the case was a very peculiar one. It was very necessary that anything of a dangerous character should be labelled "Poison," and that such things should be put out of the way of children. He hoped that Mr. Still would not be sparing of his poison-labels.

Irish News.

Drug-contracts.

Tenders for drugs and medicines, surgical and medical appliances are invited by the following Poor-law Boards on the dates subjoined:—Ballymahon, September 22; Dingle, with four dispensaries, September 22; Enniskillen, with several outlying districts, September 20; Gort, September 17; Irivinstown, and several dispensary districts, September 21; Kells, September 17; Kilrush, September 17; Newry, and ten dispensaries, September 17; Roscommon, September 24; and Tralee, with six dispensaries, September 21.

Messrs. Hunt & Co., of Westland Row, Dublin, have been

declared contractors to the Board of Guardians of the Waterford Union for the supply of drugs, &c.

Correction.

In our summary of the Council's proceedings last week, page 388, it was stated that Mr. Gorman had obtained from the Lord Lieutenant a reduction of the fines imposed. It should have been Mr. Cosgrave. As shown by our reports, no conviction was obtained against Mr. Gorman.

The Council Election.

The druggist candidates at the coming election for the Pharmaceutical Council are:—Sir James Haslett, Belfast; W. J. McNeight, Dublin; Stanley Harrington, Cork; James Hanson, Dublin; W. T. Moore, Linen Hall, Dublin; J. T. Smallman, Westland Row, Dublin; and Samuel Turkington, Cookstown. Mr. S. Gibson, Belfast, also offers himself for re-election.

Seizure of Methylated Spirit.

Last week the Dublin Excise authorities made a seizure of a quantity of methylated spirit on the premises of Messrs. Boyd & Goodwin, druggists, 6 Merrion Row, Dublin. It is alleged that the spirit does not contain the requisite proportion of naphtha, or mineral oil. Mr. Samuel Boyd, a partner in the firm, is the only licensed maker of methylated spirit in Dublin.

Assistants' Examination.

Candidates for the qualification of Assistants to Pharmaceutical Chemists who purpose presenting themselves at the examination to be held on Wednesday, October 12, in Dublin, are required to give notice to the registrar on or before Tuesday, September 27, and forward lodgment receipt of Bank of Ireland for the fee, 2*l.* 2*s.*

The Castlerock Mistake.

The inquest on the child at Castlerock whose mother had, before its birth, partaken of the tartar emetic served in mistake for tartaric acid, was resumed on Tuesday. Professor Leebody deposed that he found traces of antimony in the liver and kidneys of the child, and Drs. Steele and Ronaldson stated that the small quantity of poison found in the child's system would be sufficient to produce convulsions, from which it died. The jury found a verdict of death from misadventure.

Mr. Alexander Mullen, chemist and druggist, Castlederg, writes to us stating that "in the report of the Council of the Pharmaceutical Society" (we do not know what report he refers to) it is stated that the Rev. Dr. Irvine's family, to whom the tartar emetic was supplied in error for tartaric acid, reside at Castlederg. Mr. Alexander Mullen says he is the only chemist in Castlederg, and he naturally wishes that the confusion between Castlederg and Castlerock should be set right.

Scotch News.

The Aberdeen Classes.

Mr. George Cowie, the tutor appointed by the Aberdeen and North of Scotland Society of Chemists and Druggists, has resigned the appointment, owing to his time being fully occupied with his medical studies. A vote of thanks to Mr. Cowie for his services was passed at a meeting of the Society on September 7.

Proceedings in Glasgow under the Sale of Food and Drugs Act.

From a report submitted to the fortnightly meeting of the Glasgow Police Commissioners on Monday, it appears that the inspectors under the Food and Drugs Act are again bestirring themselves. They "booked" a local chemist the other day for selling olive oil, alleged to be adulterated with 25 per cent. of cotton-seed oil; but as a guarantee from the manufacturer to the wholesale house, who supplied the retail merchant with the oil was produced, the case was dropped. The chemist, however, had to pay the costs incurred, amounting to 1*l.* 6*s.* 6*d.* The guarantee was given by a firm in London, and therefore the authorities here cannot proceed against the manufacturer. It was also reported that the sanitary inspectors had within the past fortnight purchased four samples of salicylic acid and four of tartaric acid for analysis under the Food and Drugs Act.

French Pharmaceutical News.

(From our Paris Correspondent.)

NAPOLÉON III.'S TOILET PURCHASES.—M. Zola's statement in "La Débâcle" that the late Emperor of the French was painted and powdered at the time of his surrender at Sedan, has called forth many contradictions. Among these is one from the daughter of the Emperor's *coiffeur* (now deceased). This lady, Mlle. Caumont, keeps a small perfumery-shop in Paris, and an enterprising reporter has induced her to show him her father's account-books to prove the nature of the articles supplied to Napoleon III. It transpires that the latter's supply of scents and cosmetics was restricted to eau de Cologne, almond-soap, and a little perfume.

AN AMERICAN DENTIST, who occupies a sumptuous apartment in a much-frequented avenue near the Palais Royal, has just been summoned by a wealthy lady for the recovery of money paid to him. It appears that the dentist in question undertook to extract eight teeth from his patient and to afterwards "replant" them, the remuneration arranged being 100*f.* for each tooth; but the practitioner sent in a bill on which he charged 125*f.* per hour for the time occupied by the operation, managing in this way to increase the total to 2,400*f.* All would probably have gone well, but the teeth dropped out one by one, and finally the patient demanded to have her money reimbursed, offering at the same time to allow the dentist 400*f.* for his trouble. The latter declined this arrangement and, consequently, the matter will shortly be sifted in a court of justice. Another lady, a compatriot of the dentist, has made public the following bill from the same dentist:—

	f. c.
One porcelain crown	120 0
One orification in the same	15 0
One tooth set in plaster	85 0
Cleaning and polishing the teeth	20 0
Inhalation for the nerves; extracting a nerve, &c.; more than 10½ hours' work at 125 <i>f.</i> per hour	1,312 50
Total	1,612 50

A TERRIBLE EXPLOSION, due to imprudence, took place on Saturday afternoon last at 25 Rue de Buffon, Paris. It occurred on the premises of M. Chapron, an enameller of photographs. M. and Mme. Chapron, with their young son and daughter and two female assistants, were in the work-room, which contained a considerable supply of chemicals, including four large bottles of collodion, each containing about 15 litres. In handling one of these, Mme. Chapron let it drop, and the liquid spread about the floor. Those present immediately went to work with sponges to save as much of the collodion as possible. But the vapours of the ether and alcohol rapidly filled the room, and spread to the adjoining drying-room, where a stove was kept continually alight in order to facilitate the operation of drying the photograph-plates. The door of the drying-room had been left open, and suddenly the vapour took fire by coming into contact with the stove. The explosion was tremendous—the house shook to its base, and the windows were blown out. Then a fire broke out, and the heat caused the remaining bottles of collodion to burst one after the other, naturally increasing the damage immensely. The two assistants jumped out of the window into the garden, injuring themselves severely. René Chapron, the son, was badly burnt on the neck and hands. He also attempted to jump from a window, but his courage failed, and he hung to a shutter. He was rescued, but only to die shortly after. The little girl Suzanne rushed down the stairs with her clothes in flames. Continuing her mad course, she reached the Jardin des Plantes, and by the time she was stopped and the flames extinguished, her body was found to be already partly carbonised. The remains of M. Chapron and a servant-girl were found in the ruins of the premises, after the flames had been extinguished by the firemen, almost in cinders. Mme. Chapron escaped by the staircase, but is so severely burnt that she lies at a hospital in a most serious condition. The little girl died in great agony in her grandfather's arms at 11 o'clock the same night.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council of this Society was held at 67 Lower Mount Street, Dublin, on Wednesday, September 7, at 3 p.m. Present: Mr. William Hayes (President, in the chair), Mr. Begg's (Vice-President), Mr. Hodgson (Treasurer), Messrs. S. P. Boyd, H. Conyngham, R. J. Downes, Charles Evans, Gibson, Grindley, Merrin, J. Montgomery, Simpson, and Wells.

THE LATE MR. DORAN.

The PRESIDENT said before they proceeded to the business of the day he had the melancholy duty of proposing a vote of condolence with the family of the late Mr. A. E. Doran, who had been a member of the Council for many years, and had served them faithfully. He had known Mr. Doran for more than thirty-four years, and could bear testimony not only to that gentleman's exemplary and honourable conduct in business, but also to his high social and Christian attainments. He had never known anything in his character that anyone could cavil at or that was unworthy of a Christian gentleman. He was an ornament to the Council, who had sustained a great loss by his death, and he was sure they all sympathised with his family in the loss they had sustained. He begged to move—

That the Council have heard with sincere regret of the death of Mr. Alexander E. Doran, who was one of its oldest members on the Board, and desire to convey to his family their sincere sympathy with them for the irreparable loss they have sustained.

MR. HODGSON, in seconding the motion, said he endorsed everything that the President had said of Mr. Doran. Mr. Doran commenced his commercial career in the house in which he (Mr. Hodgson) had the privilege of being one of the members, and a more faithful and upright assistant never was in any establishment. After he left them and went into business for himself he conducted his house with the greatest uprightness and correctness. He was a man of the utmost probity, and one on whom the most implicit reliance could be placed. He was one of those who assisted at the original formation of the Society, and gave a great deal of his time and attention to the arduous work that had to be done for the accomplishment of that object. His intimacy with Mr. Doran lasted to his death, and he now sincerely mourned his loss.

MR. DOWNES said that he was in the employment of Mr. Doran for some time, and he found him everything that the President and Mr. Hodgson had said. On an occasion when he was in delicate health, and had to leave in consequence, Mr. Doran treated him with extreme kindness.

The resolution was passed in silence.

ELECTION OF COUNCILLOR POSTPONED.

The PRESIDENT said the next business was the election of a member of Council in the room of Mr. Doran, but it had been suggested to him that it would be well to leave that until the next meeting of the Council.

MR. HODGSON said it should be distinctly understood that taking that course was without prejudice to the Council's right of co-opting. They did not co-opt now because they were on the verge of the annual elections.

MR. MONTGOMERY and MR. WELLS also advocated the postponement of the election.

THE RECENT PROSECUTIONS.

The PRESIDENT said the Council would doubtless like to hear a statement from him in reference to the recent prosecutions. There were two in Bangor, in the north of Ireland. One was of a Mr. Gorman, and the magistrates there—as they generally were—were strongly against the Pharmaceutical Society, and leaned as much in favour of the person prosecuted as they thought justice permitted. They dismissed the case against Mr. Gorman, stating that they considered the evidence insufficient; but at the same time they showed that they considered he had broken the law by ordering him to remove from his window by the next morning the words “dispensing chemist.” That proved that the prosecution instituted by the Society against him was just. The other prosecution was against Mr. Samuel

Cosgrave, of Bangor. He was convicted of two breaches of the Pharmacy Act and fined 5*l.* in each case; at the same time, the magistrates recommended that the penalties should be reduced to 2*l.*s. in each case. The remaining prosecution was one against Messrs. Samuel & Walter Boyd, which occupied three days in the Police Court. Last April prosecutions were instituted against that firm which were to some extent compounded by the cases not being opened in court but settled without much publicity, and at the same time a written guarantee was given by Messrs. Samuel and Walter Boyd that they would not again transgress in any way the Pharmacy Act. Yet no sooner was the guarantee given than they began systematically to evade it by receiving prescriptions from old and new customers, compounding for the former in their own house and for the latter getting them compounded elsewhere and dispensing them themselves. This the Law Committee was satisfied was a breach of the law, though as such a case had not been tried before there was some doubt as to what view the magistrate would take of it. The magistrate, however, took a very common-sense view in this case, though it was apparent that he was no friend of the Pharmaceutical Society, as few of the magistrates appeared to be, and he could do nothing less than convict the defendants. He did not think he need enter into the matter further, as it was still under consideration: whether it would go further or not rested not with the Council, but with the defendants. He might say, however, in passing, that he thought that if they were wise they would let matters remain as they were. He had now to refer to a correspondence which had taken place between Mr. Galway, the solicitor for the Council in the Bangor prosecutions, and the Castle, in reference to the case of Mr. Cosgrave, the penalties imposed on whom had been reduced to 1*l.* in each case. He was extremely surprised at this correspondence and felt strongly that the authorities were trying to stultify the action of the Council in the matter. On September 1 Mr. Galway wrote the following letter to the Under-Secretary of the Lord Lieutenant:—

Pharmaceutical Society v. Cosgrave.

SIR,—In this case I acted as solicitor for the Society in a prosecution against Samuel Cosgrave, at Bangor, county Down, on the 17th ult. The magistrates came to a unanimous conclusion, as stated by their Chairman, that defendant had been guilty of two distinct breaches of the Pharmacy Acts, on the two dates for which he was summoned, and as there were four summonses this meant four fines. Upon hearing that 5*l.* was the fixed amount of the fine which followed each infringement of the Act, the Bench took the extraordinary course of dismissing one summons for each date, by way of reducing the amount of the fine. I am now informed by the Petty Sessions Clerk of the district, to whom I have written for the third time to issue a warrant to collect the amount of the fine, that defendant has sent in a memorial to the Lord Lieutenant, praying to have the fine still further reduced. I wish to ascertain if it is open for the Society in any way to oppose this memorial, as defendant has, since the hearing, been guilty of conduct which very considerably aggravates his offence—an offence which, I regret to say, is becoming very common in this district.

I am, Sir, your obedient servant,

W. B. GALWAY.

In reply to that letter Mr. Galway received the following:—

Dublin Castle, September 5, 1892.

SIR,—I have to acknowledge the receipt of your letter of the 1st inst., and to inform you that their Excellencies were pleased, on the 31st ult., to order that the fines imposed upon Samuel Cosgrave at Bangor Petty Sessions, on the 17th ult., be reduced to 1*l.* in each case.

I am, Sir, your obedient servant,

F. J. CULLINAN.

On September 6, Mr. Galway wrote the following letter to the Registrar of Petty Sessions Clerks, Dublin Castle:—

Pharmaceutical Society v. Cosgrave.

SIR,—On the 17th ult. I obtained a conviction against Samuel Cosgrave, druggist, Bangor, county Down, and the magistrates imposed two fines of 5*l.* each, and 1*l.* costs of each fine. A memorial was sent on to His Excellency, and, as a consequence, the fines have been reduced. I have been endeavouring to get the Petty Sessions Clerk of the district to collect the amount of the fine, but only received an impertinent communication to my first letters, and none at all to my subsequent correspondence. The Society instruct me to write to you with the object of having the fines collected. I am not aware of any reason why the Society or myself should be treated with such discourtesy; but this is not an exceptional case.

I am, Sir, your obedient servant,

W. B. GALWAY.

Now gentlemen, continued the President, you have the whole case before you. The Law Committee in their report recommend that a certain course should be taken, and I think you will approve of it.

Mr. MERRIN: I don't know whether I shall be in order in alluding to a matter in connection with this prosecution. It is with reference to the conduct of a member of the Council in connection with these prosecutions.

The PRESIDENT: I think perhaps it would be better not.

Mr. BOYD: If the statement has reference to me I would rather it was made at once.

The PRESIDENT: I think it would be better not to have any discussion.

Mr. BOYD: I was going to mention to the President, if he will allow me, that my name has been very unfortunately introduced into these prosecutions, and I cannot understand on what ground or pretext.

Mr. WELLS: I rise to a point of order. The President has ruled that one member of the Council should not open this up, and if one member is not allowed to do so I think no other should.

The PRESIDENT: I think it would be wise for Mr. Boyd not to speak.

Mr. BOYD: I am quite willing to allow that it was a mistake on the part of the committee to have brought my name in, but they should acknowledge it.

Mr. GIBSON: With reference to what the President has said about the Bangor magistrates, I was present at the case, and I must say I think they gave it a very patient hearing. It did not seem to me that they were biased on either side.

Mr. MERRIN: I think we might say the same thing of the Dublin prosecutions, Mr. President.

Mr. GIBSON: The Bangor magistrates were not of opinion that Mr. Gorman had broken the law at all. The reason they ordered the sign to be taken down was because Mr. Gorman, jun., told them that he had given over possession of the premises.

Mr. WELLS: Who is Mr. Gorman, jun.?

Mr. GIBSON: He is a licentiate of this Society.

Mr. WELLS: As Mr. Gibson has raised the question it is only right that the Council should know the truth of the matter. Mr. Montgomery can tell you more about it than I can; but we are told that the magistrates acted fairly. I must say they did not. We have in our possession a letter from Mr. Gorman, the druggist, in which he states distinctly—

Mr. CONYNGHAM: I don't think this is the place for this. We shall be here all night.

The PRESIDENT: If Mr. Gibson's statement is withdrawn we will close the matter; but if he makes a statement which another member differs from he has a right to reply to it.

Mr. GIBSON: I was present in Court, and, as far as I could see, the magistrates were not biased.

Mr. MONTGOMERY: I think it would be better to postpone any further discussion of the matter until after the case has been finally decided. It was dismissed without prejudice, and can be gone into again; and it is quite possible that we may be able to produce evidence to prove who the owner of the house is.

Later on,

The PRESIDENT stated that, with the approval of the Law Committee, he proposed to address the following letter to the Under-Secretary of the Lord Lieutenant, in reference to the case of Mr. Cosgrave:—

To Sir West Ridgeway, Under-Secretary, Dublin Castle.

SIR,—I am directed by the Council of the Pharmaceutical Society of Ireland to ask you to bring before His Excellency the Lord Lieutenant and the Privy Council the subject of the correspondence between you and our solicitor, Mr. Galway, *in re* Cosgrave, Bangor, co. Down, by which it appears that the fines imposed on this person have, on memorial, been reduced by the Privy Council from 5*l.* to 1*l.* in each case. My Council desires me to say that it feels greatly astonished at such a course being adopted without being consulted in the matter. His Excellency and the Council can scarcely be aware of the very arduous duties which devolve upon my Council in connection with the administration of this Act, as breaches of the Act are so alarmingly widespread that it is found almost impossible to cope with them with the very limited means at its disposal; and if it is thwarted or unaided by the authorities in carrying out and vindicating the law my Council feels that it has no other course left but to allow the Act to become a dead letter, thus jeopardising the safety of

the public and making the state of things worse than before the Act was passed.

Under such circumstances, my Council considers that it can have no other alternative but to surrender the trust imposed upon it by Parliament into the hands of His Excellency the Lord Lieutenant and the Privy Council, and perhaps His Excellency will consider the advisability of appointing paid commissioners to carry out the law.

I am, Sir, your obedient servant,

WILLIAM HAYES, President.

N.B.—His Excellency and the Privy Council may not be aware that the Society's inspector, who proved the cases against the defendant, is entitled to one-third of the penalty inflicted; and it will be necessary to be informed from what source that portion of the penalty is to be obtained. My Council is also desirous to know if the Privy Council have the power to override the Act, clause 30 of which states that for every offence proved the penalty is to be 5*l.*, neither less nor more.

Mr. CONYNGHAM: I think the Privy Council have treated this Council with great disrespect.

The PRESIDENT: Very great disrespect.

Mr. MONTGOMERY: Was any inquiry made of us as to the nature of the case?

The PRESIDENT said that when he was first told of the correspondence at the meeting of the Law Committee on the preceding evening, he could scarcely believe that such a thing could have taken place without the Council being first consulted. The matter was a very serious one.

Mr. BOYD said he admitted that the matter was serious, but thought that the tone of the letter might be modified.

The PRESIDENT said he was never more serious in his life. They must either carry out the law and carry on the Society or surrender their trust. There was no other alternative.

Mr. WELLS: What's the use of carrying on the Society if the law is to be evaded right, left, and centre, and the Lord Lieutenant makes it impossible for us to get the penalties? It shows the interest that is taken in helping the breakers of the law. Here you have the magistrates on the bench opposed to convicting, and then you have the Lord Lieutenant, without rhyme or reason, assisting those magistrates by reducing the penalties. It is a farce on the face of it.

Mr. GIBSON: I really think those charges should not be made against the magistrates. The magistrates ought to be above suspicion.

Mr. WELLS: They ought. Hear, hear! They are not. The idea of men saying, "You are not guilty; but don't do it any more"! That's what happened the other day.

Mr. GIBSON: Are you referring to the Bangor magistrates?

Mr. WELLS: Yes.

Mr. GIBSON: They did not do that.

Mr. WELLS: They said, "You are not guilty, but take down the sign."

Mr. BOYD thought it was rather soon, without any intermediate communication, to address the Privy Council so sharply as was proposed.

The PRESIDENT: I don't think we are addressing them sharply. We are addressing them in plain English.

The VICE-PRESIDENT: You cannot present the case in less strong language than you have there.

Mr. GIBSON said the magistrates recommended that a memorial should be sent to the Lord Lieutenant.

Mr. WELLS: We did not hear that before.

The VICE-PRESIDENT: It shows how lenient the magistrates are to law-breakers.

Mr. GIBSON: The magistrates, in fining him 5*l.*, said that if a memorial were sent up to the Lord Lieutenant—

Mr. MONTGOMERY: That's not what took place at all. It was to the Council. They said nothing about the Lord Lieutenant.

Mr. GIBSON: I understood it was to the Lord Lieutenant they said the memorial should be sent.

Mr. MONTGOMERY: The defendant's solicitor spoke to me, and I told him that I had no power to reduce the fine or recommend its reduction, and that the only person who could reduce it was the Lord Lieutenant.

Mr. BOYD: My idea is that a letter should be written to the Privy Council asking them is it a fact that such a thing has taken place without this Council being consulted in the matter.

The VICE-PRESIDENT: But surely we have their letter.

Mr. BOYD: But the letter went to the solicitor.

Mr. WELLS: He wrote on our behalf to know if it was true.

The PRESIDENT: We have been ignored in the matter.

Mr. GIBSON: You say that breaches of the Pharmacy Acts are widespread.

The VICE-PRESIDENT: They are.

The PRESIDENT: If you were on the Law Committee, and had to go through the cases that we have to go through week after week, you would be horrified.

Mr. CONYNGHAM: Stationers and all sorts of people are selling chlorodyne.

It was then agreed that the President should be authorised to forward the letter.

EXAMINER IN PHARMACY APPROVED.

A letter was read from the Privy Council enclosing a copy of an order approving of the appointment of Mr. T. W. Robinson, M.P.S., as one of the Society's examiners.

THE CASTLEROCK CASE—TARTAR EMETIC FOR TARTARIC ACID.

A letter from Sir West Ridgeway forwarded the following report, which had been received from a sergeant of police:—

County of Londonderry, Castlerock, August 9, 1892.

I beg to report that on yesterday evening Miss Flora Irwin sent Charles Warke into Mr. James Mullen's, of Castlerock, to get her 2 oz. of tartaric acid. Charles Warke brought her a small parcel marked tartaric acid, which she took home, and it was made into a kind of cooling drink, and was partaken of by the Rev. Dr. Irwin, Mrs. Irwin, Misses Annie, Mary, Harriet, Alice, Eva, and Flora Irwin, Miss Todd and Willie Todd, Mrs. Gardiner, and Dr. William Irwin. A short time afterwards they all took ill. Dr. Irwin, jun., asked to see the tartaric acid that the drink was made out of, and when he saw it he thought it was arsenic, and prescribed for the party and encouraged vomiting. He then went to Mullen's and asked to see the bottle that Mr. Mullen had given the tartaric acid out of. Mr. Mullen showed him the bottle, and he saw at once that it was tartar emetic, a deadly poison. Drs. Steel, Creery, and Brown were sent for and prescribed for them, and they all got better in a few hours except the Rev. Dr. and Mrs. Irwin, who were seriously ill, but are recovering, and almost better to-day. Mr. James Mullen is registered under the Pharmaceutical Society, dating from January 13, 1892.

Mr. FERRALL, the Registrar, stated that he had written to the Under-Secretary informing him that Mr. Mullen was not a pharmaceutical chemist, but a chemist and druggist, who had been registered without examination under section 6 of the Amendment Act.

The PRESIDENT: A charwoman also partook of the drink, and seven days afterwards was confined of a child, who died in a short time from the effects of the poison. I suppose we cannot do anything in the matter.

Mr. GRINDLEY: Except to explain to the Privy Council and the Under-Secretary the way in which we have to register these people.

Mr. BOYD: Have we looked up the papers connected with this gentleman's registration?

Mr. WELLS: I have them here.

Mr. CHARLES EVANS: It was a most terrible case.

Mr. WELLS: There seems to be an idea amongst some people in the North of Ireland that tartar emetic, tartaric acid, and cream of tartar are all the same thing.

Mr. CONYNGHAM: Do the Privy Council wish us to do anything in the matter?

The PRESIDENT: I don't think we can.

Mr. GRINDLEY: We could have his name erased from the register.

The PRESIDENT: It is in our power to recommend that his name should be removed from the register. Whether we ought to do it or not is another matter.

Mr. WELLS: Of course anybody is liable to accident. We have no information as to how the thing happened.

Mr. HODGSON: I don't think we could take any step in the matter. It is for the family to bring actions against him.

The PRESIDENT: I think the best thing to do would be to write to the Under-Secretary stating that it is in the power of the Lord Lieutenant and Privy Council to direct the seller's name to be erased from the register on the recommendation of this Council; and that, if on examination they should think such a course desirable, we would be ready to assist them.

Mr. BOYD: I don't think we should suggest it. As Mr. Wells has remarked, any man might make a mistake. Unless there was gross carelessness—

The PRESIDENT: I say that if, on inquiry, the occurrence should be found to be due to gross ignorance, so that the public would not be safe if he should be allowed to continue dealing in poisons.

Mr. WELLS: The report we have is that he was a self-made and intelligent, though not educated, man; and on that report he was registered.

The VICE-PRESIDENT: I think it only shows the Council the necessity there is for thoroughly examining the certificates of such men as come up for registration, and that we have been rather lax already.

The PRESIDENT: Mr. Mullen's case was very fully investigated before we put his name on the register. As regards the occurrence that has taken place, the stomach of the child that died is to be analysed; and the matter may afterwards be investigated in a police-court.

LETTERS OF THANKS.

Mr. R. J. Downes wrote to thank the Council for having co-opted him to a seat on the Council. Messrs. Casey & Clay wrote thanking the Council for having appointed them their solicitors. Mr. J. C. C. Payna acknowledged his appointment by the Council as their delegate to the British Pharmaceutical Conference.

Mr. BOYD suggested the desirability of delegates to these Conferences making reports to the Council.

The PRESIDENT and Mr. WELLS said this had not been usual, and Mr. Wells added that everything that took place at the British Pharmaceutical Conference was very fully reported in THE CHEMIST AND DRUGGIST. It was a most successful Conference, the delegates were well received and treated, and everything was a thorough success—both the business part and the entertainments.

Mr. T. W. Robinson wrote thanking the Council for having appointed him one of their examiners.

The PRESIDENT said Mr. Robinson had gone to London to see how the pharmaceutical examinations are conducted there. The Council should feel grateful to him for thus endeavouring to make the examination as perfect as can be.

REMITTING FINES.

A letter from Mr. Hugh Hayes, solicitor, enclosed a memorial from Mr. William Houston, of Lurgan, druggist, praying a remission of portion of four fines of 5*l.* each, which had been imposed on him for breaches of the Pharmacy Act. Mr. Houston stated that he had paid 10*l.*, and he asked for a remission of the rest on the ground of straitened circumstances. Accompanying his memorial was a recommendation from magistrates that the prayer of it should be complied with.

Mr. MONTGOMERY: Has he made any appeal to the Lord Lieutenant?

The PRESIDENT: I am not aware that he has.

Mr. MONTGOMERY said there was no doubt that Mr. Houston's circumstances were greatly reduced. On his motion, seconded by Mr. GRINDLEY, the balance of the fines was remitted.

REGISTERED DRUGGISTS.

The Examiner at the late examination for registered druggists in Dublin reported that eight candidates presented themselves, of whom six passed.

CHEMIST AND DRUGGIST CLAIMS.

Mr. BOYD asked were there many applications for registration as chemists and druggists under the Amendment Act remaining undisposed of.

The PRESIDENT: Only one or two.

Mr. BOYD: Am I in order in requesting that the Registrar be requested to lay before the Council at its next meeting the names of the applicants whose cases have not been settled?

The PRESIDENT: Yes.

Mr. BOYD: I know of two cases of men who have written for their money. It should either be sent back to them or they should be elected.

Mr. WELLS: In every case the parties have been written to to give us further evidence.

WEALTH ACCUMULATING.

On the motion of the Treasurer it was resolved that a sum of 250*l.* be invested in 2½-per-cent. Consols. This made the total of the investments about 500*l.*

NEW MEMBERS AND ASSOCIATES.

The following gentlemen were then elected members of the Society:—

Atkinson, Richard Darley, Charlemont Street, Dublin	Murray, Lewis, 17 Westbourne Place, Queenstown
Dixon, George G., 3 East Beach, Queenstown	Nicholl, Samuel C., 43 Donegall Place, Belfast
Hall, Samuel S., Bailieborough	Thompson, Robert, 24 Leeson Park Avenue, Dublin
Harley, Frank, Bridge Street, Bandon	Wheelan, Edward, Ableyview Terrace, Rithkale

The PRESIDENT submitted the following names of gentlemen for election as Associate Druggists:—

Backhouse, Henry C., Dundalk	Haslett, William, 8 Sandon Terrace, Ormeau Road, Belfast
Benson, Patrick, The Square, Tubercurry	Henderson, James, 5 Great Victoria Street, Belfast
Berry, Albert, 24 Dunluce Street, Larne	Henderson, Robert, 5 Great Victoria Street, Belfast
Black, William Boyce, Ballycastle	Hunter, Edward, Castleblaney
Bolger, John, Ferns	Jackson, David, 52 Maryville Street, Belfast
Bowman, Daniel, High Street, Carrickfergus	Kelly, Thomas, The Mart, Moate
Boyd, George, William Street, Lime- rick	Kerwick, Daniel, The Parade, Kil- kenney
Boyd, John B., Ilerton, Killiney, Co. Dublin	Kirley, Thomas, Frankford
Boyd, Walter, Merrion Row, Dub- lin	Mansfield, George de C., Weirview, Clonmel
Breen, John, Danescastle, Carrig Bannow, Wexford	M'Brian, Andrew, Gilford
Byrne, James, 27 Dublin Street, Clonmel	M'Crea, John, 93 Hill Street, Newry
Cambridge, Robert, Carrickfergus	M'Cready, George B., High Street, Donaghadee
Campbell, James A., 123 Dover Street, Belfast	M'Cready, Hugh Burns, High Street, Donaghadee
Carey, Martin, Newport, Co. Mayo	M'Donagh, Denis Michael, Athenry
Chadwick, Bartholomew, Borriso- leigh	M'Donnell, Martin, Dunmore, Co. Galway
Clarke, James, Shercock	M'Gavock, Annie, Glenarm
Cleary, William, Clara	M'Gee, Patrick, Ardee
Clow, James, jun., Emyvale, Co. Monaghan	M'Loughlin, James, Castleroa
Cosgrave, Samuel, Main Street, Bangor, Co. Down	Montgomery, Joseph, 65 Joy Street, Belfast
Cooney, George, Cross Street, Kells	Moore, Jane E., Killucan
Curry, James, Borris, Co. Carlow	Moore, Thomas, Newtownbarry
Dowling, Joseph J., 2 Lower Beech- wood Avenue, Ranelagh, Dublin	Morgan, John, Mountmellick
Doyle, James H., 1 William Street, Athy	Moss, William, 11 Camberwell Ter- race, Belfast
Egan, Patrick, Bridge House, Tulla- more	O'Neill, Anne, Newtownbarry
Farrell, Michael, Edgeworthstown	O'Neill, John F., West Gate, Carrick- on-Sair
Finn, Patrick, Thurles	O'Neill, James Edwin, Maghera
Fisher, Thomas, Dunlavin	Parker, John Henry, 69 William Street, Limerick
Gardiner, John A., 91 Bride Street, Dublin	Pelissier, Robert S., Clonmel
Garry, William, Greville Street, Mullingar	Richardson, James, 60 Anne Street, Belfast
Gelsinan, Michael, Trim	Richardson, Joseph, 60 Anne Street, Belfast
Gillespie, Thomas, Newry Street, Banbridge	Scanlon, Patrick Morris, Ballin- asloe
Gilmer, Campbell W., Wellington Street, Ballymena	Scott, Alfred C., Church Street, Portrush
Gorman, Thomas B., Bangor, Co. Down	Smallman, James S., Portarlington
Halcy, Thomas, 25 Main Street, Clonmel	Smithwick, John Francis, Brick- field House, Kilkenny
Hanson, James, 54 Capel Street, Dublin	Spencer, William O., 197 Clonliffe Road, Dublin
Haslett, John Wilson, College Gar- dens, Belfast	Valkenburg, Edward J., Balla, Co. Mayo
	Waldron, Patrick, Claremorris
	Wiley, John, Loughmorne, Castles- blaney

Mr. MERRIN said the Council were responsible for everyone that they elected, and they should therefore take care that those gentlemen were worthy of the privileges that they would acquire. They would be entitled to vote at the

annual meetings, they would obtain the official organ of the Society free, they would be entitled to visit the examinations, attend the Council-meetings and listen to the debates, and they would also become eligible for election as members of the Council. There was one name on the list to which he objected because he did not think he would make a fit and proper associate—Mr. Walter Boyd.

Mr. BOYD: If there be any objection to Mr. Walter Boyd's name, I withdraw it at once.

Mr. WELLS: He has been already prosecuted by the Society. I object to Mr. Samuel Cosgrave, and also to Messrs. James and Robert Henderson. The two latter are using the title of "chemist" at present; we wrote to them to remove it, and they are declining to do so, and it will be our duty to prosecute them.

Mr. DOWNES: I object to Mr. Thomas Gorman.

The VICE PRESIDENT: I propose that his name should be held over until the next election.

Mr. GIBSON: I, as his proposer, object to that.

Mr. WELLS: Then we must put it to the vote. We have Mr. Gorman's letter stating that he is the sole proprietor of the shop, and that his brother rented the back portion of the shop from him in which he carried on compounding. His brother got into the witness-box and swore that he owned the shop. There is an inconsistency there, and until that is cleared up Mr. Gorman's name should not be put forward.

Mr. BOYD: It is a great pity that these matters should be brought forward here. As far as I know we have never had any objection to a man who was nominated being elected.

Mr. WELLS and the PRESIDENT said there had been cases of persons nominated being objected to.

Mr. MONTGOMERY: Has there been any reply from the Hendersons as to their using the title of "chemist and druggist"?

The REGISTRAR: No.

Mr. BOYD: I am not in a position to vote about them, for I do not know the facts.

Mr. WELLS: It is one of the plainest of cases. They sent up a billhead which was printed since the Act passed and in which they call themselves "druggists and grocers," saying nothing about "chemists." Now they want to use the title of "chemists."

Mr. BOYD: Have they put that title up since they were registered?

Mr. WELLS: They have it up now. The Law Committee have the matter in hand at present.

Mr. BOYD: Have they made any application to the committee to be allowed to retain the name they used before?

The PRESIDENT: The Council have refused to entertain their application to be re-registered and have called on them to take down the title "chemist and druggist."

The VICE-PRESIDENT: And they won't do it.

The PRESIDENT: I think it is quite right that law-breakers should not be members of our Society.

Mr. GIBSON: I think they are willing to contest the point with you as to whether they are law-breakers or not.

Mr. CONYNGHAM: Why don't they write in an honourable manner to say that they claim the right to do it?

Mr. WELLS: We will go further with them if they defy us. It will be our duty to bring their names before the Lord Lieutenant, and recommend to have them erased from the register.

The PRESIDENT then submitted all the names in the list save those of Mr. W. Boyd, which had been withdrawn, and Messrs. Cosgrave, Gorman, and J. and R. Henderson, and they were unanimously elected.

Before proceeding to vote as to the others, Mr. GIBSON appealed to the Council to admit them. In the face of certain circulars, refusal, he thought, would look bad. Challenged by Mr. Wells, he then read the circular, signed "W. F. Wells, jun.," of which we gave a summary on August 6, and which said that a strong effort was being made by a wholesale firm in Dublin to put off from the Council the six retiring pharmaceutical chemists, and to put in their place six druggists. This, it was said, would give the control of pharmacy very largely into the hands of those whose trade interests are quite opposed to the best interests of pharmacy. There were several misrepresentations, Mr. Gibson said, in that circular. This Mr. Wells denied, and the President asked what reason was suggested by the circu-

lar why the four gentlemen named should or should not be elected?

MR. GIBSON: The way I look at it is that if these gentlemen are elected they will be entitled to vote, and that it is because of that that they are objected to. (Cries of "No.") He objected to the statement that druggists are opposed to the interests of pharmacy. The members of the Council had no right to say that: when the Society was in low water, and when the druggists had it in their power to crush the Society, they did not do so. (Laughter, and cries of "Question.") They passed for them a Pharmacy Bill, which was a much better Bill than any they could have hoped to pass for themselves.

MR. MONTGOMERY: All we ask the druggists to do is to adhere to that Bill.

MR. WELLS said he need not defend his circular. He might say it was sent out in opposition to another which was issued by the "wholesale house" referred to.

MR. BOYD: What house?

MR. WELLS: Hugh Moore & Co. They not only sent out circulars, but sent travellers right and left through the country blackguarding my character, and that of my father. They may throw mud on me, but it won't stick.

MR. MERRIN: Mr. Gibson ought to bear in mind that when he was returned last October it was by the votes of the pharmaceutical chemists, and not of the druggists.

MR. WELLS: We voted for him to a man.

MR. MERRIN: And this is the thanks we get for it.

MR. BOYD: I don't think it was right to say in the circular that the druggists are opposed to the best interests of pharmacy. That appears to me to be the objectionable part of the circular.

MR. WELLS: It is the "wholesale firm" that is referred to. I would not think that Mr. Hodgson would think that any of us were hitting at his firm. He has acted most honourably, and if we could get a few more wholesale men to act as honourably as he has done it would be a credit to us and a credit to the druggists.

MR. BOYD: I take the greatest interest in pharmacy, and I shall continue to take an interest in it and to do my best to forward its interests in every way. I must take exception to the statement in that circular that the druggists as a body are opposed to the best interests of pharmacy. It is all nonsense.

THE PRESIDENT: Well, gentlemen, to go back to the subject we have under consideration. I have to put the question as to whether you will accept or reject the four gentlemen whose names are before you.

MR. BOYD: Take them separately.

This was done by the President, who took a separate vote as to Mr. S. Cosgrave, Mr. Gorman, and Messrs. J. and R. Henderson, and in each case the candidate was rejected by eleven votes to two. In reply to Mr. GIBSON, the PRESIDENT said that in each case Messrs. Boyd and Gibson voted for the candidates, and all the other members of the Council present voted against them.

Several candidates for election having been nominated, The Council adjourned.

Business Changes.

MESSRS. KNOWLES & PHILLIPS, of the Minories, are about to open the "Gresham Pharmacy," at the corner of Gresham and Basinghall Streets.

MR. HENRY EVERITT, formerly of 509 Fulham Road, S.E., and late of Southsea, has purchased the branch business of Mr. John Smithson, of Brighton.

THE business of the late Mr. John Silver, manufacturer of pills and oils, Croydon, has been purchased by Messrs. H. J. Deacon & Co., chemist, Beckenham.

MR. P. H. BRACHER, the inventor and patentee of the "Desideratum" mixer, and other apparatus, has purchased from Messrs. John A. Gilbert & Sumnerling the mill, scale, and general outfitting portion of their business, and, with the assistance of Mr. H. J. Webb, will carry on this business, including canister-making, and will supply his own inventions, under the style of John A. Gilbert & Co., at 4 Mount Pleasant, Gray's Inn Road, London, W.C.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

DICKINSON—CHARGE.—On September 7, at St. Cathbert's Church, Bedford, by the Rev. G. C. R. Read, Frederick Dickinson, chemist and druggist, son of Mr. Frederick Dickinson, J.P., of Stamford, to Eunice Mary, only daughter of Mr. Charles Charge, J.P. (late of Stamford), of Dodding-ton House, Bedford.

EGGINTON—BEDDARD.—On September 12, at St. John's Church, Kidderminster, J. T. Egginton, chemist, Sedgley, to Mary Elizabeth Beddard, of Kidderminster.

INCE—EBHART.—On September 10, at St. Thomas's Church, Shepherd's Bush, by the Rev. Henry Small, M.A., vicar, Charles Edward Marzials Ince, eldest son of Joseph Ince, F.L.S., F.C.S., to Emily Elizabeth Ebhart (Millie), eldest daughter of the late Frederic William Ebhart, of H.M. War Office, Pall Mall.

MILLER—TAYLOR.—On September 3, at Zion Chapel, New Cross, George James Miller, of the firm of J. & G. Miller, herb-growers, &c., Mitcham, to Emily, third daughter of Charles Taylor, of Malpas Road, Brockley.

WHITE—JOHNSON.—On September 13, at St. Mary's Church, Leicester, by the Rev. H. Orford, Annie Margaret, only daughter of Mr. J. E. Johnson, Highcross Street, Leicester, to Sydney Bowring White, chemist and druggist, Ibstock, Leicester.

DEATHS.

LUMSDEN.—The death is announced of Mr. James R. Lumsden, chemist and druggist, at Tarves, Aberdeenshire. Mr. Lumsden was for some time in South Africa, and for several years in London with Messrs. S. Maw, Son & Thompson. He enjoyed in more than ordinary degree the confidence of the medical profession in the district, and was recognised as possessing a very wide knowledge of pharmacy. But it was in his personal capacity that he will be remembered even more widely than in his professional, and many of the poor people who have been recipients of his gratuitous kindness will long have the warmest recollection of his timely assistance in the hour of need.

MACTAVISH.—At Inverness Villa, Shanghai, China, suddenly, on July 29, James William Mactavish (of Mactavish & Lehmann, Limited, chemists and druggists). Aged 43 years. The following notice appears in the *Shanghai Mercury* of July 30 last:—"Mr. J. W. Mactavish, whose sudden death last evening gave everyone such a painful shock, was not a very old resident of Shanghai, but he had been here long enough to make a whole host of friends in every rank of life, and to have his sterling qualities, generosity, and thoroughly good heart widely recognised. His death occurred about 8 o'clock last evening; he was in apparently perfect health up to 3 P.M., when he was seized with an attack of his heart, and though medical attendance was promptly at hand he never rallied, and expired at 8 o'clock at his residence, Inverness Villa, Bubbling Well Road. Mr. Mactavish, who was 43 years of age, was a native of Inverness, and leaves a wife and two children to mourn his loss. His funeral took place this evening and was attended by a very large concourse of mourners. It is not too much to say that his death threw a gloom over every section of the community to-day. No better Scot ever came to seek his fortune, and to find a grave on Chinese soil."

PADWISSOTSKY, the Russian pharmacognosist, whose researches on podophyllum and kindred subjects are so well known, recently died at Kasan, where he held the University chair of pharmacognosy and pharmacy. He was in his seventieth year.

SCOTT.—The death is announced, at the age of 64, of Mr. George L. Scott, a successful druggist, of Paris, Ont. He was a native of Dundee.

A CHANGE.—Mr. Thomas Jardine succeeds Mr. Charles Cunningham as town representative for Messrs. T. & H. Smith & Co., of Edinburgh. Mr. Cunningham will take a country journey.

Educational Information.

A Summary of the Legal Conditions for the Practice of Pharmacy, Medicine, Dentistry, and Veterinary Surgery, with particulars of Practical Knowledge, Education, and Examinations required therein.

Also Statements regarding Education and Examinations in Science and in Agriculture, and Honours in Pharmacy.

PHARMACY.

As far as education and examination are concerned, pharmacy becomes year by year more of a professional calling than it was wont to be. As a business occupation it is on a par with all other shop trades in the matter of competition, which is fierce, keen, and killing. It has been so for twenty years and more, and although there is little sign of abatement in that direction, matters look a trifle more hopeful now, perhaps because chemists have become used to the new order of things, and probably also because many weak ones have succumbed in the struggle, thus leaving their share to the survivors.

Those who are beginning pharmacy do not trouble themselves much about these matters. That is fortunate, for there are other things of more immediate interest which it is well that they should be better acquainted with. In the first place, they must impress strongly upon their minds that pharmacy is not a free trade in the sense that a grocer's or draper's is. Every shop trade requires for success that those who follow it should be gifted with business ability. Pharmacy needs, in addition to that, a definite standard of elementary education and professional knowledge, in order that one branch of the business—namely, the dispensing and retailing of poisons—shall be properly conducted. This was decreed by the Pharmacy Act of 1853, which begins thus:—

Whereas it is expedient for the Safety of the Public that Persons keeping open Shop for the retailing, dispensing, or compounding of Poisons, and Persons known as Chemists and Druggists, should possess a competent practical Knowledge of their Business, and to that End all Persons should, before commencing such Business, be duly examined as to their practical Knowledge, and that a Register should be kept, &c.

The Act applies to Great Britain (Ireland has one of its own), and requires, *first*, that no person whose name is not on the register of chemists and druggists shall take, use, or exhibit the title "chemist and druggist," or "chemist," or "druggist" [or any of these with "dispensing" as a prefix]; *second*, that he shall not keep open shop for the retailing, dispensing, or compounding of poisons; and, *third*, that he shall not retail, dispense, or compound poisons. If anyone wishes to do all these things—in short,

TO BECOME A CHEMIST AND DRUGGIST

—he must conform to the regulations which the Pharmaceutical Society of Great Britain is empowered by the Act to frame. These are, *first*, proof, by passing a preliminary

or "first" examination, of education in Latin, English, and arithmetic; *second*, everyone must have three years' experience in dispensing prescriptions; and, *third*, a technical or "minor" examination must be passed. The following are the official regulations for

THE FIRST EXAMINATION.

When held: At 11 o'clock on the second Tuesdays of January, April, July, and October.

Candidates must give notice to Mr. Richard Bremridge, Registrar, 17 Bloomsbury Square, London, W.C., on a printed form of application, to be obtained from him, and pay the fee of 2*l.* 2*s.*, not less than *fourteen* days prior to that on which the examination is to be held.

The examination is held in the following towns, the gentlemen named being local superintendents:—

- | | |
|---|---|
| Aberdeen—Mr. Alex. Strachan,
138 Rosemount Place | Inverness—Mr. W. J. Bethune
99 Academy Street |
| Aberystwith—Mr. E. P. Wynne,
38 Pier Street | Jersey (<i>in July only</i>)—Mr. George
Cole, 4 King Street |
| Birmingham—Mr. Chas. Thompson,
129 Stratford Road, Spark-
brook | Kirkwall, Orkney (<i>in July only</i>)—
Mr. Duncan Stewart, Albert
Street |
| Brighton—Mr. J. R. Gwatkin,
49 Grand Parade | Lancaster—Mr. James Vince
37 Cheap-side |
| Bristol—Mr. John Stroud, Chester-
field House, Ashley Hill | Leeds—Mr. Richard Reynolds, 13
Briggate |
| Cambridge—Mr. Arthur Deck, 9
King's Parade | Lincoln—Mr. Joseph Maltby, High
Street |
| Canterbury—Mr. Edwin Bing,
41 St. George's Street | Liverpool—Mr. Richard Parkinson,
1 William Henry Street |
| Cardiff—Mr. John Munday, 1 Duke
Street | London—Several |
| Carlisle—Mr. John Hallaway,
52 Castle Street | Manchester—Mr. F. Baden Benger,
7 Exchange Street |
| Carmarthen—Mr. Walter Lloyd,
12 Llanmas Street | Newcastle-on-Tyne—Mr. N. H.
Martin, 29 Mosely Street |
| Carnarvon—Mr. John Jones,
Castle Square | Northampton—Mr. John Bingley |
| Cheltenham—Mr. W. Barron,
37 Wychcomb Street | Norwich—Mr. F. Sutton, Bank
Plain |
| Darlington—Mr. James Robinson,
5 Northgate | Nottingham—Mr. W. H. Parker,
177 Alfreton Road |
| Douglas, Isle of Man (<i>in July
only</i>)—Mr. John C. Radcliffe,
33 Victoria Street | Oxford—Mr. G. T. Prior, 32 Broad
Street |
| Dundee—Mr. James Hardie, 68
High Street | Penzance—Mr. Benjamin Shaker-
ley, 27 Market Place |
| Edinburgh—Mr. J. B. Stephen-
son, 48 North Frederick Street | Peterborough—Mr. Marshall
Heanley, Market Place |
| Exeter—Mr. J. H. Lake, 41 High
Street | Plymouth—Mr. F. W. Hunt, 106
Old Town Street |
| Glasgow—Mr. Alex. Kinninmont,
69 Portland Street | Sheffield—Mr. William Ward, 136
South Street, Moor |
| Guernsey (<i>in July only</i>)—Mr.
J. B. Nickolls, States Analyst's
Office | Shrewsbury—Mr. W. G. Cross,
Mardol |
| Hull—Mr. C. B. Bell, 6 Spring
Bank | Southampton—Mr. O. R. Dawson
63 Belle Vue Road |
| | Worcester—Mr. Charles Virgo
The Foregate |
| | York—Mr. Joseph Sowray, 57
Petergate |

The local superintendents do not examine the candidates, their duties being to see that candidates are in their places at the proper time, to give out the printed questions, to collect the answers, and forward them to the Registrar in London, as well as to inform candidates, a few days before the date of the examination, in what hall, hotel, or other public building it will be held. Candidates may enter for any centre they choose. The examination is wholly in writing, and comprises the following

SUBJECTS.

Latin.—Grammar; translation of simple sentences from English into Latin; translation into English from Cæsar, "De Bello Gallico," book I., or Virgil, "Æneid," book I. In each examination paper passages from both of these authors are given, but a candidate is required to translate from one author only.

Arithmetic.—The first four rules, simple and compound; vulgar fractions and decimals; simple and compound proportion; a thorough knowledge of the British and metrical systems of weights and measures.

English.—Grammar and composition.

In awarding marks, spelling and the quality of the handwriting are taken into account. The time allowed is for Latin, 11 A.M. to 12.30 P.M.; for arithmetic, 12.30 to 2 P.M.; and, after a luncheon hour, English is taken from 3 to 4.30 P.M. The questions are set and the answers examined by the College of Preceptors of London.

EXAMINATION PAPERS.—The questions set at the examinations have been regularly published in THE CHEMIST AND DRUGGIST for some years, and the publisher will supply copies of such back numbers (as far as available) at 4d. per copy.

PREPARATION FOR THE EXAMINATION.—It is not the intention of this article to instruct students about the manner in which they should get up English, Latin, and arithmetic. It is now becoming the rule to enter for the examination before or immediately after leaving school, and in that case the teacher should adapt the course of study during the last few months to the examination requirements, special attention being given to arithmetic, in which there is the largest percentage of failures. Those who have the misfortune to allow a few years to elapse after leaving school before entering for the examination should get the assistance of a tutor, or other guidance. The following are recent books on the subjects of the examination:—

Latin: White's "Cæsar," Book I. (Longmans, 1s.); White's "Virgil," Book I. (Longmans, 1s.); or Macmillan's Elementary Classics—"Cæsar's Gallic War," Book I. (1s.); "Virgil's Æneid," Book I. (1s. 6d.). For translations, see Kelly's "Key Cæsar," Books I. to IV. (1s. 6d.); and "Virgil," Books I. to VI. (1s. 6d.); or Dr. Giles's word-for-word translations, "Cæsar," Books I to IV. (2s. 6d.); "Virgil," Books I. to IV. (2s. 6d.). These are published by Cornish & Sons. Latin grammar, Smith's "Principia," Part I. (Macmillan, 3s. 6d.).

English: Trotter's "Grammar" (1s.), or Mason's "Grammar" (3s. 6d.).

Arithmetic: Barnard Smith's "Arithmetic" (Macmillan, 4s. 6d.), or Lupton's (Longmans, 3s. 6d.). See also Capel's "Catch Questions in Arithmetic and Mensuration" (Jos. Hughes, London, 4s. 6d.). For the metric system use Barnard Smith's book (Macmillan, 3d.).

These books are suitable for the corresponding subjects of the Bell Scholarship examination.

As many boys and girls pass certain school and college examinations before completing their education, the boards of examiners are empowered to accept in lieu of the Pharmaceutical First examination a certificate of having passed either of the examinations enumerated in the following list, or that of any legally constituted examining body previously approved by the Council, provided Latin, arithmetic, and English were included in the subjects of the examination for which the certificate was granted. The certificate must be forwarded to the Registrar, with the fee of 2l. 2s., for the approval of the boards of examiners.

CERTIFICATES ACCEPTED.

University of Oxford.—Junior or senior local examinations; responsions; moderations; examinations for a degree in arts.

University of Cambridge.—Junior or senior local examina-

tions; higher local examinations; previous examination; examination for a degree in arts.

University of Durham.—Junior or senior local examinations; registration examination for medical students; examination for students at the end of their first year; examination for a degree in arts or science.

University of London.—Matriculation examination; preliminary scientific (M.B.) examination; examination for a degree in arts or science.

Victoria University.—Entrance examination in arts of the Faculty of Medicine; preliminary examination.

University of Edinburgh.—Junior or senior local examinations; preliminary examination for graduation in science or medicine and surgery; examination for a degree in arts or science.

University of Aberdeen.—Junior or senior local examinations; preliminary examination for graduation in medicine or surgery; examination for a degree in arts.

University of Glasgow.—Junior or senior local examinations; preliminary examination for graduation in medicine or surgery; examination for a degree in arts.

University of St. Andrews.—Junior or senior local examinations; preliminary examination for graduation in medicine or surgery; examination for a degree in arts.

University of Dublin.—Public entrance examinations; examination for a degree in arts.

Royal University of Ireland.—Matriculation; first university examination; second university examination; examination for a degree in arts.

Queen's University in Ireland.—Local examinations for men and women; entrance or matriculation examination; previous examination for B.A. degree; examination for a degree in arts.

Oxford and Cambridge Schools' Examination Board.—Certificate.

Royal College of Surgeons of England.—Preliminary examination for the membership or for the fellowship.

Apothecaries' Society of London.—Examination in arts.

Royal College of Physicians and Surgeons of Edinburgh.—Preliminary examination in general education, conducted by a board appointed by these two Colleges combined.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary examination in general education.

Royal College of Surgeons in Ireland.—Preliminary examination.

Apothecaries' Hall of Ireland.—Preliminary examination in general education.

Intermediate Education Board for Ireland.—Certificates.

Owens College.—Junior students' general examination.

College of Preceptors.—Examination for a first or second class certificate.

Incorporated Law Society.—Preliminary examination in general knowledge.

Scotch Education Department.—The honours and first-grade leaving certificates are accepted, provided the certificates in English, Latin, and arithmetic are all obtained at any one annual examination.

Having passed the first examination, or had an equivalent certificate accepted, the name of the candidate is placed on the register of Apprentices or Students of Pharmacy. Admission to

THE MINOR OR QUALIFYING EXAMINATION

is obtained under the following conditions:—

1. The candidate must have attained the full age of 21 years, and must produce a registrar's certificate of birth to that effect.

2. The candidate must produce a certified declaration (signed by a pharmaceutical chemist, or a chemist and druggist, or a medical practitioner) that for three years he has been practically engaged in the translation and dispensing of prescriptions.

3. The candidate must give notice and pay a fee of 5*l.* 5*s.* to Mr. Bremridge, 17 Bloomsbury Square, London, on or before the fifteenth day of the month immediately preceding that in which the examinations are to be held.

The examination is held in the months of January, April, July, and October, at Galen Place, Bloomsbury, London, W.C. and at 36 York Place, Edinburgh. It extends over *two days*, those in Edinburgh generally being consecutive, but in London there is from two to eight days' interval between them. On the first day practical chemistry, dispensing and pharmacy (six hours) are taken, and on the second the rest of the subjects orally. The following are the subjects of the examination:—

PRESCRIPTIONS.

The candidate is required to read without abbreviation autograph prescriptions; translate them into English; understand the grammatical construction of the Latin; and render a literal as well as an appropriate translation of the directions for use. To detect errors, discover unusual doses, and have a general knowledge of posology. To calculate percentage ages and other quantities occurring in prescriptions; also to render in good Latin ordinary prescriptions written in English.

PRACTICAL DISPENSING.

To weigh, measure, and compound medicines; write the directions in concise language in a *neat and distinct* hand; to finish and properly direct each package. [*In awarding marks in this subject the time taken by the candidate in doing the work is taken into account.*]

PHARMACY.

The candidate will be required to possess a general knowledge of the following branches:—

(a) Operations requiring the use of heat. Evaporation, with particular reference to the preparation of extracts and inspissated juices; special characters and modes of preparing the various classes of extracts; influence of surface, temperature, and pressure upon the rate of evaporation; water, steam, and sand baths; distillation, ordinary, fractional, and destructive, distinctive characters and objects of each; official preparations illustrating the various kinds of distillation, apparatus employed, the retort and receiver, still and worm, Liebig's condenser, principles on which they are constructed and used. Sublimation; its objects and applications in pharmacy: official products of sublimation, calcination, and fusion. Desiccation; temperature best suited for drying particular drugs, loss in drying vegetable drugs, forms of drying-ovens, principles on which they are constructed and used.

(b) Disintegration of solid substances; cutting, bruising, and pulverisation; apparatus employed, principles indicating which is to be adopted in particular instances; methods for controlling the degrees of comminution, sieves and sifting, trituration, levigation, elutriation, granulation, including methods for producing certain chemicals as fine powders, small crystals, scales, &c. Solution: its nature, solvent power of various menstrua, influences of (a) temperature; (b) state of division of the substance to be dissolved; (c) time; (d) position of the substance in the menstruum; lixiviation, infusion, digestion, and decoction; maceration, percolation, and displacement, principles on which the successful performance of these processes depends; form and materials for percolators and other vessels employed. Filtration, objects and methods, filtering media, means of expediting filtration; dialysis: its application in pharmacy, construction and use of the dialyser. Expression: methods of obtaining the juices from plants; recovery of the residual liquids from tincture marcs, &c., screw, hydraulic, and other presses. The principles involved in the dispensing of medicines, particularly with reference to the best excipients and methods for forming pill-masses, the preparation and nature of emulsions, the most suitable emulsifying agents, and the best means of suspending insoluble substances in liquids.

(c) The candidate will also be required to show a practical knowledge of the processes, and understand the principles of the processes, by which the official preparations belonging to the following classes are made, viz.:—collodions, confections, decoctions, dilute acids, extracts (solid and liquid), glycerines, infusions, juices, liniments, lotions, mixtures, ointments, pill-masses, plasters, powders (simple and compound), solutions, spirits, suppositories, syrups, tinctures, vinegars, waters, and wines. He must be able to conduct such of the operations, or parts of them, as may be required by the examiner. A knowledge of the proportion of active ingredient or crude material in official preparations containing aconite, antimony, arsenic, belladonna, Calabar bean, cantharides, hydrate of chloral, chloroform, caustic potash and soda, colchicum, digitalis, elaterium, ergot, iodine, iodoform, ipecacuanha, lead, mercury, nux vomica, opium, phosphorus, scammony, stramonium, squill, alkaloids and alkaloidal salts.

MATERIA MEDICA.

The candidate is required to recognise specimens of any crude drug mentioned in the British Pharmacopoeia or in the annexed list, and to describe their methods of production and their characteristics so far as may be

necessary to detect adulteration or substitution. He must be familiar with their geographical sources, the botanical and zoological names of the plants and animals yielding them, the natural orders to which they belong, and the localities from which they are obtained. The candidate will be required to name their chief active constituents and also the official preparations into which they enter.

Roots.	Herbs.	Seeds.
Althæa officinalis	Grindelia squarrosa et robusta	Trigonella Fenum-græcum
Inula Helenium	Tussilago Farfara	Dipteryx odorata
Alkanna tinctoria	Spigelia marilandica	Pyrus Cydonia
Bryonia alba et dioica	Marrubium vulgare	Strychnos amara
	Solanum Dulcamara	Hyoscyamus niger
	Euphorbia pululifera	Anomum Melegueta
	Convallaria majalis	Areca Catechu
Rhizomes, &c.	Flowers.	Hairs.
Helleborus niger	Calendula officinalis	Mucuna pruriens
Sanguinaria canadensis	Pyrethrum cinerariaefolium, &c.	
Iris florentina	Arnica montana	
Allium sativum		Juices, &c.
Veratrum album		Acacia Catechu
Acorus Calamus		Lactuca lactuca (Lactucarium)
Agropyron (Triticum) repens		Aloe spicata, &c.
Darks.	Fruits.	Curare (Woorari)
Berberis vulgaris	Punica Granatum	Gum-Resins.
Cinnamodendron corticosum	Cuminum Cymnum	Boswellia Carterii, &c.
Simarouba amara	Capiscum annuum	Euphorbia resinifera
Erythrophloeum guianense	Laurus nobilis	
Quillaja Saponaria	Piper longum	Oleo-resins.
Fraxinus serotina	Vanilla planifolia	Pistacia Terebinthus
Ulmus campestris		Animal Substances.
Ulmus fulva	Seeds.	Spongia officinalis
Cinnamomum Cassia	Paullinia sorbilis (Guarana)	Coccus Lacca
Coto	Resins.	Myiobris Cichorii
	Cryptogamic Substances.	Seria officinalis
Callitris quadrivalvis	Lycopodium clavatum, &c.	Castor Fiber
Pinites succinifer	Fucus vesiculosus	
Calamus Draco	Chondrus crispus	

BOTANY.

The candidate will be required to recognise any of the plants specified in the list appended to this schedule; to refer any flowers that may be shown to him to their class and sub-class; to possess a general knowledge of the internal structure of stems, leaves, and roots, and their parts, and of the elementary tissues of which they are composed; to describe a cell, its structure, and usual contents; to explain the thickening of cell-walls, and to describe the manner in which cells are combined to form tissues. To distinguish between roots and stems, and to name such important modifications of either as present distinguishing characteristics. To name correctly such leaf-shapes as are shown, and to recognise appendages or any important modifications of the leaf. To have a practical knowledge of the various arrangements of leaves or flowers in the bud, and of the different kinds of phyllotaxis and of inflorescence; to understand the principles of branching, and the different kinds of branch systems. To possess a general knowledge of the processes of reproduction of plants, and to describe those of phanerogams and ferns. To name and describe the arrangements of the parts of the flower, the number, position, and shape of the floral envelopes, and of the organs of reproduction; to name and describe the different kinds of fruits, and the various modes of dehiscence and kinds of placentation. To have a general knowledge of the physiology of plants, and to describe the functions of the roots, stems, and leaves. To be acquainted with the materials which form the food of plants, and to understand the part played by starch, sugar, and aleurone grains in the life of the plant. To recognise, by means of the microscope, sections of stems of dicotyledonous, monocotyledonous, and cryptogamic plants; spiral reticulated, and scalariform vessels; as well as the simpler structures, such as stomata, pollen grains, and hairs.

List of Plants for Recognition.

Aconitum Napellus	Valeriana officinalis	Mentha viridis
Papaver Rhæas	Achillea Millefolium	" Pulegium
" somniferum	Anthemis nobilis	Rosmarinus officinalis
Brassica alba	Matricaria Chamomilla	Daphne Laureola
Cochlearia Armoracia	Taraxacum officinale	" Mezerium
Althæa officinalis	Menyanthes trifoliata	Juniperus Sabina
Ruta graveolens	Borago officinalis	Taxus baccata
Cytisus Scoparius	Atropa Belladonna	Colchicum autumnale
Rosa canina	Datura Stramonium	Arum maculatum
Bryonia dioica	Hyoscyamus niger	Avena sativa
Æchusa Cynapium	Solanum Dulcamara	Hordeum vulgare
Conium maculatum	Digitalis purpurea	Triticum sativum
Feniculum capillaceum	Lavandula vera	Aspidium Filix-mas
Guanthe crocata	Mentha piperita	

CHEMISTRY AND PHYSICS.

The candidate will be expected to possess an *elementary* knowledge of the following subjects:—

(a) The law of the conservation of energy; the law of gravitation; the British and metric system of weights and measures; the balance; specific gravity; atmospheric pressure; the barometer, air-pump, and syphon; the law of Boyle; temperature; thermometer; the law of Charles; the law of gaseous diffusion; V. Meyer's method for determining vapour densities.

(b) The chief characteristics of chemical action, the distinction of elements and compounds; the laws of chemical combination by weight and volume; the hypothesis of Avogadro; atomic weight and molecular weight; chemical formulae and nomenclature; valency; the distinction between metals and non-metals.

(c) The general characters of the non-metals; the chief methods of preparation and the typical reactions of the following non-metallic elements and compounds:—Hydrogen, oxygen, ozone, water, peroxide of hydrogen; chlorine, bromine and iodine, and their compounds with hydrogen and oxygen; fluorine, hydrofluoric acid; nitrogen, ammonia, the oxides of nitrogen, nitrous acid, nitric acid; sulphur, sulphuretted hydrogen, sulphurous and sulphuric anhydrides and acids, thiosulphuric acid; phosphorus, phosphine, the oxides and oxy-acids of phosphorus, the chlorides of phosphorus; silicon, silica, fluoride of silicon, silicofluoric acid; boron, boric acid. The usual impurities in those of the above named substances that are included in the British Pharmacopœia.

(d) The general characters and classification of the metals, and the general methods of forming oxides and salts; the sources, the usual methods of extracting, and the chief properties of the undermentioned metals, and the principal modes of preparation, properties, adulterations, and contaminations of such of their compounds as are described in the British Pharmacopœia:—Potassium, sodium, ammonium, lithium, barium, calcium, magnesium, zinc, aluminium iron, chromium, manganese, arsenium, antimony, tin, copper, bismuth, lead, silver, mercury, gold, and platinum.

(e) Carbon, its oxides, cyanogen, hydrocyanic acid, cyanide of potassium, ferrocyanide and ferricyanide of potassium, oxalic acid. The chief methods of preparing marsh gas, ethylene, alcohol, aldehyde, acetic acid, acetate of ethyl, spirit of nitrous ether, nitrate of amyl, hyarate of chloral, chloroform, iodoform, ether; the principal properties, reactions, and mutual relations of these compounds. The candidate will also be expected to possess a general knowledge of the methods of estimating carbon, hydrogen, oxygen, and nitrogen in organic compounds, and of obtaining molecular formulae.

Note.—Candidates will be expected to solve simple problems relating to the weight and volume, under different conditions of temperature and pressure, of elements and compounds concerned in chemical reactions.

Practical Examination.

To determine the specific gravity of liquids and solids, to be familiar with the general construction and use of the thermometer and barometer.

To recognise by chemical tests the more important non-metallic elements and compounds, as well as the metals and salts indicated in the foregoing list; to detect the chief impurities in those that are included in the British Pharmacopœia; to recognise by their physical properties those which possess well-defined characteristics.

To identify by chemical tests the organic compounds before enumerated, and, in addition, tartaric and citric acids, starch, cane-sugar, grape sugar, salicin, quinine, morphine, and strychnine; and to detect the impurities in such as are included in the British Pharmacopœia.

To perform those volumetric determinations which are described in the British Pharmacopœia.

To quantitatively determine the total alkaloids in cinchona-bark, and in the tincture and extract of *nux vomica*, and the morphine in opium.

The candidate will further be expected to have a practical acquaintance with the methods of preparing the more important inorganic substances, including the non-metals and their compounds, and such metallic compounds as are included in the British Pharmacopœia, and also the following organic compounds:—Ether, chloroform, spirit of nitrous ether, nitrite of amyl, acetate of ethyl, and hydrocyanic acid, so that he may be able to explain to the examiner the operations involved in their preparation, and, if called upon, to perform the operations or certain stages of them himself.

POISON LAWS.

On and after January 1, 1893, candidates will be required to enumerate the poisons contained in Schedule A of the Pharmacy Act, 1868, and those since added thereto, in pursuance of the provision contained in section 2 of that Act, viz.:—

(a) Poisons within Part I. of the schedule.

(b) Poisons within Part II. of the schedule.

They will be required to describe minutely the conditions required upon the sale by retail of poisons, both in Part I. and Part II. of Schedule A; and to write the proper entry required, according to Schedule F of the Act, for the sale of a poison coming within Part I. of Schedule A. They will also be required to state the conditions imposed on the sale of scheduled poisons by wholesale and for export; and upon the sale of a scheduled poison when forming an ingredient in a medicine dispensed.

A knowledge of the conditions imposed on the sale of arsenic by the Arsenic Act will also be required.

EXPERIENCE OF CANDIDATES.

The following accounts of the Minor examination by candidates who were examined in Edinburgh and London in July last are as good explanation of the nature of the examination as any that can be given.

By a Candidate in London.

"On being called into the examination-room each candidate addressed an envelope to himself, which was destined to bear the news of the result of the 'practical examination.'

"Just before 10 o'clock I was sent, with seven others, for dispensing and practical pharmacy, to Mr. Greenish, who gave me four prescriptions to dispense, and also told me to make the official quantity of liquor magnesiæ citratis. My first prescription was linimentum terebinthinæ aceticum, B.P. In making this two of the ingredients are ordered by fluid measure and one by weight. My next test was a mixture containing salicin in such proportion that it was totally dissolved by aid of a little warm water. My third was some pills, containing among other things, Plummer's pill and rhubarb pill. For both of these I used the powder, and it was necessary to make due and correct allowance for excipients. The next was a blister-plaster, on which I succeeded in getting a good final glaze by means of a bone knife dipped in boiling water. I now finished off the liquor magnesiæ citratis which I had previously started, and having thus done all my work I was told I could go. It was now 12.30.

"At practical chemistry in the afternoon (2 P.M.) Mr. Symons was my examiner. The first salt I had proved to be morphine hydrochlorate, and the second was sodium phosphate. I then took the specific gravity of a liquid, getting my temperature correct by means of ice, which was in readiness. Having done these tests by 3 o'clock, this left me just two hours for my volumetric work. Mr. Symons gave me a powder to estimate the amount of ferrous iron contained in it as metal. I made two estimations of this for sake of accuracy, and as they both came out within 5 in the second place of decimals, I took the mean result as correct. I then finished writing out my report on my work, and without the least hurry had done by 4 o'clock, thus having an hour to spare. This finished my first day, and in it I met with nothing but kindness and consideration from the examiners; but, to my mind, with very few exceptions, the candidates seemed to be totally ignorant of the use of thermometers in taking specific gravities, and of the method of handling delicate chemical balances.

"Eight days later I went up at 11 A.M. for the oral examination. I was first sent to theoretical chemistry, where I was examined by Mr. Symons again, who at once set me at ease by telling me indirectly that I did well in the practical work. He asked me to explain the actions of strong and weak sulphuric acid on ferrocyanide of potassium; next he gave me some salts to recognise; and then asked me to explain (1) the action of hypophosphorous acid on copper sulphate, (2) action of sulphuric acid on iodide of lead in presence of manganese dioxide, (3) the action of neutral potassium chromate on metallic iron in presence of sulphuric acid. He then asked me about phosphine, hydrazine, and hydroxylamine, and their analogues; and with a question about constitution, &c., of aldehyde and chloral, and one relating to the atomic theory, he told me I could go.

"I next went to materia medica, where Mr. Druce took me. I was not nervous, nor would it have been possible with Mr. Druce, who seemed more like an old friend than an examiner. Among the specimens he showed me were digitalis, annual henbane, lobelia, conium, pellitory, liquorice-root, Burgundy pitch, scammony, stavesacre-seeds, &c. Of the majority of these he asked me the botanical name, habitat, active ingredients, and, in some cases, the percentages. He showed me one thing which I did not recognise, but which I now think must have been chrysarobin.

"I next went to Mr. Mutton Holmes for prescription-reading, where I was also asked several official doses and proportions of active ingredients, and had three or four prescriptions to read in full and to translate.

"Mr. Corder took me at botany, and I was quite sorry to leave him, so interesting was it. He showed me annual henbane, conium, fool's parsley, belladonna, *Malva sylvestris*,

and several others. He gave me a few questions about structural botany, and then showed me half-a-dozen slides for microscopic recognition.

"Mr. Gerrard took me in pharmacy, and asked me, among other things, about the various ointment-bases, about the different kinds of incompatibility, how to make oleic acid, also how to make granulated sulphate of iron (not the official way), one or two opium strengths, and, with a few common-sense questions, my examination was finished.

"The Chairman called me up and congratulated me on the high number of marks I had got, and asked me when I was going up for the Major. I told him I was going up at the next Major examination, thanked him, and left, feeling at peace with all the world."

The writer of the foregoing was a Square student, and the gentleman who has drawn up the following outline of his

Experiences in Edinburgh

also hails from this side of the border. He writes:—"First of all I was called to practical chemistry, and Mr. Dott gave me:—(1) Salt, which was borax; (2) 'salt,' which was oxalic acid; (3) solution, which was magnes. sulph.; (4) estimate volumetrically ferrous sulphate; and (5) specific gravity of a solid.

"In Dispensing the following work was given out by Mr. Nesbit:—

Acid. tannic.	gr. ij.
Ol. theobrom.	q.s.
Mitte suppos. vj.	
Quin. sulph.	gr. j.
Ferri sulph. exsic.	gr. ij.
Strychniæ	gr. $\frac{1}{4}$
Fiat pil. Mitte xij.	
Tinct. gualaciam.	5iv.
Tragacanth.	q.s.
Aquæad.	5iv.
Fiat mistura.	
Pulv. rhei	gr. viij.
Podophyllin	gr. $\frac{1}{2}$
Hyd. cum cretâ	gr. ij.
Misce. Mitte vj.	
Emp. belladon.	5×3
Emp. canthar. for the left ear.	

This finished my first day's work, and I was told to wait downstairs, and I would be informed when to come for my second day.

"I had now four days to wait for the second part of the programme. I first got Mr. Nesbit in pharmacy. He gave me oil of cloves to recognise; how prepared? Describe a still. Pulv. opii co., pulv. amygd. co., mist. cretæ, and a few others to recognise. How prepared? What strength? How cretæ prep. was prepared? How ether was obtained? Strength of spirits used in the Pharmacopœia? How ext. nuc. vom. was prepared? Ext. opii; and strengths of morphia in all the official preparations. A few other questions finished me in pharmacy.

"Next I got Mr. Dott in chemistry. He took me on the barometers, thermometers, Boyle's and Charles's laws, laws of chemical combination by weight and volume, the oxides of nitrogen and sulphur, and how obtained.

"My next subject was botany, which I feared the most, as I had failed in this subject in January. I had Mr. Jack again, who was exceedingly nice—so much so that I have quite altered my opinion of him. When I was sent to him, he bid me 'Good morning,' and said he remembered seeing me before. This set me quite at ease. He gave me a block of wood, and asked me to tell him all I knew about it. Then I had a long story about starch; next a few inflorescences and flowers to tell all I knew about them; then I had fruits and a few dried specimens shown me, also some slides under the microscope, and this finished botany.

"Materia medica was my next subject. Here I got Mr. Maben. He showed me cinchona, saffron, colchicum, scammony, cantharides, mountain damask, starch, *Triticum repens*, calendula, mylabris, belladonna, aconite, acacia, almonds, and some others. I had to tell him the botanical name and habitat, also the active principle and preparations.

"Now I came to my last subject—prescription-reading. I got Mr. Kinnimont. He gave me some prescriptions to translate into full Latin. I got on very nicely with him. He rather enjoyed it when I told him the prescriptions were badly written. He asked me the doses of tinct. opii, liq. hyd. perchlor., hyd. subchlor., liq. arsenicalis, and one or two more; then gave me a prescription to write out in full Latin.

"This finished my examination, and I now had twenty minutes at fever-heat on the finking-form. Afterwards I was called up, and told I had got through."

HOW TO PREPARE FOR THE MINOR.

Begin early. It is one of the grandest mistakes to suppose that the best way of getting through the examination is to leave it all to college or school teachers—*i.e.*, until the six or twelve months immediately preceding the examination. The object of passing the "first examination" soon after leaving school is to give the apprentice perfect freedom to learn his business. If he fills in the time between then and twenty-one by careful observation of pharmaceutical processes, constant reading of suitable text-books, and attendance at any local science classes there may be, he will have laid a splendid foundation of skill and knowledge which will be of life-long value. Then a few months at a school, if he can afford it, will give the finishing touches. In *THE CHEMIST AND DRUGGIST* of July 30, 1892, page 153, there is a statement by a successful man of how he coached himself for the Minor. It will be well to read that. The moral is, Waste no time, do the work thoroughly, and make the most of shop resources.

The following selection of books make the nucleus of a useful pharmaceutical library, and they are books which students need:—

- The British Pharmacopœia (Spottiswoode & Co., 6s.)
- "The Art of Dispensing" (*THE CHEMIST AND DRUGGIST* Office, 3s. 6d.)
- Pereira's "Selecta & Prescriptis" (Churchill, 5s.)
- Attfield's "Chemistry" (Gurney & Jackson, 15s.)
- Roscoe's "Chemistry" (Macmillan, 4s. 6d.)
- Geddes-Behrens' "Botany" (Pentland, 5s.)
- Shottall's "Organic Materia Medica" (Churchill, 5s.)
- Everett's "Physics" (Blackie, 3s. 6d.)

For elementary study in the sciences the student will, of course, adopt the class-books recommended by his teachers, but those who have no opportunity of the kind will find it useful to begin chemistry with the "Roscoe" above indicated. Practical work should go on simultaneously, using Dr. Marshall Watts' "Elements of Chemistry" (J. Nesbit & Co., 1s.) at the outset, and, when the specific work of the examination is reached, Slatter's "Outlines of Qualitative Analysis" (Murby, 2s. 6d.), or "Attfield." Proctor's "Pharmaceutical Testing" (the office of *THE CHEMIST AND DRUGGIST*, 2s. 6d.) is a very good book for everyone to use in the shop as a ready means of acquainting themselves with the properties and quality of commercial medicinal chemicals. Bentley's "Structural Botany" (Churchill, 7s. 6d.) is a readable book which may take the place of Geddes-Behrens, and many prefer Squire's "Companion" (Churchill, 10s. 6d.) to the B.P. It is certainly more readable; but have both if possible. For those who have little opportunity of making pharmacopœial preparations, Proctor's "Lectures on Practical Pharmacy" (Churchill, 14s.) is of great utility. *Materia medica* should be well grounded by systematic reading of text-books, and should the student possess a microscope he cannot be wrong in preparing sections of drugs for examination. The kind of practical work which can be done in the shop may be judged from the particulars given in the Minor schedule.

THE TITLE "CHEMIST AND DRUGGIST,"

with a somewhat paltry certificate, is given to those who pass the Minor examination, and they are entitled to all the privileges conferred by the Pharmacy Act, 1863, so far as keeping open shop for the sale of poisons is concerned. Similar privileges are given to persons who were assistants before the Pharmacy Act passed, and who registered their names with the Registrar before December 31, 1869. Such persons have to pass a modified examination. They get no certificate.

THE MAJOR EXAMINATION.

This is an examination which the Pharmaceutical Society originally intended to be the qualifying one, but the Legislature thought fit to accept the one of lower grade as sufficing for the title "Chemist and Druggist." Consequently, the Major examination is an optional one, and need only be entered for by those who desire the title "pharmaceutical chemist." Like the "Minor" (which, by the way, is now as searching and comprehensive as the "Major" was twenty years ago), the examination has recently been altered, and comprises the following subjects:—

BOTANY.

In addition to what is required for the Minor, the candidate is expected to possess an intimate acquaintance with the parts of the flower, fruit, and seed; to describe the structure and development of the pollen and of the ovule, and to trace the steps by which the latter is transformed into the seed. To have an intimate knowledge of the structure of cells, whether isolated or in combination to form tissues; of the contents of cells in their various stages of development; and a general knowledge of the origin of gums, acids, and mineral and other secretions of plants. To be familiar with the composition of the cell-wall, its chemical nature, properties, and reactions; with the changes it undergoes in the formation of wood, cork, and mucilage, and in the processes of thickening and cuticularisation. To possess a knowledge of the general principles of classification, the system of Linnæus, and of the natural system founded upon that of De Candolle. To be able to distinguish practically the natural orders included in the schedule appended below, and such of the leading genera of each of these orders as are therein specified; also to refer to their respective orders or genera such specimens included in the schedule as may be shown to him. To possess a general knowledge of the method of reproduction in cryptogams, and to describe that of mosses; to be familiar with the development of the spores in these plants, and to be able to compare the different organs with the corresponding organs in phanerogams; to possess a knowledge of the alternation of generations in the cryptogams, and the modifications under which this is represented in the phanerogams. To have a practical acquaintance with the use of the microscope, and by means of it to recognise the various tissues found in the plant, the reproductive organs of cryptogams and phanerogams, and the more important cell-contents.

Schedule.

RANUNCULACEÆ	Rosa	Erythraea	EUPHORBACEÆ
Anemone	Pyrus	Menyanthes	Euphorbia
Helleborus	CUCURBITACEÆ	CONVOLVULACEÆ	Buxus
Aconitum	Ecballium	SOLANACEÆ	CUPULIFERÆ
PAPAVERACEÆ	Bryonia	Solanum	Fagus
Papaver	UMBELLIFERÆ	Physalis	Quercus
Chelidonium	Eryngium	Artemisia	Corylus
CRUCIFERÆ	Centaurea	Hyoscyamus	SILICACEÆ
Brassica	Carum	Datura	Salix
Occhlearia	Chenopodium	SERPYLLARIACEÆ	BETULACEÆ
VIOLACEÆ	Foeniculum	ACEÆ	Alnus
Viola	Daucus	Verbascum	CONIFERÆ
MALVACEÆ	Conium	Scrophularia	Juniperus
Malva	Coriandrum	Digitalis	Pinus
RUTACEÆ	DIPSACEÆ	LABIATÆ	ORCHIDACEÆ
Ruta	COMPOSITEÆ	Mentha	AMARYLLIDACEÆ
LEGUMINOSÆ	Tu-fago	Origanum	IRIDACEÆ
Lathyrus	Inula	Thymus	Iris
Mimosa	Matricaria	Lamium	Crocus
Cercis	Anthemis	Marrubium	LILIACEÆ
ROSACEÆ	Cichorium	POLYGONACEÆ	Convallaria
Prunus	Lactuca	Polygonum	Ruscus
Spiræa	GENTIANACEÆ	Rumex	Allium
Potentilla			GRAMINEÆ

MATERIA MEDICA.

This comprises a practical knowledge of the methods of estimating the value of important drugs, of distinguishing commercial varieties of the same, and of separating such of their active principles as are official in the British Pharmacopœia.

The candidate is also expected to have a general acquaintance with the active constituents of all important drugs, and to possess a general knowledge of the chemical properties of the official alkaloids, glucosides, resins, and essential and fixed oils.

The microscope will be introduced for the examination of certain drugs.

CHEMISTRY AND PHYSICS.

In addition to the subjects indicated by the schedule for the Minor examination, the candidate will be expected to possess a knowledge of the most important facts connected with—

1. The physical constitution of the three states of matter; liquefaction

of gases, critical point; the diffusion of gases and liquids, dialysis; methods for determining vapour densities; solution.

2. The dynamical theory of heat; heat and temperature; sources, development, and propagation of heat; radiation, diathermancy and athermancy, separation of heat from light; latent heat; boiling-point, distillation; freezing mixtures; specific heat; calorimeters; relation of specific heat to atomic weight; thermometers, the air-thermometer; methods of determining exceedingly high and low temperatures.

3. The undulatory theory of light; reflection; refraction; propagation of light, the photometer; mirrors and lenses, the microscope; decomposition of white light by a prism; the spectroscopic, spectrum analysis; double refraction; polarisation, the polariscope; influence of light in promoting chemical change, the principles of the ordinary photographic processes.

4. The methods of producing magnetism; magnetic induction. Sources of electricity, frictional electricity; the electrostatic; electric induction; electric machines; the Leyden jar; voltaic electricity; the principal forms of voltaic batteries; the galvanometer; chemical effects of current; electrolysis; measurement of current, Ohm's law; voltameter; secondary currents, secondary batteries; thermo-electricity, the thermopile; production of heat and light from electricity; electromotors; dynamo-machines.

5. The history of the atomic theory; the hypothesis of Avogadro; the methods by which the standard atomic weights have been determined; dissociation; specific volume; the periodic law.

6. Classification of carbon compounds; rational formulæ; isomerism. The characteristics and constitution of the chief typical organic compounds. The constitution, sources, methods of preparation, properties, reactions, and mutual relations of the following organic compounds: *Cyanogen derivatives*.—Urea, cyanuric acid, uric acid. *Hydrocarbons*.—The principal members of the paraffin, olefin, acetylene, and benzene series; their chief haloid and nitro-derivatives. Theory of isomerism in paraffin and benzene series. *Paraffin derivatives*.—Distinction of primary, secondary, and tertiary alcohols; the chief primary monohydric alcohols; glycol; glycerine (glycerol); mannite; acetaldehyde, chloral; chloral hydrate; acetone; ether; the principal acids of the acetic series; oleic acid; glycolic and lactic acids; oxalic, succinic, malic, tartaric, racemic and citric acids; ethylamine; acetamide; glycocine; cane sugar; grape sugar; milk sugar; maltose; starch and cellulose. *Benzene derivatives*.—Phenol, sulphonic acid; phenol; resorcin (resorcinol); aniline; benzaldehyde; salicylaldehyde; benzoic acid; salicylic acid. The principal properties of the terpenes and camphors, essential oils, resins. The characteristics of naphthalene and its derivatives. The processes of alcoholic, acetic, lactic, and ammoniac fermentation. The properties and decomposition products of the principal glucosides, alkaloids, and other substances of definite chemical composition in the British Pharmacopœia.

Practical Examination.

The candidate will be expected to be able—

To analyse mixtures containing three metallic salts; to estimate the nitrogen in organic compounds by the soda-lime process; to determine melting and boiling points. To perform the operations (or certain stages of them) necessary for the preparation of cyanogen, artificial urea, ethyl chloride, iodoform, ethylene, ethylene dibromide, acetaldehyde, formic acid, oxalic acid, nitrobenzene, aniline, benzoic acid, the nitrophenols. To recognise by their chemical reactions, and to determine, where necessary, by the Pharmacopœial gravimetric or volumetric methods, the strength and purity of the most important of the inorganic and organic compounds (including crude drugs and galenical preparations) described in the British Pharmacopœia. To detect and separate the most important alkaloids, alkaloidal salts and glucosides, and to separate in the pure state morphine from opium and strychnine from nuxvomica.

In the practical portion of the Major examination standard works of reference are provided for the use of candidates, at the discretion of the examiner. No other books or memoranda are allowed.

Anyone who has passed the Minor examination is eligible to enter for the Major, three months or more afterwards, on payment of a fee of 3*l.* 3*s.* to Mr. Brembridge fifteen days before the first day of the month in which the examination is to be held (January, April, July, and October) in Edinburgh or London. The examination extends over three days. On the first, papers in chemistry and physics are set for written answers; on the second, papers in botany and materia medica; and on the third the candidate may be further examined orally, and practical work has then to be done. The following are

THE QUESTIONS SET IN JULY.

LONDON.

Chemistry.

1. Distinguish between sodium hyposulphite and thiosulphate, and give the method of preparation in each case. What do you know about the vapour density of sulphur?

2. Describe the solution of hydrogen peroxide as it occurs in commerce, and give the process of manufacture. How may its strength be determined?

3. Show how the rational and the constitutional formula of an organic compound may be found, the empirical composition being known; illustrate your answer by an example.

4. Give a full account of hydroxyacetic acid, its source, mode of preparation, and constitutional formula.

5. Show the nature and chemical properties of the ketones, and describe the preparation and uses of acetone, giving formulae and equations.

6. What is the essential oil of mustard, and how may it be prepared? Distinguish between the thiocyanates and the isothiocyanates.

7. Give a short account of the petroleum industry, and describe the physical and chemical characters of its chief commercial products.

8. What constitutional formulae are indicated by the names thio urea, diphenylamine, metaphenylenediamine, phenylhydrazine, amidodimethylaniline.

Physics.

1. Explain the pressure of a gas upon the walls of the containing-vessel in accordance with the dynamical theory.

2. What is the nature of fluorescence? Name some substances which exhibit the property.

3. Describe the compound microscope, illustrating its principle by a diagram.

4. What is the explanation of the line "D" in the solar spectrum? How may it be imitated in the laboratory?

5. What effect has a substance in solution upon the freezing-point of its solvent? How do the facts bear upon chemical theory?

6. Give an example of the dissociation of a vapour by heat, and show how it may be demonstrated.

7. Describe the construction and principle of the electro-magnet, and show how a simple electro-motor may be made by means of it.

Botany.

1. Refer to their respective natural order the botanical specimens submitted to you, and name the genus and the Linnean class of any that you may know. Write a full description of the plant marked "A."

2. Give the characteristics of the natural order Rosaceae. Enumerate the principal genera indigenous to Britain. Are there any apetalous genera? Distinguish a rosaceous from a ranunculaceous plant.

3. What is the corolla? What are its functions? Describe and illustrate the principal forms.

4. Define dimorphism (as applied to flowers), cleistogamous, chalaza, anemophilous, caryopsis, and staminode.

5. Give a full account of the life-history of *Claviceps purpurea*.

6. What are the phenomena attending the germination of the seed?

7. What do you make out by microscopically examining the slide marked "B"?

Materia Medica.

1. Name the official stearoptens. Define the name. Give the botanical and geographical sources of the plants from which they are obtained. Describe the physical characters and chemical composition of the stearoptens, and state by what means they are obtained.

2. Give a process for eliminating the active principle of ipecacuanha. What is it? What is the colour reaction known as Power's test? Which part of the plant contains the largest amount of alkaloid? Where is ipecacuanha cultivated? Is there any peculiarity respecting the means by which the plant may be propagated?

3. What is cocaine? How is it obtained? With what other substance is it associated in the leaf? What species or varieties of erythroxylon yield it?

4. What resinous substance is yielded by the official zygophylleaceous plants? Enumerate its chief constituents, and give their relative proportion. What decomposition products—either by dry distillation or fusing with hydrate of potash—can be obtained from it? Give the names and chemical formulae of the most important of them. State the action of oxidising agents on the resin, and mention if this has been utilised, and for what purpose?

5. From what plants is salicin obtained, and by what process? What is it? State its relative solubility in water, ether, and petroleum benzine. What is formed when it is fused with hydrate of potash, and also when it is heated with red chromate of potash, sulphuric acid, and water? What are the formulae of the two products, and what relation do they bear to each other? Give tests which shall ensure the absence of poisonous alkaloids and phlorizin.

6. Report on the purity of the samples of gamboge marked "A," "B," "C."

EDINBURGH.

Chemistry.

1. Describe in detail how you could perform an ultimate analysis of an organic body containing carbon, hydrogen, oxygen, nitrogen, and chlorine. Distinguish between primary, secondary, and tertiary alcohols.

3. What is racemic acid? In what respects does it differ from tartaric acid? Could you separate the one from the other, and how?

4. What is alloxan? How is it prepared?

5. What is mannite? How is it prepared artificially?

6. How may benzoic and salicylic acids be artificially prepared?

7. State what you know regarding the chemistry of the alkaloids of *Aconitum Napellus*.

Physics.

1. What is meant by the expression "spheroidal state"? Explain the phenomenon.

2. State what you understand by "electro-motive force." What relation does it bear to intensity?

3. What are secondary currents?

4. Give the laws of electrolysis, and state what use is made of them in chemical science.

5. Give examples showing that light can be used to effect chemical combination and decomposition. On what hypothesis can you account for these results?

6. Explain fully what you understand by "polarisation of light." For what purpose is the polariscope used?

7. Describe Hofmann's and V. Meyer's methods for the determination of vapour densities. Of what use are these determinations?

Botany.

1. Describe minutely the structure of a caryopsis as observed in vertical section. Illustrate by diagram.

2. Explain the formation of the gum of tragacanth, and of the gummy matters in the seed coat of linseed.

3. In what respects do the pollen-grains of angiospermia and gymnospermia differ? Describe their formation and growth.

4. Give a tabulated and practical description of the plants submitted to you, placing them in the respective orders and genera of Linnæus and De Candolle.

5. Recount the plant section submitted to you, and discuss it fully.

6. Give an account of the modifications of the leaf and its parts.

Materia Medica.

1. Name and describe the constituents of cascara sagrada, especially those which are active. It has been stated that on prolonged heating of a watery extract it is rendered miscible with water. Give your opinion as regards this theory, discussing any changes that may occur in the process.

2. State the name, natural order, and habitat of the plant yielding quillaia bark. Describe the principle contained in it, and mention any other plants in which an analogous substance may be found.

3. What is berberine? Is it widely distributed? Describe its physical and chemical characters.

4. Given you a plant, explain fully the method you would adopt to ascertain whether it contained an alkaloid.

5. Describe, as far as you can, the sections of gelsemium rhizome, gentian root, and senega root.

Three hours are allowed for each set of questions.

STUDY FOR THE MAJOR.

It will be seen from the scope of the foregoing schedule and the nature of the questions that the examination is a severe one, requiring much reading. The following are good text-books for it:—

BOTANY.—Geddes-Behren's or Prantl and Vine's "Botany" (Sonnenschein, 9s.), with Bentley's "Systematic Botany" (Churchill, 7s. 6d.).

CHEMISTRY.—"Atfield" for practical; Thorpe's "Inorganic Chemistry" (Collins, 2 vols., 6s.); Berntsen's "Organic Chemistry" (Blackie, 9s.); and Meyer's "Outlines of Theoretical Chemistry" (Longmans, 9s.) for home study.

PHYSICS.—Ganot's large book (Longmans, 15s.) may be read along with Everett's.

MATERIA MEDICA.—"Pharmacographia" (Macmillan, 21s.), or Wills's "Materia Medica" (Westminster College, 10s. 6d.). For aid as to the historical characters of drugs, see Professor Maisch's "Manual" (published by Lea Bros., Philadelphia, \$3), which has good engravings.

PHARMACEUTICAL EDUCATION IN GREAT BRITAIN.

In regard to the following paragraphs, it should be understood that general information only is given, the points kept in view being the time at the disposal of students and the length of their purses. When they have made up their minds as to which school is likely to suit them, they should communicate with dean, secretary, or principal as the case may be.

SCHOOLS IN LONDON.

THE SCHOOL OF PHARMACY,
17 Bloomsbury Square, W.C.

The fifty-first session of this school will commence on Wednesday, October 5, with a jubilee address by Mr. Michael Carteighe, at 3 P.M. During the session (October to July) there are two courses of instruction in each subject of the curriculum. The first or elementary course commences in October, and terminates at the end of March. This includes the subject-matter of the Minor schedule, and those who work diligently during the course ought to pass the Minor examination in April. The second or advanced course commences in the third week of April, and terminates at the end of June. The work includes the subject-matter of the Major schedule, and it is arranged so that students may enter for the Major examination in July. Chemistry lectures are given on Tuesday, Wednesday, and Thursday mornings at 9 o'clock. Fees, 4*l.* 4*s.* for the first, and 3*l.* 3*s.* for the second courses. Botany lectures, Monday and Saturday mornings at 9 o'clock. Fees, 3*l.* 3*s.* for the first, and 2*l.* 2*s.* for the second courses, with 10*s.* 6*d.* per course for practical work. Pharmacy lectures on Tuesdays, Thursdays, and Fridays at 5 P.M. Fee, 3*l.* 3*s.* for six months' course. Practical pharmacy and dispensing, Mondays and Wednesdays, 3 to 6 P.M. Fee, 2*l.* 2*s.* for 1½ hour each day. Materia medica and histology every Friday, at 9 A.M. Fees, 2*l.* 2*s.* for the first, and 1*l.* 1*s.* for the second courses. Practical chemistry may be taken any time from 10 A.M. to 5 P.M. Three hours per day is reckoned as enough for the Minor. Fee for this, 12*l.* for the six months, or 17*l.* 17*s.* over the whole session (average for the Major). The total fees for the Minor, therefore, amount to 26*l.* 14*s.* The dean of the school is Professor Dunstan, but information respecting the school is obtainable from Mr. F. W. Short, B.Sc., secretary to the school, 17 Bloomsbury Square, W.C.

SOUTH LONDON SCHOOL OF PHARMACY (LIMITED),
325 Kennington Road, S.E.

The session at this school is divided into three terms of fully three months each, beginning on October 1, January 3, and April 2, and the courses of instruction during these periods are arranged to suit the Minor or Major examinations held in January, April, and July. In addition to these general courses there is a special tutorial term, beginning on September 1, for those students of the school who wish to enter for the October exams. Students work the whole day, fees for Minor lectures and practical instruction in chemistry, dispensing, pharmacy, and histology being 12*l.* 12*s.* per term. The same fee is charged for the "Major," and in both cases it is perpetual so far as lectures are concerned, so that students may take another term at the school on payment of 2*l.* 12*s.* 6*d.* for the Minor practical work, or 3*l.* 3*s.* for the Major. Partial courses may also be taken at specified fees. Dr. John Muter, the principal of the school, requires students to provide themselves with two text-books only—viz., the British Pharmacopoeia and Dr. Muter's "Short Manual of Analytical Chemistry" (Simpkin, 6*s.* 6*d.*). Other books are lent in accordance with the "inclusive" principle of the school. Secretary, Mr. W. H. Dodd, F.C.S.

WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY,
Trinity Square, Borough, S.E.

The principals of this college (Messrs. G. S. V. Wills and H. Wootton) have recently rearranged the courses of instruction so as to adapt them to the new quarterly exams. Complete courses of three months each now commence on August 1 and on the fourth Tuesdays of October, January, and April. Fee for either examination course 8*l.* 8*s.*, or 15*l.* 15*s.* until qualified for the Minor, the same fee being charged for a year's instruction for the Minor and Major. Evening classes are held for the Minor on Tuesday, Wednesday, and Thursday evenings from 7 to 9; fee, 1*l.* 1*s.* per quarter for one night per week. Practical dispensing on Thursdays from 5 o'clock; fee, 1*l.* 1*s.* for three months. Evening classes are also held for the Preliminary and the Major, and special day classes for the Preliminary. Secretary,

Mr. E. Walden, from whom particulars of the college postal system, through which students are guided in home studies, may also be obtained.

THE CITY SCHOOL OF CHEMISTRY AND PHARMACY (LIM.),
27 Chancery Lane, W.C.

There are day and evening classes at this school, the session beginning in September, and the courses are adapted to the quarterly exams. In the case of the Minor the fee per course is 8*l.* 8*s.*, or 4*l.* 4*s.* per month. Those who have passed the Minor from the school are admitted to the Major course at 25 per cent. less than the advertised terms. The work in the day classes begins at 9.30 A.M. and continues until 5 P.M. The evening classes are held on Tuesdays and Thursdays from 6 till 10; fee, 10*s.* 6*d.* per month for one evening per week. Classes are also held for the Preliminary. Secretary, Mr. Reginald Harrison.

OTHER METROPOLITAN SCHOOLS.

Mr. Frederick Davis, B.Sc., 26 and 28 Newington Causeway, S.E., gives personal tutorial instruction in botany, chemistry materia medica, microscopy, pharmacy, prescriptions, and dispensing. Students may take one or more subjects, at a time arranged between them and Mr. Davis. Fees by agreement.

Messrs. Woodland and Cooper, of the Central School of Chemistry and Pharmacy, 173 Marylebone Road, N.W., have three courses for the Minor during the year, beginning September 2, January 2, and April 26, the first two being 10*l.* 10*s.* per course, and the last 8*l.* 8*s.* There are two Major courses, beginning in September and February; fee, 15*l.* 15*s.* Evening Minor classes are held, also Preliminary classes.

Middlesex College of Chemistry and Pharmacy (40 Charlotte Street, Portland Place, W.). Mr. F. H. Painter gives instruction in all the subjects for the Minor and Major examinations. The next course begins on October 4 and extends to the January examination, lectures being given in all subjects, and half of the day is devoted to laboratory and museum work. Fee, 8*l.* 8*s.* Evening classes are held on Mondays and Thursdays from 7 to 10.

PROVINCIAL SCHOOLS.

THE LIVERPOOL SCHOOL OF PHARMACY,
24 Newington, Liverpool.

This school is kept open by the principal, Mr. J. S. Ward, from the first Monday of September to the end of the July examinations. Fresh courses of lectures in all the classes begin on the first Mondays in January, April, and September. A complete course of instruction for the Minor or Major lasts three and a half months, and occupies the whole day. Fee for the Minor, 9*l.* 9*s.*; for the Major, 6*l.* 6*s.* For local students there are excellent arrangements. Thus in the Minor there are afternoon classes daily (3 to 5), evening classes on Wednesdays and Fridays, and a once-a-week class (Wednesdays), which is especially convenient for apprentices and assistants in St. Helen's, Widnes, Wigan, Chester, Southport, and other towns in the district. There is a similar class for the Major.

OWENS COLLEGE, MANCHESTER.

There are two sessions in the academical year of the pharmaceutical department of this college—from October 1 to end of March, and from May 1 to end of July. Students before entrance are required to produce (a) a testimonial of good character, and (b) a certificate of having passed the Preliminary examination. The arrangement of the classes is practically the same as at Bloomsbury Square, the winter course covering the Minor subjects, and the summer one those of the Major. The science subjects are taught by the Owens College professors, and the strictly pharmaceutical by Mr. Kirkby and Mr. Hoseason. Composition fee for the Minor courses, 13*l.* 13*s.* Separate classes may be taken. We note that Mr. Kirkby will give six lectures on Pharmacy Law, including the Apothecaries Act, Arsenic Act, Pharmacy Acts, Spirits Act, Sale of Food and Drugs Act, the

Medicine-stamp Act, and the interpretations of them which have obtained in the courts of law.

An entrance exhibition of 10% will be offered for competition in October, 1892, to students entering for the full pharmaceutical course. The subjects of the examination will be elementary botany and chemistry. Candidates must give notice to Mr. H. W. Holder, M.A., registrar, before September 20. A scholarship of 10% and a prize of 5% will be offered at the end of the winter session 1892-3 for competition amongst students proceeding to the course for the Major examination.

MANCHESTER COLLEGE OF PHARMACY,
225A and 227A Oxford Street, Manchester.

The system of instruction employed by Messrs. W. S. and Charles Turner, directors of this college, in all the departments of their work is a combination of lectures and demonstrations with classes. The following are the arrangements for Minor students, the courses beginning on the first Mondays of September and January, and the second or third Monday of April. Those who desire to work the whole day attend the full-time class; fee, 9*l.* 9*s.* per course. There is an afternoon class on Tuesdays and Thursdays (2 to 6), an evening class on Mondays, Wednesdays, and Fridays (8 to 10), and a once-a-week class from 2 to 6 P.M. on Tuesdays. In all these classes the whole of the work for the Minor is gone over in a session, and the fees are moderate. The Major examination arrangements comprise a full-time class, a once-a-week class, and an evening class. Working in the first of these a student is expected to be fit for the Major in three months, and the fee for that period is 4*l.* 14*s.* 6*d.* The directors will advise local students as to the best course they should adopt.

NORTHERN SCHOOL OF PHARMACY,
100 Burlington Street, Manchester.

For the Minor and Major there are day, afternoon, and evening classes at this school, taught by Mr. George Clayton, the principal. Taking the whole-day Minor class as an example, we note that work begins at 9 A.M. with a tutorial or reading class, then comes some practical work, and after luncheon more tutoring and recognition of specimens, the day finishing at 4 P.M. The courses begin in January and April—3½ months—fee, 9*l.* 9*s.*; and from September to January, 10*l.* 10*s.* The Major work is similarly arranged, and goes on to 5 P.M.; fee, for 3½ months, 5*l.* 5*s.* For this examination the evening class meets on Wednesdays and Thursdays, and the afternoon one on Wednesdays and Fridays. A time is fixed, but Mr. Clayton is open to arrangement on that score.

SHEFFIELD COLLEGE OF PHARMACY,
116 and 118 South Street, The Moor, Sheffield.

There are several courses at this school (conducted by Messrs. R. B. Greaves and J. W. J. Turner) for the Minor and Major. Full courses begin on October 4, January 4, and April 10, and give complete instruction for the examinations next ensuing. Short courses for those who require a finishing touch commence on November 21 and February 20. For the Minor the whole day, from 10 to 4.30 (with a luncheon interval), is occupied. For the Major the forenoons are devoted to practical chemistry, and the rest of the day to other subjects. Fees, 8*l.* 8*s.* for the full course, and 4*l.* 10*s.* for the short one. Applications should be sent to Mr. R. B. Greaves at the above address.

SCHOOLS IN SCOTLAND.

Edinburgh.—Classes are conducted at the Royal Dispensary, 21 West Richmond Street, by Mr. William Duncan. Terms of three months each begin on the first Tuesdays of September, November, February, and May, the instruction in each term covering the requirements of the Minor or the Major. Fees, 8*l.* 8*s.* per term. Evening classes are held for the convenience of local assistants.

Glasgow.—In the School of Pharmacy, 180 West Regent Street, Dr. David Lees has private day classes and evening lectures and classes for the pharmaceutical examinations. The latter are arranged into junior, advanced, and tutorial, and each class meets twice a week at 8.30 P.M. The sessions begin in October and April.

LOCAL ARRANGEMENTS.

In the scientific section particulars are given regarding local science classes whereat apprentices and assistants may obtain education in chemistry, physics, &c. In the absence of special pharmaceutical arrangements these science classes provide an excellent means for students familiarising themselves with the first principles of science, thereby greatly decreasing the labour of the preparatory course of study prior to the examination. In what immediately follows the arrangements made by local pharmaceutical associations are summarised, together with some special information received.

ABERDEEN.

Classes in chemistry, botany, &c., are held in Robert Gordon's College, and the laboratory of the Aberdeen and North of Scotland Society of Chemists and Druggists is available for the use of students. Full particulars may be obtained from Mr. Alex. Strachan, secretary to the Society, Rosemount Place.

BIRMINGHAM.

Mr. F. H. Alcock, Temple Chambers, Broad Street Corner, prepares students for the Minor and Major.

The Birmingham Municipal Technical School (Midland Institute, Paradise Street) gives good facilities for the study of chemistry and botany to chemists' assistants and others who have but limited time at command. There are classes in inorganic chemistry and organic chemistry, both lecture courses, and practical work in the laboratory. Although at present there is no special course for the Pharmaceutical Society's examinations, yet by attending suitable classes in chemistry and botany all the subjects but *materia medica* are provided.

The Mason College classes are referred to under "Scientific." Professor Tilden, the chemistry teacher there, is a pharmaceutical chemist.

BRIGHTON.

The classes promoted by the local Chemists' Association have not been held for some years, owing to want of support but the Association still shows its interest in educational matters by offering two prizes, 2*l.* and 10*s.* 6*d.*, annually to assistants and apprentices resident in the town, who can obtain scientific education at the School of Science and Art, Grand Parade, where there is a course of lectures on general and pharmaceutical chemistry at 2 P.M. on Fridays, followed by 1½ hour in the chemical laboratory, and at 4.30 P.M. by a lecture on *materia medica*. The laboratory is open daily, and the fees are exceedingly moderate—in fact, Brighton assistants and apprentices appear to be as well off as those in any other town in the kingdom. There are lectures on physics in the morning, and evening classes in botany, chemistry, and physics by Mr. H. Elmonds, B.Sc.

DUNDEE.

It is not improbable that before long a regularly organised course of pharmaceutical study may be provided in this city. In the principal's report of session 1891-92 of the Dundee University College it was stated that "arrangements are being made to offer special facilities in the future for pharmaceutical students to attend the University classes in chemistry, physics, botany, and *materia medica*, thus providing a complete curriculum such as is compulsory in the leading countries on the Continent, but which has hitherto been grossly neglected in our own. In order that the liberal opportunities held out by the college may be taken advantage of by the apprentices of Dundee, it will be necessary that the masters should also make some small concessions on their part, so as to admit of their employés devoting the needful time to their studies. It is also earnestly to be hoped that funds may be found available by the County Councils of the neighbourhood for subsidising promising students to take advantage of the technical classes in the college, as has been done in other places." A composition fee has been suggested, which may not be found unreasonable. The appointment of a lecturer in *materia medica*, and the extensive alterations which the Council have decided to make in the college buildings, will doubtless facilitate these

arrangements. The college at present provides lectures in chemistry by Professor Percy Frankland, with laboratory work under Mr. Fred Hambly, which are more than ample for all the requirements of the pharmaceutical examinations. Professor Geddes's lectures and laboratory work in botany are good for those who have already done something to the elementary part of this subject. The fees for the day classes are 3*s.* 3*s.* each subject. At the Technical Institute evening classes are provided in chemistry, to be supplemented this year by a lecture course in organic by Mr. Hambly. The fees for these classes, which are under the Science and Art Department, are 5*s.* for the first subject, and 2*s.* 6*d.* for each additional one. The chemical lectures and analytical work given at the Y.M.C.A. Science School by Mr. J. Braik Mason, F.C.S., chemist and druggist, have again proved the most successful in the district, and have attracted a large proportion of the young druggists of the town. Mr. Mason provides instruction in all branches of chemistry. The fees are similar to those of the Technical Institute. The classes held in connection with the Assistants' Association by the secretary, Mr. W. Mair, will be resumed in October. Botany is taken on Monday evenings at 9.15, and materia medica and pharmacy on Friday at the same hour.

EDINBURGH.

The North British Branch of the Pharmaceutical Society secures the admission of pharmaceutical students at reduced fees to the chemistry lectures and laboratory practice at the School of Medicine (Dr. Stevenson Macadam and Mr. Falconer King). Those who care to attend courses of lectures on materia medica and therapeutics (specially useful for the latter) can also be accommodated at reduced fees. For particulars apply to Mr. J. Rutherford Hill, 36 York Place.

The Heriot-Watt College, Chambers Street, is an admirable institution for purely scientific training, and young apprentices who have yet some years to wait before they can go in for the Minor should devote one or two evenings per week to the classes of the college. Apply at the college for a prospectus of the classes and fees.

LEEDS.

Leeds School of Science and Technology (head-master, Mr. S. J. Harris, M.Sc., F.C.S.). Classes available for students wishing to pass the examinations of the Pharmaceutical Society are given in elementary and advanced theoretical and practical chemistry, botany, and allied subjects. The session commences in October and ends in May, and the fees are for elementary classes, 2*s.* 6*d.*; advanced, 3*s.* 6*d.* per session; practical chemistry, elementary, 3 hours per week, 7*s.* 6*d.*; advanced, 4½ hours per week, 12*s.* 6*d.*; honours, 9 hours per week, 15*s.* the session. Apparatus and materials free. Special aid is given to students wishing to qualify for the Pharmaceutical Society's examinations, and during the last twenty years many youths have successfully gone through this test without any other aid. The opening lecture will be given by Professor E. Jacob, M.A., M.D., on Monday, September 19, at 8 P.M., in the Chemical Lecture Theatre, Rossington Street. Subject: "Lights and Lighting."

LEICESTER.

We have failed to get information as to the proposed arrangements for the ensuing session. A correspondent writes: "I expect there will be a meeting called shortly to try and arrange for some classes during the coming winter, but the unqualified assistants and apprentices in the town (with one or two exceptions) seem not to have much energy, and do not appear to take the trouble to attend a class even if no charge is made beyond the membership of the Association." Leicester is capable of something better than this, surely. Its pharmacy classes looked quite brilliant a winter or two ago.

NEWCASTLE-UPON-TYNE.

The North of England Pharmaceutical Association have made arrangements with the Durham College of Science for the attendance of pharmaceutical students at the evening classes in chemistry and botany. A course of twenty Thursday lectures on "Materia Medica," by Mr. N. H. Martin, begins on October 6, at 8 P.M. Fee, 1*l.* 1*s.*

NOTTINGHAM.

The Notts and Nottingham Chemists' Association continue their arrangements with the authorities of the Nottingham University College under which pharmaceutical apprentices and assistants are admitted to specially arranged classes taught by the professors, and which form a complete course of instruction for the Minor examination extending over two years. Practical pharmacy is taught in the Association's own rooms. The Association advise students to make the course extend over three years, taking theoretical and practical chemistry only the first session, and devoting the other two sessions to the remainder of the subjects. During the present college session, commencing on October 10, instruction will be given in practical chemistry, practical dispensing, and pharmaceutical botany. The work in practical chemistry will comprise laboratory instruction, daily, from 10 to 5; and on Tuesday and Thursday evenings from 7 to 9. Fee, 10*s.* per term for each twenty-two hours' work. Text-books:—Attfield's "Chemistry," and Clowe's "Practical Chemistry," (Churchill, 7*s.* 6*d.*) In practical dispensing there will be twelve class meetings on Monday evenings, from 8.30 to 10, beginning on Monday, January 9. After half an hour's demonstration by the teacher, the students adjourn to the chemical laboratory for practical work. Fee, 7*s.* 6*d.* A course of lectures in pharmaceutical botany for pharmaceutical students will be given on Tuesday evenings, at 8, beginning on October 11. During the first term and first half of the second term, elementary, structural, and physiological botany will be taught; in the second half of the second term, practical instruction in morphology and anatomy; and, in the third term, practical demonstrations in systematic botany will be given. Fee per term, 7*s.* 6*d.* Text-book: Bentley's "Manual of Botany" (Churchill, 14*s.*). Next session pharmaceutical chemistry, organic chemistry, physics, and materia medica are the subjects which will be taken up. The Association has the use of the Sunday School Institute on Friday evenings from September to June; here are stored the library, pharmaceutical specimens, and microscope, and a pharmacy class is conducted by one of the chemists of the town from 9 to 10 P.M. This room is open to associates from 8 to 10.30 P.M. The associates subscription is 2*s.* 6*d.* per annum, and entitles them to the use of the library, &c., and they are also admitted at a reduced rate to one college class each session. For further particulars apply to Mr. William Gill, secretary, 207 Radford Road.

SHEFFIELD.

The eighth session of the school promoted by the Sheffield Pharmaceutical and Chemical Society will be opened on Thursday, October 13, at 6.30 P.M., when the last session's prizes will be distributed and an address to the students will be delivered. The classes will commence the following week. Monday, botany; Tuesday, materia medica; Thursday, chemistry. Intending students may obtain a syllabus containing full information from Mr. Robert Watts, 56 Fargate, Sheffield.

POSTAL INSTRUCTION

in the subjects of the pharmaceutical examinations is provided by the undermentioned. It should be understood that this instruction, so far as the Minor and Major are concerned, is now mainly preparatory, and suffices to keep students on the proper lines of work. Such a course should be supplemented by practical work in chemistry, botany, dispensing, and pharmacy.

The Westminster College of Pharmacy gives instruction for the Preliminary, Minor, and Major. In the latter two printed lectures are sent to students weekly, and such other matter (specimens, prescriptions, powders for analysis) as will enable them to work systematically and profitably.

Mr. John Tuily, chemist, Hastings, gives good advice to Preliminary and Minor students. He adopts the examination-paper method, and insists upon progress before the student is allowed to proceed from one stage to another.

APOTHECARIES' ASSISTANTS' CERTIFICATE.

This certificate is much sought after by English assistants. It is a fair test for those who are preparing for the Minor examination, and it is recognised by hospital boards as evidence of qualification for dispenserships, but the Local

Government Board only recognises the Minor pharmaceutical certificate. The examination for the certificate is held at the Apothecaries' Hall, Blackfriars, E.C., on the fourth Wednesday of every month, at 2 P.M. The examination consists of two parts:—

(a) Practical—the compounding and dispensing of medicines.

(b) Oral—the translation of prescriptions; the materia medica, pharmacy, chemistry, and botany of the British Pharmacopoeia.

Candidates must give notice, and pay the fee of 2*l.* 2*s.*, seven days previously, to Mr. C. E. Armand Semple, B.A., M.B. Cantab, Secretary to the Court of Examiners.

IRELAND.

The laws affecting pharmacy in Ireland are distinct from those obtaining in Great Britain. In Ireland there are (1) pharmacists (*i.e.* licensed pharmaceutical chemists), who may sell poisons and compound prescriptions; and (2) druggists (*i.e.* chemists and druggists and registered druggists), who may sell poisons, but not compound prescriptions. All are now subject to examination conducted by the examiners of the Pharmaceutical Society of Ireland, for whom Mr. A. T. Ferrall, 67 Lower Mount Street, Dublin, acts as registrar, and to him all inquiries should be addressed. First, in regard to

THE DRUGGISTS' EXAMINATION.

This is an examination, instituted by the Amendment Act of 1890, for persons who wish to be registered as "Registered Druggists." Candidates must have served for four years as apprentices or assistants with pharmaceutical chemists, apothecaries, chemists and druggists, or registered druggists. The subjects of the examination are:—

- (1) English orthography and composition.
- (2) Arithmetic and the weights and measures of the British Pharmacopoeia.
- (3) Appearance and properties of the various drugs and chemicals in general use.
- (4) The Sale of Poisons Act (Ireland), 1870.

The examination is held in Dublin on the first Thursdays of March, June, September, and December; and also, at an early subsequent date, at other centres (such as Cork and Belfast, where there are examiners), if twelve candidates from such centres make application to be examined there. The fee for the examination is 4*l.* 4*s.*, and candidates for it are required to send in two declarations (on forms to be obtained from Mr. Ferrall), fourteen clear days before the date of the examination, accompanied by a receipt from the Bank of Ireland of having lodged the 4*l.* 4*s.* fee to the credit of the Society. Successful candidates receive a certificate which sets forth that they are "qualified to sell poisons." They are eligible for election by the Pharmaceutical Society as associate druggists, with privilege to vote, &c., and they receive *THE CHEMIST AND DRUGGIST* weekly, this journal being supplied by the Society to the whole of its adherents.

PHARMACEUTICAL CHEMISTS.

To obtain this title the candidate must have served an apprenticeship of four years with a pharmaceutical chemist (Great Britain and Ireland), chemist and druggist (Great Britain *only*), or an apothecary, and pass a Preliminary examination, and the licence examination.

THE PRELIMINARY EXAMINATION.

COMPULSORY SUBJECTS.

LATIN.—To translate into English, and parse sentences from a Latin author:—Caesar's "Commentaries," Book I.; or Virgil's "*Aeneid*," Book I.
ENGLISH.—English grammar, including orthography and parsing. To write on a subject selected by the examiner; and to write from dictation.
ARITHMETIC.—The first four rules, simple proportion, vulgar fractions and decimals. To describe the British weights and measures and the metric system.

ALGEBRA.—As far as simple equations, inclusive.

GEOMETRY.—Including the First Book of Euclid.

OPTIONAL SUBJECTS.

One of the following must be taken:—

ELEMENTARY PHYSICS AND MECHANICS.—Sound, light, and heat, as given in Ganot's "Elementary Course of Natural Philosophy," mechanics of

solids and fluids, comprising the elements of statics, dynamics, and hydrostatics.

THE RUDDIMENTS OF BOTANY.—Oliver's "Lessons in Elementary Botany," Part I.

ELEMENTARY CHEMISTRY.—As included in Roscoe's "Lessons in Elementary Chemistry," chapters 1 to 13 inclusive.

FRENCH, GERMAN, or any modern language.

HOW TO BE EXCUSED.

The Preliminary, or Matriculation, examination of the Royal College of Surgeons, or such other examination as is accepted by the General Medical Council as equivalent to it, and the Preliminary examination of the Pharmaceutical Society of Great Britain, will be accepted instead of this Preliminary examination; such examination to be passed at least one year before the candidate presents himself for the licence as a pharmaceutical chemist. The usual fee of 2*l.* 2*s.* to be paid.

CONDITIONS OF APPLICATION, AND WHEN HELD.

Candidates must prove that they are 16 years of age.

The examination is held at the Society's house, 67 Lower Mount Street, Dublin, on the first Mondays of January, April, July, and October, at 11 A.M.

Candidates must give notice to Mr. Ferrall at least seven clear days before (on a form to be obtained from him), sending with the notice a receipt from the Bank of Ireland showing that the fee of 2*l.* 2*s.* has been lodged to the credit of the Society.

Each candidate must obtain 50 per cent. of marks in English, arithmetic, the British and metrical systems of weights and measures, and 40 per cent. on the entire course, to enable him to pass. No candidate will pass who does not obtain 20 per cent. in each of the other compulsory subjects. Spelling and handwriting are taken into account.

THE LICENCE EXAMINATION.

Held at Dublin, in the Society's House, on the first Wednesday and two following days of January, April, July, and October, at 11 A.M.

The fee, 5*l.* 5*s.*, to be paid into the Bank of Ireland to the credit of the Society, and the receipt forwarded to the Registrar, along with certain certificates, fourteen clear days before the date of the examination.

The Certificates are (1) one in proof of age—*viz.*, 21 years; (2) one in proof of the candidate having been engaged four years in compounding and dispensing prescriptions; and (3) one showing that the candidate has attended a course of practical chemistry, having worked at the bench for a hundred hours in the laboratory of one of the following institutions, *viz.*:—

The Pharmaceutical Society of Ireland, School of Chemistry and Practical Pharmacy.

The Cecilia Street School of Medicine, Dublin.

The City of Dublin Technical Schools.

The City School of Chemistry and Pharmacy (Limited), Chancery Lane, London, W.C.

The Government School of Science, South Kensington.

The Queen's College, Belfast.

The Queen's College, Cork.

The Queen's College, Galway.

The Royal College of Science for Ireland, Dublin.

The Royal College of Surgeons in Ireland, Dublin.

The Working Men's Institute, Belfast (Chemical School).

Trinity College, Dublin.

Subjects of Examination.

BOTANY.—To recognise the principal indigenous plants used in medicine to refer them to their natural orders, and to give the definitions and the distinctive characters of their several parts.

MATERIA MEDICA.—To recognise specimens of the drugs of the Pharmacopoeia, to describe their characters and active principles, name the sources from which they are obtained and the official preparations into which they enter, and to detect adulterations.

GENERAL AND PHARMACEUTICAL CHEMISTRY.—The elementary laws of chemistry and physics, including chemical equations. To recognise the chemical substances of the Pharmacopoeia; to describe the processes by which they are obtained; qualitative analysis (including the tests of the Pharmacopoeia) and volumetric analysis; and to submit to a practical examination in these subjects.

PRACTICAL PHARMACY.—To translate Latin prescriptions; to detect

dangerous doses; to compound and dispense correctly. To explain the processes of making the non-chemical preparations of the Pharmacopœia, and to recognise them; and to have an intimate knowledge of the Sale of Poisons (Ireland) Act, 33 & 34 Vict. chap. 28, 1870.

THE SOCIETY'S SCHOOL OF CHEMISTRY

Is under the direction of Professor Tichborne, assisted by Mr. P. Kelly, M.P.S.I., as demonstrator. The course comprises 100 hours of actual work at the bench, and consists of the recognition of the chemical substances of the Pharmacopœia, description of the processes by which they are obtained, qualitative and quantitative analysis (including the tests of the Pharmacopœia), and volumetric analysis. For terms and particulars apply to the Registrar, or to the teachers.

ASSISTANTS TO PHARMACEUTICAL CHEMISTS.

Under the Amendment Act of 1890 the Irish Pharmaceutical Council was empowered to grant to assistants of pharmaceutical chemists certificates of competency in dispensing, &c, on certain conditions. During the past year the arrangements have been completed, and the examination is now conducted at the Society's house in Dublin on the second Wednesdays of January, April, July, and October, at 11 A.M. The following are the

CONDITIONS OF APPLICATION.

A fee of 1*l.* 1*s.* must be paid.

Notice must be given to the Registrar fourteen clear days before the date of examination.

Candidates must have been engaged at practical pharmacy for at least four years, and must produce a certificate (similar to the one for the Licence examination) to that effect.

SUBJECTS OF EXAMINATION.

Prescriptions.—Candidates will be required to read autograph prescriptions, translate them into English, render a correct translation of the directions for use, and detect unusual doses.

Practical Dispensing.—To weigh, measure, and compound medicines write the directions in suitable language, finish, and properly direct each package.

Materia Medica and Quality of Specimens.—To recognise the Pharmacopœia chemicals in frequent demand, and specimens of roots, barks, leaves, fruits, resins, and gums in ordinary use; also to estimate the quality of each specimen submitted, and its freedom from adulteration.

Pharmacy.—To recognise the preparations of the Pharmacopœia which are not of a definite chemical nature, such as extracts, tinctures, and powders, and give the proportions of the more active ingredients. The candidates will also be examined in the Sale of Poisons (Ireland) Act.

The questions set at the examinations in Ireland are published in THE CHEMIST AND DRUGGIST from time to time, and copies containing such questions may be obtained from the publisher at 4*d.* each.

APOTHECARIES' HALL ASSISTANT'S CERTIFICATE.

This certificate is granted by the Apothecaries' Hall to persons of 16 years of age who, having spent two years at practical pharmacy under the superintendence of a duly registered apothecary or pharmaceutical chemist, pass an examination in practical and theoretical pharmacy, materia medica, the British Pharmacopœia, and the translation and compounding of medical prescriptions.

The examination is held on the first Friday in each month (except August), at the Apothecaries' Hall, Mary Street, Dublin, at 2 o'clock, P.M. Fee, 2*s.*

PHARMACEUTICAL SCHOLARSHIPS AND PRIZES.

With the exception, of the Pharmaceutical Scholarship offered by Owens College and our own prizes, all the "good things" under this heading are reserved for adherents of the Pharmaceutical Society of Great Britain. First, in regard to men low down on the ladder (both in age and pharmaceutically), we may note the

BELL AND MANCHESTER SCHOLARSHIPS.

These are offered for competition annually, the examination being held at the same time and places as the preliminary examinations. There are two Bell Scholarships, each of the

value of 30*l.* plus free education in the School of Pharmacy Bloomsbury Square, W.C., and 5*l.* worth of text-books. Candidates must be (1) subscribing students of the Pharmaceutical Society; (2) between 20 and 22 years of age on the day the examination is held; and (3) have served three years with a pharmaceutical chemist or chemist and druggist. The Manchester Pharmaceutical Association Scholarship is of the value of about 30*l.*, which is to be expended for instruction in the School of Pharmacy, Bloomsbury Square, or in a provincial school selected by the scholar and approved by the Pharmaceutical Council. Candidates must be (1) students of the Pharmaceutical Society; (2) between 19 and 21 years of age on the day on which the examination is held; and (3) have served not less than three years with a pharmaceutical chemist or chemist and druggist in Lancashire, Cheshire, or the High Peak parliamentary division of Derbyshire. No person to whom a Bell Scholarship has been awarded is permitted to compete for the Manchester Pharmaceutical Association Scholarship, and vice versa.

The Subjects of the Examination are the same for both scholarships, viz:—

Latin: Virgil, the first three books of the "Æneid"; Latin prescriptions; translations of Latin into English and English into Latin; translations from any Latin Pharmacopœia; and parsing.

French or German.

English composition and parsing.

Arithmetic: The first four simple and compound rules, fractions, and decimals; the British and metrical systems of weights and measures.

Elementary chemistry, pharmacy, and botany.

The questions set at the last examination were published in THE CHEMIST AND DRUGGIST, July 16, 1892.

Books for Study.—As we are often asked the titles of books suitable for those preparing for the scholarship examinations we append a list of some which can be relied upon:—

Latin: The series of Virgil recommended under the Preliminary, or the translations of the "Æneid" published by W. B. Olive & Co. (1*s.* each book). Pereira's "Selecta & Prescriptis," or Ince's "Latin Grammar of Pharmacy."

French or German: Macmillan's "Progressive French Readers" (2*s.* 6*d.* each); the similar books for German, or, preferably, Otto's "Grammar."

English composition and parsing, arithmetic: same as for the Preliminary.

Elementary chemistry, pharmacy, and botany: Wilson's "Chemistry" (Chambers, 3*s.* 6*d.*), or any of the standard elementary books on inorganic chemistry; Balfour's "Elements of Botany" (Black, 3*s.* 6*d.*), or Bentley's little book (S.P.C.K., 1*s.*), British Pharmacopœia, and "The Art of Dispensing."

HERBARIUM PRIZE.

A silver medal is annually offered by the Pharmaceutical Society for the best herbarium, collected in any part of the United Kingdom between the first day of January in one year and the first day of July in the year following; and should there be more than one collection possessing such an amount of merit as to entitle the collector to reward, a second prize, consisting of a bronze medal, and also certificates of honour, is given.

The herbarium should contain not less than 150 Phanerogamous plants and ferns collected by a subscribing student or apprentice of the Society, and arranged according to the natural system adopted in some book on British botany. Competitors must be under 21, and must forward their collections to Mr. Bremridge before July 1, 1893.

COMPETITIONS IN ANALYTICAL CHEMISTRY.

We ought not to forget here that every month the proprietors of THE CHEMIST AND DRUGGIST offer two book-prizes for competition amongst students of chemistry, supplemented by half-yearly prizes and certificates to those students who take the largest aggregate number of marks in six competitions. The work done in the "Corner for Students" is of the highest value to those preparing for the pharmaceutical examinations, and not a little honour is attached to the awards, many of the foremost men in pharmacy having been prizemen in their student days.

PHARMACEUTICAL MEDALS.

Pharmaceutical chemists who were Associates of the Society at the time of passing the Major examination are entitled to compete for the following prizes in the July

ending the session in which they passed the Major examination:—

First Prize—Pereira Medal (silver), and a Hills book-prize value 5*l*.

Second Prize—The Pharmaceutical Society's medal (silver), and a Hills book-prize value 3*l*.

Third Prize—The Pharmaceutical Society's medal (bronze), and a Hills book-prize value 2*l*.

The examination is held in the last week of July, immediately after the meetings of the Boards of Examiners. It is a written examination, held in Edinburgh and London, and the questions are in botany, chemistry and physics, and *materia medica*, somewhat in advance of the Major, and including, sometimes, current literature.

RESEARCH HONOURS.

The Pharmaceutical Society further offers a *Redwood Scholarship* annually in July to pharmaceutical chemists who are desirous of obtaining advanced instruction in chemistry and chemical pharmacology, with a view to conducting original investigations in these subjects. The scholar receives 20*l*., and is provided, free of cost, with a working-bench, apparatus, and materials in the Society's research laboratory. The nomination of the scholar is made by the Research Committee after ascertaining the candidate's fitness by means of an examination in chemistry and *materia medica*, or in such other manner as the Committee may think fit. Pharmaceutical chemists who are members of the Pharmaceutical Society, and who have worked during one year in the Research Laboratory, and who are proficient in the methods of chemical investigation in their relation to pharmacy, are eligible for election by the Council as Research Fellows of the Pharmaceutical Society, on presenting a thesis which has been approved by the Research Committee, and which embodies the results of original investigation.

MEDICINE.

If we may judge from the number of queries which we receive throughout the year from young pharmacists in regard to the medical profession and the entrance thereto, a very considerable proportion of those who qualify in pharmacy, or who come very close up to the period of qualification, are ambitious to figure in the higher rank—medicine.

The step from the one to the other is an easy, though a long, one; but it is well for aspirants to consider, before they take it, what they are exactly aiming at, and we have thought this year that the matter could not be better presented than in the

VIEWS OF A MEDICAL GRADUATE,

who has large experience as a class-demonstrator, clinical lecturer, and practitioner, and who has thus had exceptional opportunities of judging the difficulties which beset medical students, and the problems which meet them when qualified.

To the youthful pharmacist (writes this gentleman) medicine often seems more or less of a paradise abounding in social and material advantages and far removed from all the aggravations of unriple pills and plasters. Also, it is a paradise on the road to which he has already made some progress. Like Cæsar, he has crossed the Rubicon—why not press on to Rome itself?

Thus comes the annual migration from pharmacy to the ranks of the higher profession. There can be no doubt of the great rewards bestowed by the goddess of medicine on those who worship at her shrine—East London and the West of Ireland notwithstanding. There can be no question of the advantages of a thorough training in pharmacy to the medical student and the practitioner. Therefore, to those who may now think of leaving pharmacy we say, Godspeed, and offer also such guidance and advice as is in use.

In the good old times it was a right easy thing to become a doctor. The mystic symbols of the apothecaries' art, a stock-in-trade of lancets and cupping-glasses, a few bottled scorpions or other handy awe-inspiring objects, and "hey,

presto!" the happy possessor was qualified complete to do battle with disease and death. Now we have changed all that. The training required of him who would practise the healing art has gradually become more and more exacting until this year we are face to face with the long-talked-of five years' curriculum—a new era in medical education.

THE FIVE YEARS' CURRICULUM.

The desirableness—if not, indeed, the absolute necessity—for a prolongation of the minimum period of medical study has for long been only too evident. Year by year the limits of science are being put further back and the demands made upon medical students correspondingly increased. When these ever-growing demands will cease might be an interesting speculation, but we are more concerned with things as they are, and for them it is clear that five years' study is none too little.

Some say that the increase in the curriculum is more apparent than real, and they point out that few of the higher diplomas are now taken in less than five years. This argument we grant, but it by no means proves the case. The change will certainly be very real to that numerous class who take a minor diploma either for good or as a means of getting practice while working for something higher. Moreover, the regulations now being issued by the Universities show pretty plainly that increased requirements will fully occupy the additional year, and the students of the future will find six years as needful as five are now.

Some good effect the new curriculum may perhaps have in reducing the too great influx of men, and thus lessening that terrible competition which threatens to swamp all that is highest and best in the traditions of medicine. Certain it is that the change cannot but raise the general standard of professional efficiency and thereby contribute to the status of the doctor and to the welfare of the people at large.

The new regulations are now being issued by the different licensing bodies, and as they are all based more or less closely on the recommendations made by the General Medical Council, we may briefly indicate the scope of the professional education required subsequent to registration as a medical student, viz:—(1) The course of medical study after registration should occupy at least five years. (2) The first four of the five years should be passed at a school or schools of medicine recognised by any of the licensing bodies, provided that the first year may be passed at a university or teaching institution recognised by any of the licensing bodies where the subjects of physics, chemistry, and biology are taught. (3) The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the licensing bodies, provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities. (4) In every course of professional study and examination the following subjects must be contained:—(1) Physics, including the elementary mechanics of solids and liquids and the rudiments of heat, light, and electricity. (2) Chemistry, including the principles of the science and the details which bear on the study of medicine. (3) Elementary biology. (4) Anatomy. (5) Physiology. (6) *Materia medica* and pharmacy. (7) Pathology. (8) Therapeutics. (9) Medicine, including medical anatomy and clinical medicine. (10) Surgery, including surgical anatomy and clinical surgery. (11) Midwifery, including diseases peculiar to women and to new-born children. (12) Theory and practice of vaccination. (13) Forensic medicine. (14) Hygiene. (15) Mental disease.

THE PROFESSIONAL EXAMINATIONS.

Then as to professional examinations there should be:—(1) At least three. (2) The examination on physics, chemistry, and biology should be passed before the beginning of the second winter session. (3) All the examinations, except the Final examination on medicine, surgery, and midwifery, should be passed before the final year, intended for clinical work. (4) The Final examination must not be passed till the termination of the fifth year of medical study.

These recommendations show the main lines on which medical study is now to be conducted, but as the regulations

of the different licensing bodies vary somewhat in details, it will be advisable for those who are interested to write for full particulars to whatever medical school they may think of joining.

The medical student in this country is in the happy position of having a choice from some seventeen different diplomas, each carrying with it the right to practise. He may rest content with something quiet, like the M.B., or he may elect to have a small alphabet following his name, such as the L.R.C.P., M.R.C.S., or the still more formidable Scottish triple qualification. The choice, however, in this matter is worthy of serious consideration, and many and bitter are the complaints we have heard from those who have found too late that they have chosen wrongly.

The diplomas are all alike in that they qualify, but there all likeness ends. They may be very fairly described as an aristocracy, a middle, and a lower class, and in the last not a few good men get landed simply from want of foresight, or it may be through shirking some little preliminary difficulty.

What, then, is the student to do? We cannot here enter into a qualitative analysis of all the different diplomas even if space permitted, but on some of the more general aspects of the question we shall express an opinion.

We may as well say at once that our advice to all is, Take a degree if you possibly can. In most cases this will mean more time, work, and expense, but the result is certainly worth it all.

THE ADVANTAGES OF A DEGREE.

There can be no need to insist on the professional and, perhaps, still more valuable social advantages of a university title. There is more, however, than the mere title in question. The success of a doctor depends as much on his knowledge of the world as on his knowledge of medicine. He must be something more than a mere medical machine, however efficient. Tact, width of sympathy, a full appreciation that he is not merely treating "cases," but men and women—these are essential for the physician who is to reach his full development. All this is rather beyond the horizon of the average student. His alpha and omega are things professional, and this all the more at a purely medical school, where he only comes in contact with fellow-medicals and where his every environment is more or less coloured by "shop." Here a university training gives a distinct advantage, for he is a poor specimen indeed who leaves his *alma mater* without some, at least, of that breadth of outlook, academic culture and *savoir-faire* which mark the university man wherever he goes.

Regarding where to study: to the man who can afford seven years and 250*l.* a year, Oxford or Cambridge will be *facile princeps*. To those who are not in this fortunate position probably the best course would be to spend the first three or four years at one of the younger English or a Scotch university. There the more purely scientific part of the work can be finished, and the student will then be in position to come up to the London hospitals and take full advantage of the unequalled clinical training they afford. Lastly, he may return to the scene of his earlier labours, and, passing the Final examination, receive the first-fruits of his work—a degree.

When will the long-suffering London student be provided with a teaching university and an opportunity of capping his labours with the much-coveted degree? The good time seems as yet far off, despite all the efforts of Royal Commissioners, existing and defunct. At present the only avenue to a degree is through the examinations of the London University, and in these the preliminary scientific subjects are so difficult as to deter all but the elect from entering. The degree, however, when attained, carries respect everywhere.

In many cases the questions what to study for, and where to study for it, will be decided largely by ways and means and in this a number will be fortunate in living near a medical school. They will generally be able to continue their ordinary work, and, at the same time attending the first year's classes and getting the first professional examination over, they will greatly reduce the cost of their education.

A WORD OF ADVICE.

At the outset of his career the medical student is pretty much an innocent abroad. His surroundings, work, and

habits are all new to him. Often for the first time he is freed from the restraint of home-life, and stands alone in the great world, where he must fight for his own hand. Well will it be if he sees what lies in front, and recognises that now he is to arm for the strife; that his present work is to decide whether he will enter the contest in faultless armour, and with weapons keen and bright, or ill-equipped, only to struggle on to a foregone conclusion.

The great turning-point of student-life comes with the first year. Then the right groove is entered or the wrong. It is easy to get into either, and to stay when in; but to get out, especially from the wrong groove, is wonderfully difficult.

At the beginning the work is easy; the "Preliminary" lies behind, the "First" seems afar off, and he of simple faith thinks it may very well take care of itself. Soon enough he becomes aware of his mistake, and a hurried "cram" is followed by a scramble through the examination, or a dead failure. Here, as elsewhere, history repeats itself, and the "Second," the "Third," and the "Final," are but a repetition of the tale of woe. The truth is, that now, if ever, good work ought to be done, and the essence of good work is steadiness and system. There is no need for midnight oil and wet towels, but a certain part of each day should be sacred to study. If notes of lectures are taken, they should be carefully read over and corrected every evening. It is often a good plan to supplement these notes with extracts from some standard text-book, and certainly in no case should the student pin his faith to notes alone.

Reading is important, practical work still more so, and no opportunity of gaining experience in the laboratory or in the hospital ward should be lost. Here, as in reading, method will tell. In both, by doing a little day by day, and always thoroughly grasping the essentials of whatever is done, the work will not only be mastered with surprising ease, but it will become interesting and of real use because it will be understood, not merely crammed. Then, with a rapid revision before going up for examinations, these terrible trials may be met with that cool and confident mind which is the most important factor in securing success.

The chief end of student-life is to study and pass examinations, but he who is wise enough to adopt an orderly method in his work will find plenty of time for other things. He will be able on the tennis-court, the golf-links, or the cricket-field to reap a rich harvest of enjoyment and stores of health and energy for future use. He will form friendships and get into a "set," and on the particular "set" he happens to enter more than on anything else will depend the making or unmaking of his character. Students' societies he should by all means join. The educational influence of such a society as the Royal Medical in Edinburgh, for example, cannot well be over-estimated. There the student meets on equal terms with the cream of his fellows, with the best of the younger graduates, and even with his teachers. He learns to measure himself among other men, to think quickly and accurately, to formulate his opinions, and to speak out fearlessly before an audience. His eyes will open as he hears the fads and fine-spun theories he has innocently swallowed swept away by a merciless criticism, and he will learn to think out the truth of things and to judge of their value for himself.

So much for student life, but what has been said has a much farther-reaching significance; for all the honest painstaking work, the orderly methods, the worthy friendships, the reputations of student-days—all these and their opposites last out into the life beyond, and determine for it its good or evil, its success or failure.

THE OFFICIAL REGULATIONS FOR ENTRANCE.

The General Medical Council administer the Medical Acts, so far as registration is concerned, and they have large powers, in regard to modifying the professional curriculum and medical educational matters generally. The reference made by our medical contributor to the five years' curriculum sufficiently indicates that that is the period which the student has now to get over before his name can be entered upon the Medical Register. It is, therefore, important to note at the outset that the commencement of the five years' course of professional study recognised by any of

the qualifying bodies is not reckoned as dating earlier than fifteen days before the date of registration as a medical student. Now, no one is registered as a medical student until he produces to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study. So that the first thing to do is to get through the

PRELIMINARY EXAMINATION.

The Medical Council does not conduct any examination of the kind, although it has formulated a standard; but there are many preliminary examinations, and the course which the student is to pursue must decide what preliminary examination he should pass. If he is to seek a university degree, he will find in some cases that the only course open to him is to pass the matriculation examination of the University. That is the case in London, and Oxford, Cambridge, Dublin, Victoria, and Durham Universities all have special regulations in regard to preliminary knowledge, which practically shut the door to any other method of entrance. The Scotch Universities, on the other hand, while they require the student to matriculate, accept certificates recognised by the Medical Council *pro tanto*, and allow the student to take the extra subjects in the Universities' own preliminary examinations. The qualifying or licensing bodies follow the lead of the General Medical Council.

The standard preliminary examination in general education, which is now required to be passed previous to registration as a medical student, comprises the following subjects:—

- (a) English language, including grammar and composition.
- (b) Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors.
- (c) Mathematics, comprising (a) Arithmetic; (b) Algebra, as far as simple equations, inclusive; (c) Geometry, the subject-matter of Euclid, Books I., II., and III., with easy deductions.
- (d) One of the following optional subjects:—
- (a) Greek, (b) French, (c) German, (d) Italian, (e) any other modern language, (f) logic.

There are many examinations in the United Kingdom which come up to this standard, and the Medical Council publishes a list of those which they have recognised, and the certificates of which they accept. The list is a longer one than we have room for here, but we may say that it includes all the university certificates recognised by the Pharmaceutical Society, and the preliminary or arts examinations of the Society of Apothecaries, the Royal Colleges of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Royal Irish Colleges, as well as certain certificates of the College of Preceptors, the Intermediate Education Board of Ireland, the Educational Institute of Scotland, and the Scotch Education Department. It should be noted that no certificate of pass in a preliminary examination is accepted unless the whole of the subjects have been passed at the same time.

Previous to January 1, 1892, the following was the standard in force, and the Preliminary and Minor examinations of the Pharmaceutical Society of Great Britain, and the Preliminary examination of the Pharmaceutical Society of Ireland, were accepted *pro tanto*:—

- 1. English language, including grammar and composition.
- 2. Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors.
- 3. Elements of mathematics, comprising (a) Arithmetic, including vulgar and decimal fractions; (b) algebra, including simple equations; (c) geometry, including the first book of Euclid, with easy questions on the subject-matter of the same.
- 4. Elementary mechanics of solids and fluids, comprising the elements of statics, dynamics, and hydrostatics.
- 5. One of the following optional subjects:—(a) Greek, (b) French, (c) German, (d) Italian, (e) any other modern language, (f) logic, (g) botany, (h) zoology, (i) elementary chemistry.

We quote this because the conditions obtaining before 1892 are still applicable to those who had then passed the *pro tanto* examinations. That is to say, those who before January 1, 1892, had passed the English pharmaceutical Preliminary, and who wish now to go forward to medical studies, have only to pass in algebra and geometry, mechanics,

and an optional subject; and if they had the Minor certificate they will, like Irish Preliminary men, be also excused the optional subject.

Let it be clearly understood that we refer now to registration as a medical student. If a person is to go forward to a university degree, he should ascertain whether the University regulations admit registration as medical student *pro tanto*, and then a pass in logic or Greek; or whether the University insists upon its own preliminary or matriculation examination being passed.

Apart from the universities the only bodies which conduct fully recognised preliminary examinations in the kingdom are the following:—

College of Preceptors, Bloomsbury Square, London, W.C.—Examinations are held in June, September, and December, at Birmingham, Bristol, Leeds, Liverpool, and London. A month's notice has to be given by candidates, and they pay a fee of 25s., as well as a local fee at the provincial centres. The College allows those who passed the pharmaceutical Preliminary before 1892 to enter for the completion of their qualification by passing in the remainder of the subjects required under the former syllabus. Others may enter for the College's second-class professional examination, which is recognised by the Medical Council. The papers set at previous examinations may be obtained from Mr. F. Hodgson, 89 Farringdon Street, London, E.C., by post, for 7d.

Society of Apothecaries, Blackfriars, London, E.C.—The arts examination of this Society is held at the Hall on the first Fridays and Saturdays of March, June, September, and December. The conditions, so far as pre-1892 students are concerned, agree with those of the College of Preceptors. The fee for the examination is 21s., payable, a fortnight before the date of the examination, to Dr. Armand Semple, the Secretary, who will also supply previous examination-papers for 6d.

Educational Institute of Scotland, 10a South St. Andrew Street, Edinburgh, conducts the medical preliminary for the Royal Edinburgh Colleges and the Glasgow Faculty, and its examination is recognised by the Medical Council. The examination is held three times a year in Edinburgh and Glasgow, generally at the beginning of April, July, and October. The fee for examination is 1l. Candidates under the old regulations are admitted for the subjects in which they have not passed. Full particulars in regard to this and the new examination can be obtained from Mr. Alexander Mackay, LL.D., 10a South St. Andrew Street, Edinburgh, to whom all fees have to be paid.

Royal Colleges of Ireland, 47 Dawson Street, Dublin.—The preliminary examination of the Royal Colleges of Physicians and Surgeons is the only extra-university one available to students in Ireland who may wish to avail themselves of the pharmaceutical *pro tanto* arrangement. The fee for the examination is 21s., and particulars regarding it will be obtained from Mr. Greenwood Pim, at the above address.

REGISTRATION AS MEDICAL STUDENT

Does not cost anything. The necessary forms are obtainable at all medical schools, and as soon as professional studies are commenced, the student should fill in particulars and send in to the Branch Registrar at the capital of the country in which he is studying. The following are the addresses:—

W. J. C. Miller, B.A., Registrar of the General Medical Council and of the Branch Medical Council for England, Medical Council Office, 299 Oxford Street, London, W.

James Robertson, Registrar of the Branch Council for Scotland, 1 George Square, Edinburgh.

R. L. Heard, M.D., Registrar of the Branch Council for Ireland, 35 Dawson Street, Dublin.

MEDICAL DEGREES.

Reference has already been made to the Medical Council's regulations in regard to professional studies and professional examinations. The main object of these regulations is to fix a minimum, and while the regulations are not binding upon all qualifying bodies, as a matter of fact they are stringently followed, and the universities generally go

beyond them in several respects. Thus, in the case of the Scotch universities, although botany is no longer included in the General Medical Council's obligatory subjects, all these universities insist upon it in the First professional examination. Again, when the regulations of the old universities of England are examined, it is found that the curricula and examinations are considerably in advance of the Medical Council's requirements. We call attention to this matter owing to a misunderstanding which sometimes appears that the medical curriculum and professional examinations are the same everywhere. Were that so we might stop here and mention only the fees charged by qualifying bodies. But from the time that a person registers as a *medical student* until he has obtained a diploma entitling him to registration as a *medical practitioner* the General Medical Council has nothing to do with him, and he has to submit to the regulations of the body whose qualifications he seeks. We now give these regulations in as brief a form as is compatible with clearness.

UNIVERSITY OF LONDON.

This University grants medical and surgical degrees. We speak here of the M.B. (Bachelor of Medicine), which must first be taken, before proceeding to the others. There are four examinations—the matriculation, preliminary scientific, and two examinations in medicine.

Matriculation Examination.—This is common to all candidates for the University degrees. Particulars regarding it are given under "Science."

Preliminary Scientific (M.B.) Examination.—Any time after matriculation this examination may be taken. The subjects are:—(a) Chemistry and physics, and (b) biology. The examination is held on the third Mondays of January and July. Honours can be taken in July only. In chemistry (inorganic only) the scope of the examination is similar to the Major, and the analytical work is confined to testing solutions of one simple salt. In experimental physics the examination is written and practical, and the same applies to biology. The candidate may take the examination in two sections, *a* or *b*. Every candidate must, not less than five weeks before the commencement of the examination, apply to the Registrar of the University, Burlington Gardens, London, W., for a form of entry, which must be returned not less than four weeks before the commencement of the examination, accompanied by the fee of 5*l.*, which covers the whole examination, whether taken in sections or not. A copy of the "Regulations" for this examination can be obtained from the Registrar by sending a stamped wrapper; so also in the case of the other examination "Regulations," or the whole may be seen in the University Calendar.

Intermediate Examination in Medicine.—Two years after passing the Preliminary Scientific, the candidate may, if he is 19 years of age, enter for this examination. He must at the time produce proof of having attended courses of lectures on three medical subjects; of having dissected during two sessions; of having, subsequently to passing the Preliminary Scientific examination, attended a course of practical chemistry, comprehending the more important processes of general and pharmaceutical chemistry, tests for discovering the adulteration of articles of the *materia medica*, and the presence and nature of poisons, and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c.; and of having attended to practical pharmacy and acquired a practical knowledge of the preparation of medicines. The examination is held in January and July. It includes printed papers in anatomy, physiology and histology, organic chemistry, and *materia medica* and pharmaceutical chemistry, with *visu-voce* and practical examinations in the same subjects. The "honours" examination is a stiffer one in the same subjects—*e.g.*, the chemistry includes:—Qualitative analysis: Mixtures of not more than two substances will be given. Quantitative analysis: Any of the volumetric operations of the British Pharmacopœia; or an estimation of urea or sugar in urine. Fee for the examination, 5*l.*

M.B. Examination.—This is the final examination, and can only be entered 21 months after the Intermediate

has been passed. Meanwhile the candidate must have attended courses of lectures in two medical subjects, conducted at least twenty labours, and attended medical and surgical practice in a hospital or hospitals for two years, and, apart from that, attended to practical medicine, surgery, or obstetric medicine, with special charge of patient's in a hospital, infirmary, dispensary, or parochial union, during six months, and also show proficiency in vaccination. Candidates are examined in general pathology, general therapeutics, and hygiene; surgery, medicine, obstetric medicine, and forensic medicine, with questions in surgical and medical anatomy, pathological anatomy, and pathological chemistry. In forensic medicine the candidate is expected to detect the following poisons:—

In Simple Solutions.—Carbolic acid. Morphia and meconic acid. Strychnia and brucia. Alcohol. Chloral; chloroform. Nitro-benzole. Anilin.

Mixed with Organic Substances.—Mineral acids. Caustic alkalies. Oxalic acid. Carbolic acid. Prussic acid and other cyanides. Phosphorus. Compounds of arsenic, antimony, mercury, zinc, lead, barium, copper, silver.

The examination is held in May and October; fee, 5*l.* In the case of registered medical practitioners of not less than three years' standing, and not less than 25 years of age, the usual intervals between the examinations are dispensed with if the candidates can produce the necessary certificates.

VICTORIA UNIVERSITY.

Next in importance, so far as popularity is concerned, comes the University which is an affiliation of the great teaching colleges in Leeds, Liverpool, and Manchester. The University confers the degree of bachelor of medicine and the correlated degrees.

Before entrance students must pass the arts or preliminary examination of the University, and the only certificates accepted in lieu of it are (1) an arts degree; (2) the London "matric."; (3) the Cambridge "previous"; (4) Oxford responsions and moderations; and (5) the Cambridge and Oxford leaving certificates, including Latin, English, mathematics, and mechanics. The subjects of the Victoria University Arts Entrance examination are:—(1) Latin; (2) elementary mathematics; (3) elementary mechanics; (4) English language, including grammar and composition; and (5) one of the following:—(a) Greek; (b) French; (c) German; (d) Italian; (e) Spanish. It is held in June and October at Owens College, Manchester; University College, Leeds; and University College, Liverpool—from any of which full particulars can be obtained. The fee for the examination is 1*l.*

The professional curriculum extends over five years, at least two of which must be passed in a college of the University, and the rest may be taken at any recognised medical school. There are three professional examinations, similar in nature to those of the London University—*viz.*, a *first* at the end of the first year of the curriculum (chemistry, biology, and physics), and *M.B.* divided into two parts, *second* and *final*, the last only being open when the fifth year of professional study is completed.

Any medical practitioner registered prior to January 1, 1885, may obtain the M.B. by passing the second and final examinations, provided that all other requirements for admission to the intermediate and final examinations have been duly complied with, including at least two years' attendance upon lectures in a college of the University.

UNIVERSITY OF DURHAM.

The Faculty of Medicine in this University grants a "Licence in Medicine" (L.M.), "Bachelor in Medicine" (M.B.), and "Licence in Surgery." The preliminary regulations practically admit no certificates except those in arts (degree or matriculation in medicine) given by the universities, so that if candidates have none of these the best plan is to enter the University Registration Preliminary examination in arts, which are held on March 21 and 23 and September 26, 1893, at Durham. The necessary subjects of the Registration examination are English, geography, and arithmetic, and in the preliminary any four of the following subjects, of which two at least shall be languages, may be taken, *viz.*:—

Greek—Xenophon's "Anabasis," Book II. Latin—Cicero's "De Senectute." French—Voltaire's "Louis XIV.," chap. xiv.—xxiv. German—Goethe's "Knabenjahre." Mechanics, hydrostatics, and pneumatics. Euclid—Books IV. and VI.

English History—Henry IV.—Richard III. Geometrical optics. Logic.

Application for admission must be made at least one month before the examination. The fee is 1*l.*, payable to A. Beanlands, Esq., the University, Durham.

The professional curriculum lasts five years, and at least one year of this must be spent at the College of Medicine, Newcastle. The rest may be spent at a recognised medical school. There are three professional examinations, and in the first botany, with medical botany, is included. Candidates who have completed part of their curriculum elsewhere, may pass their first and second examinations previously to entering the Newcastle-upon-Tyne College, but the best plan for those who propose to divide their studies is to spend the first year of the curriculum (say, one summer and two winter sessions) at Newcastle, getting through the first examination, then going elsewhere for the rest. The examinations for L.M. are the same as for M.B.

UNIVERSITY OF OXFORD.

Only Oxford graduates in arts are eligible for the medical degrees (B.M., &c.) of this University. Full particulars will be found in the University Calendar, which may be obtained from the Oxford Press.

UNIVERSITY OF CAMBRIDGE.

The medical degrees of this University are much esteemed by London students, as there are better facilities for obtaining them than exist at Oxford. The local examination certificate suffices as proof of education, and those who do not hold it must pass the previous examination. For the M.B. degree five years of medical study are required. This time may be spent at Cambridge or at one of the recognised schools of medicine. The first three or four years are usually spent in Cambridge, the student remaining in the University till he has passed the examination for the Natural Science Tripos and the first and second professional examinations, then taking clinical practice at a London hospital.

UNIVERSITY OF EDINBURGH.

This is the most popular of all medical schools in the country, and the medical degrees of the university are known throughout the world. The diploma sought for is the double one, M.B., C.M., and the regulations for this are substantially in accord with the Medical Council's standards.

A *Preliminary Examination* must be passed before matriculation. This examination is held in March and October each year, and the subjects from October, 1892, to March, 1894, inclusive, are as follows:—

ENGLISH.—Writing, composition, grammar, geography, history, and history of English literature.

LATIN.—Livy, Book XXI., up to March 1893, then Cicero, De Senectute; passage from an unseen author; English into Latin.

ARITHMETIC.—Common and compound rules, fractions, stocks, &c.

MATHEMATICS.—Euclid, Books I. to III., or their equivalent; algebra, including simple equations, &c.

MECHANICS.—On the basis of Blackie's "Elements of Dynamics" (excluding the Appendix).

OPTIONAL SUBJECTS.—Two of the following are to be taken, but, according to the new ordinance of the Scottish Universities Commission, which will come into force next month, *one only* must be taken. The subjects are Greek, French, German, higher mathematics, logic, and moral philosophy.

After October, 1892, the whole of the subjects must be passed at one examination. Certain certificates are accepted *pro tanto* in lieu of the examination. The pharmaceutical Preliminary is not included, but those who passed that examination before 1892 should complete the requirements with the Educational Institute of Scotland, which has an examination for university students. See the "Programme of the Medical Faculty" (James Thin, Edinburgh, 1*d.*) for full particulars.

The Professional Curriculum.—The Medical Faculty permits students who have not been able to register as medical students to begin their medical studies in summer, attending the classes of botany and natural history, but they must pass a sufficient preliminary examination in October. The ordinance to which reference has already been made provides

for the extension of the curriculum of study to five years, and includes physics in the subjects of the first professional examinations. The University is liberal in regard to the *locus* of education, insisting only upon two years being spent in the University, and the rest of the curriculum can be taken elsewhere in England, Scotland, and Ireland, where there are recognised medical teachers or schools. This is a point upon which full information is given in the "Programme." There are many graduates who have taken the degree under these conditions. There are recognised teachers in the following towns:—Aberystwyth, Bangor, Birmingham, Bristol, Cardiff, Dublin, Edinburgh, Glasgow, London, Nottingham, Oxford, and Sheffield.

The professional examinations (for those who have commenced medical studies before October, 1892) are divided into four parts:—*First*, in chemistry, botany, and natural history; this may be taken after the class work in these is completed. *Second*, anatomy, institutes of medicine, materia medica (including practical pharmacy and prescribing), and pathology; this comes on at the end of the third winter session. *Third*, surgery, practice of medicine, midwifery, and medical jurisprudence. *Fourth*, clinically on medicine and on surgery in a hospital. By the new regulations the examinations henceforth are put down as follows:—*First*, in botany, zoology, physics, and chemistry; *second*, in anatomy, physiology and materia medica and therapeutics [cannot be taken before the end of the third winter session]; *third*, in pathology, and medical jurisprudence and public health [cannot be taken before the end of the fourth winter session]; *fourth*, in surgery and clinical surgery, practice of medicine and clinical medicine, and midwifery [at the completion of the five years' curriculum]. It is further decreed that four degrees in medicine and surgery shall be conferred by the University—viz, bachelor of medicine (M.B.), bachelor of surgery (Ch.B.), doctor of medicine (M.D.), and master of surgery (Ch.M.). The Ch.B. shall not be conferred on any person who does not at the same time obtain the M.B., and *vice versa*.

The fees for the whole of the examinations and graduation amount to 2*l.* Those who intend to proceed to the *doctorate* (M.D.) must at the preliminary examination pass three of the optional subjects. Two of these must be Greek and either logic or moral philosophy, and the third French, and German, higher mathematics, or natural philosophy. Secretary to the Senatus Academicus, Mr. James Fitzpatrick, at the University.

OTHER SCOTCH UNIVERSITIES

resemble Edinburgh in regard to curriculum and examinations. The authorities of the University of

Aberdeen. Aberdeen announce that the new ordinance (same as that of Edinburgh) comes into force at the beginning of the winter session (October, 1892), and up to that date candidates for the preliminary examination will be taken on the old lines; thereafter the new examination will come into force, and the Joint Board of Examiners have yet to determine what certificates will be accepted, in whole or part, in place of the preliminary examination. The curriculum and examinations will be exactly the same as at Edinburgh. Secretary to the Faculty, Mr. D. R. Thom, M.A., University Offices, Aberdeen. The University

Glasgow. of Glasgow permits any student who commenced his studies before January 1, 1892, to graduate under the system in force before that date; otherwise they must conform with the new ordinance. The preliminary examination is the new one—viz, (1) English, (2) Latin, (3) mathematics, and (4) Greek, French, or German. For details of the examination see the "Programme," obtainable from the assistant clerk at the Matriculation Office of the University. The oldest Scotch University (St.

Andrews) conducts a preliminary examination for registration as medical student. The University also grants the bachelorate degrees, but they are seldom taken, the M.D. for registered medical practitioners, who are 40 years of age, and of good professional standing, being most in request. This degree costs 50 guineas, and applicants are examined in materia medica and general therapeutics, medical jurisprudence, practice of medicine and pathology, surgery and midwifery, and diseases of women and children.

IRISH DEGREES.

The two Dublin universities have made their arrangements for a five years' curriculum. Trinity College, Dublin, like the Oxford University, requires medical aspirants to be graduates in arts, and the medical education for bachelor in medicine comprises attendance on a single course of each of the following lectures:—Anatomy, practical anatomy, chemistry, *materia medica* and pharmacy, physiology (two courses), practice of medicine, botany, medical jurisprudence and hygiene, pathology, heat, electricity, magnetism, light and sound, zoology, three courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. Six months' dissections, three months' laboratory instruction in chemistry, three months' practical histology, three months' study of mental diseases, and one month's instruction in vaccination are required. Any of the above-named courses may be attended at any recognised medical school in Dublin. The University grants several other medical and surgical degrees. The Royal University of Ireland is an affiliation of the Queen's Colleges of the country, and its degrees are, perhaps, a trifle more easily obtained than those of Trinity College, especially as students may take out the classes in the provincial colleges. As the arrangements for the five years' course were not completed when this article was written, we must refer inquirers to the Secretary of the University at Dublin.

MEDICAL DIPLOMAS.

In what follows under this heading we refer only to the new regulations for students beginning their professional studying on or after the approaching winter session, and as the preliminary standard of the General Medical Council is recognised by all the qualifying bodies, it is unnecessary to refer further to that matter. We shall suppose that those interested have registered as medical students, and that general information in regard to diplomas (other than those granted by universities) is required.

THE ROYAL COLLEGES OF ENGLAND.

The Royal College of Physicians of London and the Royal College of Surgeons of England have a conjoint examination board, the diploma of either not being sufficient in itself for registration as a medical practitioner. The Board meets in the Examination Hall, Victoria Embankment, W.C., and all information may be obtained by addressing Mr. F. G. Hallett, Secretary, there. There are four professional examinations on the lines laid down by the Medical Council, and the total fees amount to 35 guineas. So far, synopses of the first and second examinations have been published by the Board, and should be consulted. Those who pass the examinations receive the titles M.R.C.S. and L.R.C.P. Graduates of English, Irish, and Scotch universities are on certain conditions admitted to the third and final examinations on payment of the full amount of fees. It is often desirable, for the sake of hospital appointments, to get one of these diplomas.

THE ROYAL SCOTCH COLLEGES.

The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, act conjointly in the same manner as the English Colleges. The examinations, which are the same as the English, are held four times a year in Edinburgh, and twice in Glasgow. The total fees are 30*l*. The title is a long one—L.R.C.P. & S.E., and L.F.P. & S.G.—but it is conferred upon women. The three co-operating bodies grant their single diplomas only to candidates who already possess another and opposite diploma in medicine or surgery, as the case may be. Secretaries:—Mr. James Robertson, 1 George Square, Edinburgh; and Mr. Alexander Duncan, B.A., Faculty Hall, 242 St. Vincent Street, Glasgow.

APOTHECARIES' SOCIETY'S LICENCE.

The Apothecaries' Society of London is enabled, through a supplement of examiners appointed by the General Medical

Council, to grant a diploma (L.S.A.) in medicine, surgery, and midwifery. The curriculum and examinations are in strict accordance with the General Medical Council's recommendations. There are three professional examinations—primary, intermediate, and final. The *primary* is divided into two parts, and the first of these may be passed any time after registration as a medical student. It includes elementary biology, chemistry, the principles of the science which bear on the study of medicine; chemical physics, including the elementary mechanics of solids, and fluids; heat, light, and electricity; practical chemistry; *materia medica*, including the botany of the British Pharmacopœia; pharmacy, and prescriptions. The second part can only be entered at the end of the first year of the curriculum. The *intermediate* is also divided into two parts, and the *final* into three parts, the last of which cannot be entered until the end of the fifth year. The fee for the examinations is 5*l*. 5*s*. for each—i.e., 15*l*. 15*s*. in all.

IRISH DIPLOMAS.

The Royal Colleges of Physicians and Surgeons in Ireland are associated in the same manner as the L.R.C.P. & S.I. English Colleges for the purpose of granting registrable qualifications, while each grants its own diploma to men who are already registered as practitioners. For the "double qual." there are four examinations; but the arrangements for all are not yet completed. However, we are enabled to state that the subjects of the first professional examination will be:—1. (a) Chemistry; (b) Physics; 2. Practical pharmacy; 3. Elementary biology; 4. Anatomy, viz.: Bones, with attachments of muscles and ligaments; joints. Candidates may take this examination as a whole at one time, or in four parts, but the examination in anatomy not earlier than the end of the first winter session. The subjects of lectures, &c., for the first year are:—1. Demonstrations and dissections, six months; 2. Theoretical chemistry, six months; 3. Practical chemistry, three months; 4. Practical pharmacy, three months; 5. Physics; 6. Elementary biology. The last two subjects may be studied either before or after registration as medical students, at institutions recognised by the Colleges for the purpose, during not less than three months. Full particulars regarding the qualification may be obtained from Mr. Greenwood Pim, Secretary, 47 Dawson Street, Dublin. The total fees for the qualification are 42*l*.

The Secretary of the Apothecaries' Hall, Dublin, tells us that the arrangements for the five years' scheme have not yet been published. The Hall, it may be explained, is associated with the Royal College of Surgeons in granting a conjoint diploma, which, however, retains the old title—viz., L.A.H. The four examinations will, doubtless, be similar to the above; but the fees are less—viz., 31*l*. 13*s*. Address Mr. R. Montgomery, M.R.C.S., Secretary, Apothecaries' Hall, Dublin, for particulars.

QUALIFICATIONS FOR WOMEN.

The following are the British and Irish qualifications open to women:—University of London, M.B. and B.S. and M.D. and M.S. degrees; Royal University of Ireland, M.B. and B.Ch. and M.D. and M.Ch. degrees; licences of the Royal Colleges of Physicians and Surgeons of Edinburgh and Faculty of Physicians and Surgeons of Glasgow (triple qualification); licences of Conjoint Board of Royal Colleges of Physicians and Surgeons, Ireland; Fellowship of Royal College of Surgeons, Ireland; licence in Medicine, Surgery, and Midwifery, Apothecaries' Hall, London.

The Scotch Universities have now made arrangements under which women shall ere long be admitted to medical graduation.

WHERE TO OBTAIN MEDICAL EDUCATION.

Students themselves must count the total cost of obtaining a medical qualification. They should know what their living costs, and it is not likely to be less during the medical curriculum. To that they must add the school-fees, books, instruments, and examination-fees. In what follows under this heading we note simply the total class-fees at the various institutions. In medical schools, such as those of London, the sums given represent what it costs for the five years' education necessary for a diploma. The figures given

under Universities represent, of course, the class expenditure for degrees, unless otherwise stated. The persons named under each heading are those who should be addressed for fuller information.

MEDICAL SCHOOLS IN LONDON.

At each of the following a complete curriculum may be obtained:—

CHARING CROSS HOSPITAL.—Fees, 115*l.* 10*s.*, or 127*l.* 1*s.* in instalments. Dean, Mr. Stanley Boyd, 62 Chandos Street, W.C.

GUY'S HOSPITAL (founded 1722).—Fees, 150*l.*, or 167*l.* 10*s.* in instalments. Dean, Dr. Perry, the Hospital, Borough, S.E. There is a residence, "The College," for sixty students.

KING'S COLLEGE, Strand, W.C.—Fees, for M.B. (Lond.), including preliminary science, 148*l.* or 169*l.* in instalments. Dean, Professor John Carnow, M.D. Residence for a limited number.

LONDON HOSPITAL, Mile End, E. (established 1740).—Fees, 126*l.* or 136*l.* 10*s.* in instalments. Warden, Mr. Munro Scott.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30 Handel Street, Brunswick Square, W.C. Fees, 125*l.*, or 135*l.* in instalments. Secretary, Miss Heaton.

MIDDLESEX HOSPITAL, Cleveland Street, W. (founded 1745).—Fees, 126*l.*, or 136*l.* 10*s.* in instalments. Dean, Dr. Coupland. The residential college accommodates thirty.

ST. BARTHOLOMEW'S HOSPITAL, West Smithfield, E.C. (founded 1123).—Fees, 157*l.* 10*s.*, or 168*l.* in instalments. Warden, Dr. T. W. Shore. There is a good residence for students.

ST. GEORGE'S HOSPITAL, Hyde Park Corner, S.W.—Fees, 145*l.*, or 150*l.* by instalments. Dean, Dr. T. Whipham.

ST. MARY'S HOSPITAL, Cambridge Place, Paddington, W.—Fees, 130*l.*, or 135*l.* in instalments. Dean, Mr. Geo. P. Field. Sub-dean, Dr. A. P. Luff. The residential college receives students at a charge of 375*l.* for instruction, board, &c., during the five years.

ST. THOMAS'S HOSPITAL, Albert Embankment, S.E. (founded 1207).—Fees, 150*l.*, or 157*l.* 10*s.* in instalments. Medical Secretary, Mr. G. Randle, at the Hospital.

UNIVERSITY COLLEGE, Gower Street, W.C.—Fees (for the double qualification), 136*l.* 10*s.*, or 141*l.* 15*s.* in instalments. Dean, Professor E. A. Schäfer.

WESTMINSTER HOSPITAL, Caxton Street, S.W. (founded 1834).—Fees, 115*l.*, or 132*l.* in instalments. Dean, Dr. Allchin.

SCHOOLS IN THE PROVINCES.

ABERDEEN.—*University.*—Fees, for M.B., B.Ch. (exclusive of examination fees, 21*l.*), are about 80*l.* Secretary, Mr. Thom.

BELFAST.—*Queen's College.*—Clinical instruction in Belfast Royal Hospital (perpetual fee, 10*l.* 10*s.*). Class lectures, from 2*l.* to 3*l.* per course in each subject. Registrar, Dr. Purser.

BIRMINGHAM.—*Queen's Faculty of Medicine, Mason College.* Total fees for double qualification, 123*l.* Dean, Professor Windle, M.D.

BRISTOL.—*University College Medical School.*—Fees, 105*l.* Dean, Dr. E. M. Skeritt.

CORK.—*Queen's College.*—Fees, 2*l.* to 3*l.* per term for each subject. Registrar, Mr. Alexander Jack, M.A.

DUBLIN.—*Catholic University Medical School*, Cecilia Street.—Fees, 2*l.* 2*s.* and 3*l.* 3*s.* per class.

University School of Physic (Trinity College).—Apply to the Registrar, Mr. H. W. Macintosh, M.A., Trinity College.

DUNDEE.—*University College.*—For the first two years of the curriculum only, with practice in the Infirmary. Secretary, Mr. R. N. Kerr.

EDINBURGH.—*School of Medicine.*—Fees for Scotch triple, including examination fees, 100*l.* Secretary, Dr. Stevenson Macadam, Surgeons' Hall, Nicolson Street.

Medical College for Women, 30 Chambers Street.—Fees, about 80*l.* for the five years. Secretary, Miss D. M. Scott.

University Medical School—Fees, about 110*l.*, exclusive of graduation fees. Secretary to the Senatus, Mr. Kirkpatrick.

GLASGOW.—*University Faculty of Medicine*—Fees, about 120*l.* The Assistant Clerk, Matriculation Office, supplies particulars.

Anderson's College Medical School, Dumbarton Road.—Fees (lectures and hospital) for Scotch triple qualification, about 63*l.* Dean-Professor, Samson Gemmell, M.D., 17 Woodside Place, Charing Cross.

Queen Margaret's College, Hillhead, for the education of women.—Now a part of the University.

St. Mungo's College and Glasgow Royal Infirmary.—Fees for Scotch triple qualification, 70*l.* 10*s.* Dean, Professor Clark, 86 Castle Street.

Western Medical School, University Avenue, Hillhead.—Partial instruction only. Secretary, Mr. J. N. Morton, M.A.

LEEDS.—*Yorkshire College.*—Fees as at Owens College. Secretary, Mr. W. H. Brown, 19 Queen Street.

LIVERPOOL.—*University College*—Fees as at Owens College. Dean, Mr. F. T. Paul, F.R.C.S., 38 Rodney Street.

MANCHESTER.—*The Owens College.*—Fees for M.B. 138*l.* 5*s.*, and double qualification 112*l.*, with a few extras. Registrar, Mr. M. W. Holder, M.A.

NEWCASTLE-ON-TYNE.—*Durham College of Medicine.*—Fees, 94*l.* 10*s.*, or 105*l.* 5*s.* in instalments (for M.B.). Secretary, Lieut. H. Fox.

SHEFFIELD.—*School of Medicine.*—Fees similar to those at Manchester. Secretary, Dr. W. T. Cocking, Leopold Street.

HOSPITAL PRACTICE.

Homœopathy.—The London Homœopathic Hospital Medical School, Great Ormond Street, Bloomsbury, W.C., provides instruction in the principles of homœopathic medical practice. Students of any medical school may attend before or after qualification. The fee for the complete course is 10*l.* 10*s.* Secretary, Mr. G. A. Cross.

Clinical practice is considered the most important factor in medical education, and it is therefore important that students should get as much as possible of it. They are admitted to the following hospitals at the terms stated. Some of these institutions are "recognised" by the licensing bodies:—

Bath: Royal United Hospital.—Registrar, Mr. H. Culliford-Hopkins. Fee, 1*l.* 1*s.* per month.

Bradford: Infirmary and Dispensary.—Fee, perpetual, 10*l.* 10*s.*

Brighton: Sussex County Hospital.—Fee, 21*l.* for two years.

Canterbury: General Kent Hospital.—Fee to pupils of the staff, 7*l.* 7*s.* Secretary, Mr. A. J. Lancaster.

Derby: Royal Infirmary.—Fee, 5*l.* 5*s.* a year.

Devonport: Royal Albert Hospital.—Dispenser's fee for pupils of the medical staff, 2*l.* 2*s.*

Dublin: Adelaide Medical and Surgical Hospitals.—Fee for nine months' hospital attendance, 12*l.* 12*s.*

Coombe Lying-in Hospital and Guinness Dispensary.—Fee, six months, 8*l.* 8*s.*

Jervis Street Hospital.—Hon. Secretary, Dr. Coleman, 15 Westland Row.

Mater Misericordiarum Hospital.—Fee, 12*l.* 12*s.* for nine months.

Dr. Steevens' Hospital.—Nine months' fee, 12*l.* 12*s.* Hon. Secretary, Dr. R. A. Hayes, 82 Merrion Square South.

Edinburgh: There are a number of dispensaries for general and special practice.

Exeter: Devon and Exeter Hospital.—House Surgeon, Mr. Henry Andrew, who will give particulars as to fees, &c.

Exeter.—West of England Eye Infirmary.—Secretary, Mr. R. C. Cole.

Glasgow: There are, as in Edinburgh, ample opportunities for practice.

Gloucester: General Infirmary.—Resident and non-resident pupils taken. Apply to the Secretary, Mr. H. P. Pike.

Lincoln: County Hospital.—Fee, 10*l.* 10*s.*

Liverpool: New Royal Infirmary.—Good practice here.

Northern Hospital.—Fees, perpetual, 26*l.* 5*s.*; one year, 10*l.* 10*s.*

Royal Southern Hospital.—Fees as the Northern.

London: All the London public hospitals, general and special, admit students to practice.

Manchester: General Hospital for Sick Children, Pendlebury and Gartside Street.

Northampton: General Infirmary.—Anatomy and materia medica and practical pharmacy, and freedom of wards. Fee, 10*l.* 10*s.* per annum.

Norwich: Norfolk and Norwich Hospital.—Fee, 15*l.* 15*s.* for twelve months. Pupils. Secretary, Mr. Poole Gabbett.

Nottingham: General Hospital.—Fee, 10*l.* 10*s.* annually.

Portsmouth: Royal Hospital.—Apply to the House-surgeon, Mr. Bishop, M.B.

Southampton: Royal South Hants Infirmary.—Fee, 10*l.* 10*s.* for a perpetual ticket. Secretary, Mr. T. A. F. Hall.

Stafford: General Infirmary.—Fee, 10*l.* 10*s.* Secretary, Mr. E. E. Crisp.

Stoke-on-Trent: North Staffordshire Infirmary and Eye Hospital. Secretary, Mr. R. Hordley.

Winchester: Royal Hants County Hospital.—Fee, 10*l.* 10*s.* for one year.

Wolverhampton: General Hospital.—Fee, 12*l.* 12*s.* per year.

SCIENCE.

THE study of science was for so many years a pastime pursued by amateurs, or by men of learning who earned their living in the allied profession of medicine, that it has not settled down into a concrete profession itself. That is scarcely possible. In the accumulation of knowledge differentiations have been effected, and naturally effected. Here we are more concerned with chemistry than any other department of science. It was at one time, like botany, a purely medical study, and the fact that many of the leading professors of chemistry of the present time are M.D.'s is itself evidence of the value that medicine has been in promoting the science. What medicine has done pharmacy may be doing now; indeed, our own profession has given not a few eminent chemists to the world. But chemistry is now steadily approaching the crystallisation point in the professional sense. Except in electrical matters the physical sciences offer no occupation for any but the most brilliant students; in short, for the men who have so ardent a love for a special branch that the "What they shall eat and the wherewithal they shall be clothed" becomes a secondary object of life to them. Mr. Crookes has expressed this well in saying that "Sir Isaac Newton, had he been living in these days, could scarcely have earned salt to his food. Darwin, so far from being enriched by his discoveries, could not have carried out his investigations except he had been born to an ample fortune. He received no pay for serving on the memorable voyage of the *Beagle*, but had, in vulgar phrase, to 'find' himself. Nor was the discoverer compensated by honours or social position for the lack of material rewards." As society is at present constituted there appears to be no immediate prospect of higher remuneration for our Newtons

and Darwins; but in chemistry and applied physics it is different. There is a large field of occupation and respectable livings in both, and it is this fact more than sheer love of the sciences which attracts so many hundreds every year.

PROFESSIONAL CHEMISTRY

is made up of many sections. There are "analytical and consulting chemists," whose sole occupation is to analyse and report upon foods, beverages, and other articles of common consumption; some pose as water authorities pure and simple; some seek a living amongst publicans; some are gas-chemists, sugar-chemists, brewer's chemists, iron-chemists, dyer's chemists, and so on; all being more or less engaged in analytical work. Others, again, are employed in teaching, and it is notorious that some of the leading professors of the day are "experts" in "patent" cases, and have much to do in perfecting processes and in defending them in the law courts when they are perfected.

It is obvious, therefore, that there is a wide field open to the tyro, and he may do little or he may do much in it according to the area which he occupies. There is no restriction by law in the practice of chemistry as distinct from pharmacy. Success is mainly a matter of qualification. It is true that

THE INSTITUTE OF CHEMISTRY

has set up a standard for the "analytical and consulting chemist," and that a charter has been granted to this body because, "having regard to the rapidly increasing application of chemistry to legal investigations, to public health, to the adulteration of food, to agriculture, and to the arts and manufactures, it is desirable that persons practising the profession of analytical and consulting chemistry should have both a practical and scientific knowledge thereof. It is a matter of increasing importance to Government departments, corporate bodies, and others requiring the assistance of persons competent to practise in analytical chemistry and to advise in technological chemistry that such persons should be properly trained, and that their qualifications should be attested by certificates of competency."

So runs the charter, granted in 1885, after the Institute had been founded eight years. The Institute is supported by all the leading British chemists, and it offers a certificate to those entering the profession which certainly carries value with it. Three classes of persons are registered: *First*, students of the Institute, who must be persons at least 17 years of age at the time of application, pupils of a fellow of the Institute, or at one of the universities, colleges, or schools approved by the Council, and they must be recommended by a fellow of the Institute with whom they are engaged in the study of chemistry, or a professor of chemistry in any of the universities or chartered or incorporated colleges or schools, approved by the Council, at which the applicant for admission is studying. The fee is 2*s.* 6*d.* *Second*, there are *Associates*, who are persons, 21 years old, who have passed through a course of three years' study of theoretical and analytical chemistry, physics, and elementary mathematics, and the Institute's examination. Most of the technical schools throughout the country now adopt the complete course of training in chemistry to the requirements of the Institute. The examination is a practical one, and includes qualitative and quantitative analysis (inorganic and organic), gas-analysis, preparation of pure materials, &c. The examination is held once a year, in June or July, in London, Edinburgh, Dublin, and all the towns where there are science colleges. The regulations are at present under revision, but the above practically represents the requirements. For full particulars address Mr. G. H. Robertson, Secretary, 9 Adelphi Terrace, Strand, W.C. Three years after taking the A.I.C. the fellowship may be obtained on application. The annual subscription is 2*l.* Most of those who take the three years' curriculum for A.I.C. are likely to make that the penultimate object, as

A SCIENCE DEGREE

is now considered of greater value. What degree will be proceeded to depends upon the centre of study. Leeds, Liverpool, and Manchester Colleges lead up to the degrees of Victoria University. Each of the Scotch Universities has its

own B.Sc., so have some Irish bodies; but all—colleges and universities alike—appreciate the value of the degrees of the University of London, and of these we give a somewhat full account.

For B.Sc.Lond.,

then, the first point to be noted is that, like all the University's degrees, it is open to persons of either sex. There is the Matriculation examination to be passed first. This is open to those who are 16 years of age. The subjects are:—1. Latin [January, 1893, Horace's "Odes," iii. and iv.; June, 1893, Cicero's "De Senectute" and "Pro Archia"]. 2. One of the following languages:—Greek, French, German, Sanscrit, Arabic. 3. The English language, and English history, with the geography relating thereto. 4. Mathematics. 5. Mechanics. 6. One of the following branches of science:—Chemistry, heat and light, magnetism and electricity, botany. The examination is held on the second Mondays of January and June in London, and at the following provincial centres:—

January, 1893.—*Birmingham*: Queen's College. *Cardiff*: University College. *Glasgow*: The Training College, New City Road. *Leeds*: The Yorkshire College. *Leicester*: The Wyggeston Schools. *Newcastle-on-Tyne*: The School of Science and Art. *Oswestry*: The High School. *Plymouth*: The Athenæum. *Portsmouth*: The Grammar School.

June, 1893.—*Bangor*: University College. *Birmingham*: Queen's College. *Cardiff*: University College. *Edinburgh*: The Heriot-Watt College. *Leeds*: The Yorkshire College. *Leicester*: The Wyggeston Schools. *Liverpool*: University College. *Manchester*: The Owens College. *Newcastle-on-Tyne*: The School of Science and Art. *Nottingham*: University College. *Sheffield*: Firth College.

The fee for the examination is 2*l.* (exclusive of a provincial fee of 1*l.* or 2*l.*) which must be paid to the Registrar of the University (Burlington Gardens, London, W.) not less than four weeks before the examination is to be held, but notice has to be given a week earlier than that.

We are now addressing many who may have an ardent desire to add to their pharmaceutical qualifications this coveted degree; and to such a few hints in regard to

Preparation for the Matric.

may not be out of place. The list of subjects for this examination shows that the sooner it is taken after leaving school (if not before) the better. The subjects are essentially scholastic, and hence to the student who can look back over perhaps half-a-dozen years since the close of his school-life—years during which his mental powers have been occupied with quite another branch of study—the Matriculation may appear somewhat formidable.

The choice of text-books for such a candidate will, in most of the subjects—as English, arithmetic, algebra, geometry—depend upon what book he used at school, a teacher with whose method one is perfectly familiar being preferable to one who works on totally strange lines, even though the latter be actually the better. Collins's "Royal History of England," and "Epochs of English History" (I.-V.) are easily picked up cheaply by the explorer of second-hand bookstalls, and a careful study of the two works—they are arranged on entirely different schemes—will give the student a better grasp of English history than the reading of such detailed works as Macaulay or Hume. The same is true of Morris's "History of English Grammar," a most fascinating volume to anyone with philological leanings, and invaluable for the Matriculation. An additional author will be necessary for freshening up the candidate's knowledge of parsing and analysis; reliable guides in these matters abound everywhere, and are obtainable for a few pence.

Any student for whom Latin composition is a *bête noir* should get "Latin Prose through English Idiom"—also a regular appearance on the second-hand bookstall. Todhunter will give sufficient algebra, and Hamblin Smith's "Euclid" is good because of the numerous riders it contains—riders, be it remembered, form generally most of the Euclid paper.

For a clear conception of the principles of mechanics, Newth's "Natural Philosophy" is all that is necessary. If another author be desired to supplement this, Magnus ("Lessons in Elementary Mechanics") is, perhaps, as good

as any, though the ideal introductory text-book of this subject has still to be written.

Turning to optional subjects, the pharmaceutical candidate will, of course, have no difficulty with the science subject; these papers are always very simple. There is a sufficiently extended choice of languages; probably the inclusion of Sanscrit and Arabic in the list was the suggestion of some prophetic seer with an intuition of the modern development of Board School training. Some candidates may choose Greek—Greenwood's "Elements" is an excellent grammar of Greek—others (and these are the more numerous class) French or German. Good French teachers there are in plenty, but the student of the Teutonic tongue must beware of the average German grammar. The language has sufficient inherent difficulties, but the average grammar (especially as regards declension and conjugation) adds gratuitously to the student's burden, and indulges in wearisome pages of fanciful hair-splitting at his expense. The student should persistently decline to have anything to do with grammarians who present for his bewilderment four-to ten declensions and verbs classified according to the past tense. Such teachers may be specious, but they are blind leaders of the blind. Keane's "True Theory of German Declension and Conjugation" will enable the student to master these stumbling-blocks of the average grammarian in a few days.

Little of a special nature can be said about the examination itself. There is a knack in passing examinations which cannot be taught, but may be fairly defined as the art of expressing in the best way what you know. It is possible in most examinations, including this, to write a successful paper without answering anything like all the questions or the full number allowed. To find that one is not even marked "weak" in a paper of which less than half was attempted is not an isolated experience. The candidates are provided with special green-covered books for answering in, and the tearing-out of pages is specially forbidden. Fresh books are, however, ready to hand during the examination, and the candidate who may have chanced to make an awkward-looking mistake (say, in mathematics) must decide for himself whether it will pay him to get another book and copy in his work again, omitting the error. As a rule it will be found simpler, and better in the end, to strike through the mistake and proceed afresh. After passing this there are

Two Scientific Examinations.

The first of these is the "Intermediata Science." Five subjects must be passed—viz., chemistry, physics, botany, zoology, and mathematics. In the first of these a fairly thorough knowledge of the *Elements of Inorganic Chemistry* is necessary, and the candidate receives two papers in the subject of three hours each. Either Watt's "Inorganic Chemistry" (omitting the chapters on the rare metals) or Thorpe's "Chemistry" are well suited for this work. In addition it is advisable to read Tilden's little book on "Chemical Philosophy." A practical examination of great simplicity has also to be passed. The candidate is given two bottles, each containing a solution of a simple salt. He is expected to detect them in an hour and a half. In the *Physics*, an elementary but thorough knowledge (so far as it goes) of the general principles of heat, light, sound, electricity, and magnetism is required. In addition, the candidate must know the chief laws of general physics, and pass a short and easy examination in practical physics. The papers last for six hours, the practical examination for somewhat under an hour. Deschanel's "Natural Philosophy" (Blackie), or Ganot's "Physics" (Longmans) contains practically everything that is necessary. One paper of three hours is given in *Botany and Zoology* combined. This paper always asks for more work than can possibly be done in the time, and candidates must pass in both parts of it. The best book that can be used for the botanical work is Prantl's "Botany," translated by Vines (Swan Sonnenschein). No knowledge of systematic botany is asked for, therefore the chapters on natural orders may be omitted. For the zoology the most useful book is Lloyd-Morgan's "Animal Biology." Three hours of practical botany and the same time at practical zoology have to be gone through. The botany consists, in the first case, of cutting sections of stems, leaves, &c., recognising easy sections, &c., and can be worked from any botanical textbook with an ordinary student's

microscope. The practical zoology is the hardest part of the examination. It lasts, as above mentioned, for three hours, and includes "spotting" slides, and dissections. The types which are given are selected from rabbit, frog, crayfish, dogfish, mussel, worm, amphioxus, hydra, vorticella, and amoeba. The whole of this work is beautifully treated in Marshall and Hurst's "Practical Zoology" (Churchill), and Marshall's "Frog." Lastly, the *Mathematics* paper includes a knowledge of elementary trigonometry up to the solution of triangles; algebra, including logarithms, progressions, permutations, and the like; conics, only as far as the end of the circle; and mixed mathematics of an elementary, but thorough, character. Any ordinary textbook is suitable for the pure mathematics, and for the mixed, Magnus's mechanics and Locke's dynamics are sufficient. Candidates for the Intermediate are admitted any time a year after the Matriculation examination. The fee is 5*l.*, and the examination is held on the third Monday of July in London, and, in 1893, at the following centres:—*Bangor*: University College. *Cardiff*: University College. *Glasgow*: The Training College, New City Road. *Leeds*: The Yorkshire College. *Liverpool*: University College. *Manchester*: The Owens College. *Newcastle-on-Tyne*: The School of Science and Art.

Again a year after passing the Intermediate examination the candidate may enter for the B.Sc. examination, in which there are nine subjects, of which the candidate chooses three. They are—chemistry, botany, physics, mathematics (pure or mixed), mental science, geology, physiology, and zoology. For a pharmacist the natural subjects to choose are chemistry, physics, and botany. The candidate must have a fair knowledge of inorganic chemistry rather above the standard of the pass examination at the Intermediate, and also a good general knowledge of organic chemistry. He should first read Remsen's "Organic Chemistry," and supplement this with Bernthsen's "Organic Chemistry" (Blackie). Six hours are given for the papers, and six hours for practical chemistry, which is similar to that of the Major examination. In physics a much deeper knowledge of the subjects set at the Intermediate is required. The best books are Balfour Stewart's "Heat" (Clarendon Press), with parts of Clerk Maxwell's "Heat" (Longmans), Jenkin's "Electricity" (Longmans), Glazebrook's "Physical Optics" (Longmans), and the chapters in Deschanel on "Sound." The practical examination in this subject lasts from two to four hours, and includes ordinary physical measurements, such as determination of pitch of tuning-forks, specific heat, melting-points, latent heats, and the like. The botany paper is the hardest in the whole examination, for the reason that the work must be picked out from a number of different books. It is necessary to read the whole of either Vine's "Physiology of Plants" (Cambridge Press, 2*l.*s.), or Sachs's lectures on the "Physiology of Plants" (Clarendon Press, 3*l.*s. 6*d.*) Of these, the latter is preferable, and covers all the physiological botany required. For the cryptogamic work, "Benett and Murray" is as good as any book. The chapters on natural orders in Prantl and Vines ought to be known. Six hours are devoted to the papers and six hours to the practical, which is well covered in Bower's "Practical Botany" (Macmillan), so long as the student has examined a good number of slides in addition. The examination commences in London on the third Monday of October each year, and the fee is 5*l.*, payable a month before. Honours are given under special conditions and prizes to the best students in each examination, but for particulars in regard to these matters we must refer students to the "regulations" of which copies can be obtained from the Registrar. Candidates for the degree of D.Sc. are required to submit a dissertation or thesis, printed or published in his own name, treating scientifically some special portion of the subject which he professes, embodying the result of independent research, or showing evidence of his own work, and if this is approved he is admitted to examination.

OTHER DEGREES AND DIPLOMAS.

Candidates pass a preliminary examination in English language and history, pure mathematics, and three of the following subjects, one of which must be a language:—(a) Greek, (b) Latin, (c) French, (d) German, (e) elementary mechanics, (f) chemistry, (g) physiography. The candidate then studies three years at

either of the colleges of the Victoria University, and as he obtains the necessary class certificates, passes intermediate and final examinations similar in scope to those of London. Honours may also be taken. The higher degree is M.Sc. For full particulars communicate with either of the colleges, or with the Registrar, Victoria University, Manchester.

These degrees are granted in several departments of science, including the physical sciences, agriculture, and engineering. Two years' attendance at the A.Sc. and classes of the Durham College of Science, B.Sc. Newcastle-on-Tyne, and examinations in the Durham. respective subjects are required for the associateship, and a year after the B.Sc. may be taken. See the Calendar of the University.

The four universities of Edinburgh are now in the position to grant science degrees, the Commissioners under the Universities (Scotland) Act, 1889, having or Scotch B.Sc. dained that two degrees may be conferred by each of them—viz, B.Sc. and D.Sc. The degrees may be given in pure science and in applied science. As this ordinance comes into force on October 1, 1892, it would be waste of space to refer to the old regulations (although these apply to students who commenced their studies before that date). The new regulations require a preliminary examination to be passed. Then candidates must in the course of not less than three academical years attend at least seven courses of instruction in examination subjects—three of the first examination and four of the second—and at least four of the seven courses must be taken in the university granting the degree. In pure science the First Science examination is to be in (1) mathematics or biology (*i.e.*, zoology and botany), (2) natural philosophy, (3) chemistry; and the Final Science examination in any three or more of the following subjects:—(1) Mathematics; (2) natural philosophy; (3) astronomy; (4) chemistry; (5) human anatomy, including anthropology; (6) physiology; (7) geology, including mineralogy; (8) zoology, including comparative anatomy; (9) botany including vegetable physiology. So far the universities have not formulated their own regulations under this ordinance. Under the old regulations, Edinburgh grants the B.Sc. to those who study one of the three years at the university, and it is given in the mathematical sciences, the physical experimental sciences, the natural sciences, agricultural, public health, and engineering.

Glasgow University also grants its B.Sc. in Natural Science or in Engineering, the last two years of the three being spent at the university. The natural science section is divided into the following five groups, any one of which the student may select:—1. Mathematics and natural philosophy; 2. Experimental physics and chemistry; 3. Astronomy, geology and mineralogy; 4. Botany and zoology; 5. Physiology and vertebrate anatomy. Of course these regulations hold good for those who have commenced their studies at this date.

D.Sc., Ireland. The Royal University of Ireland admits its B.A.'s to an examination in, (a) Mathematics and mathematical physics, in (b) Experimental physics and chemistry, in (c) Biology, including: i. Botany and zoology, or chemistry, ii. Physiology, or in (d) Geology, including physical geography and mineralogy, with either chemistry or botany and zoology. A year later another examination or an essay in a specialised subject must be passed.

King's College, London, in common with other science

A. K. C. schools throughout the country, grants a diploma of associateship to those who have taken the full science curriculum of two or three years, and otherwise satisfied the professors. The most valued of these associateships are those of the Royal College of Science and of the City and Guilds of London Institute, particulars of which are appended.

Ph.D. This degree is obtainable at about thirty universities in Germany, Austria and Switzerland. The highest value is attached to those from Berlin, Stuttgart, Würzburg and Munich, but this varies according to the professors and staff at any given time. The other university towns are: Basle, Berne, Bonn, Breslau, Czernowitz, Dorpat, Erlangen, Freiburg, Geneva, Giessen, Göttingen, Gratz, Greiswald, Halle, Heidelberg, Jena, Innsbruck, Kiel, Königsberg, Leipsic, Marburg, Prague, Rostock, Tübingen, Vienna, and Zurich. Most of the universities require that native students shall have attended one or more of these univer-

sities for seven or eight semesters or half-yearly sessions, but in the case of foreigners this regulation is waived provided sufficient evidence is adduced of good general and technical scientific education. The London Matriculation examination is accepted as a proof of general education, and although English students may be admitted into the university laboratories without this qualification, difficulties are often raised in its absence when permission to enter for the diploma examination is made. Recommendations from teachers and professors in England should also be presented. Under favourable circumstances the length of residence required by foreigners depends to a great extent upon the individual application of the student and the impression that he creates upon the professors. Two years is about the average time, though men coming from Oxford and Cambridge or other well-reputed schools are occasionally allowed to enter for examination after one year. When proficiency in practical work has been shown an investigation is either selected by the student or suggested to him by the professor in his principal subject, and he must bring it to a definite conclusion, if possible with positive results. For examination two secondary subjects besides the principal one must be selected, the chemist having to take chemistry and physics and one of the following:—botany, mineralogy and geology, or applied chemistry. The student is expected to attend the lectures and practical classes of the professors whose subjects he selects and who examine him. The fees are fixed by the university and are moderate, about 5*l*. per semester for full practical course occupying the whole of the day, and 3*0s*. to 2*l*. for daily lectures. Apparatus and materials have generally to be supplied at the student's expense, but most laboratories are sufficiently endowed to enable them to sell materials considerably below cost price. The fees for examination range from 15*l*. to 30*l*. in different universities, and part is usually returned when unsuccessful. The student is at liberty to reside in any part of the town.

F.C.S.

The Fellowship of the Chemical Society of London is not a qualification in the sense that the foregoing are. Indeed, the Fellowship may be conferred upon anyone who is interested in chemistry, provided he get five fellows to sign the certificate showing the basis of his application. After this the certificate is read at three ordinary meetings of the Society, a copy of it published in the "Proceedings," and a ballot taken. The fees are 4*l*. for entrance and 2*l*. annually. Forms of application can be obtained from the secretaries, Chemical Society, Burlington House, Piccadilly, London, W. The Fellowship of the Linnean Society (same address) is granted on very similar terms. Fees, 6*l*. entrance and 3*l*. annually.

WHERE TO OBTAIN SCIENTIFIC EDUCATION.

The facilities now provided in the United Kingdom for instruction in science are probably far in advance of actual demands. This is true of London and all the large towns in the provinces. We refer as succinctly as possible to most of the schools which provide full courses of instruction, but to this we add the advice that students should communicate with any institution which strikes them as providing the requirements which they seek.

THE ROYAL COLLEGE OF SCIENCE.

South Kensington, S.W.

A Government college, intended for the instruction of science-teachers and students who have obtained scholarships through the South Kensington Science Scheme. Only a few private students can be admitted, and admission is discouraged by very high fees. The course of instruction extends over three years, and the Associateship of the College is granted in mechanics, physics, chemistry, biology, geology, or agriculture, while the Associateship of the Royal School of Mines is granted in metallurgy or mining. Fees, for the three years' course, 110*l*. to 120*l*.

ROYAL COLLEGE OF SCIENCE FOR IRELAND.

Stephen's Green, Dublin.

This college is the Irish counterpart of the South Kensington one, but it is freer in the matter of admission, and supplies, as far as practicable, a complete course of instruction in

science applicable to the industrial arts, and is intended also to aid in the instruction of teachers for the local schools of science. The instruction in chemical science includes (1) general chemistry, (2) chemical manufactures, (3) metallurgy, (4) analytical and experimental chemistry, (5) instructions in chemical research. The fees for a three years' course amount to about 50*l*., and individual subjects may be taken at moderate rates. Diplomas are awarded in the faculties of mining, engineering, and manufactures.

GOVERNMENT SCHOLARSHIPS.

We may appropriately introduce here particulars of the scholarships annually awarded by the Government to deserving students from the industrial classes, who, on obtaining these, study at either of these Royal colleges. These comprise seven Royal exhibitions, four for London, and three for Dublin, consisting of instruction and 50*l*. a year for three years. Twenty-two national scholarships (tenable London or Dublin), providing instruction, 30*l*. a week for forty weeks, and railway fare from home and back; and six free studentships, providing instruction only at the Royal College of Science, London. It will be understood that these scholarships are open each year, and they are awarded to those who take the highest aggregate number of marks at the annual examinations in May (mathematics being included in the subjects). Competitors should send in form No. 330*a* before April 15, and form No. 400 before May 31, to the Secretary, Science and Art Department, London, S.W., who will supply the forms. Every year about fifty students and teachers are admitted for free instruction at the London College, with return railway fare and 21*l*. for board, &c.

CITY AND GUILDS OF LONDON INSTITUTE.

The arrangements made by this Institute for the advancement of technical education are of the most adequate description. There is an ample scheme of annual examination, fulfilling in technical science what the South Kensington scheme is doing for pure science. The examinations are in two grades, ordinary and honours, and are open, on the payment of

a fee of 1*s*. for each subject. Certificates and prizes (medals and money) are awarded, and grants of 1*l*. and 2*l*. (according to the grade of the pass) are made to the teachers in respect to each subject. There are sixty subjects, amongst them being the following, and the examinations are held in May:—Salt manufacture, alkali manufacture, soap manufacture, brewing, spirit manufacture, coal-tar products, sugar manufacture, painters' colours, oils and varnishes, oils and fats, including candle manufacture, gas manufacture, paper manufacture, photography, pottery and porcelain, glass making, telegraphy and telephony, electric lighting and power distribution, and electro-metallurgy. The scope of the examinations is fully set forth in the "Programme of Technological Examinations," to be obtained from Mr. John Watney, Secretary, Gresham College, London, E.C., 6*d*. or 8*d*. post free. We note that there was not a sufficient number of candidates in salt and alkali manufactures this year to permit an examination being held.

Perhaps the educational is the more important part of the Institute's work. It has two schools of science

Central Institution.—the one at Exhibition Road, S.W., is a college for higher technical instruction and mathematics, civil, mechanical, and electrical engineering, and chemistry. The complete courses of instruction for the diploma of the Institution extend over three years, and they are intended for persons (1) training to become technical teachers; (2) preparing to enter engineers' or architects' offices or manufacturing works; and (3) persons who desire to acquaint themselves with the scientific principles underlying the particular branch of industry in which they are engaged. An entrance examination in mathematics, mechanical drawing, physics, chemistry, and French or German must be passed. The fees amount to 25*l*. a year. Students are admitted under specified conditions to individual classes, at the class-fees, which (we have calculated from the Institute's account) are a mere fraction of the cost of the education. A more popular, because less

Finsbury College.

specialised, school is the Technical College, Leonard Street, City Road, E.C., which is for training students for intermediate posts. There are day-classes for those who are able to devote one, two, or three

years to systematic technical education; and evening-classes for those who are engaged in the daytimes. The subjects are practically the same as those taught in the Exhibition Road, but the fees are lower—viz. 15*l.* a session, and the course extends to two years. Students of 14 are admitted, whereas at Exhibition Road they must be 16. The entrance examination is in mathematics and English. The evening-classes are good, and are recognised for A.I.C. The following may be noted as being useful for young druggists:—Practical physics, Mr. Thomas and Mr. Flew; Fridays, 6 to 9. Chemistry for brewers, dyers, coal-tar distillers, soap-makers, &c., Prof. Meldola, F.R.S., and Mr. Streetfield, F.I.C. Mondays, 7 to 9. Laboratory work on Wednesdays and Thursdays, 6 to 9. Inorganic chemistry, Mr. Castell-Evans, F.I.C.; Mondays, 7 to 9. Laboratory work on Wednesdays and Thursdays, 6 to 9. In connection with each course of lectures in physics and chemistry there is a corresponding course of laboratory instruction. The College laboratories are open on most evenings from 6 to 9. The fees for the separate evening classes vary from 7*s.* to 17*s.* for the session. Apprentices under 20 years of age are admitted at half the ordinary fees. The session commences on Monday, October 3, 1892. For further particulars see programme of instruction, to be obtained at the Colleges, or at the office of the Institute, Gresham College, E.C.

KING'S COLLEGE, STRAND, W.C., and UNIVERSITY COLLEGE, GOWER STREET, W.C.

The scientific instruction at these colleges is intended to meet the requirements for the University of London degrees, but is of much wider application. The conditions of entry are similar to what obtains at the Central Institution. In King's College instruction is given on the general principles of chemistry (inorganic and organic), and there are special courses of instruction in metallurgy and photography. The fees for the general course, including practical work, are 18*l.* 18*s.* per annum. The complete course for A.I.C. may be obtained here. There are evening classes. At University College the instruction is nicely graded in the general section, the fees about the same as at King's College, and there is a good technical course, being lectures on the following subjects:—Manufacture of sulphuric acid, alkali, &c.; fuel and gas manufacture; chemical technology of building materials; methods for the technical chemical analysis of raw and manufactured products; coal-tar products and colours; applications of chemistry to engineering; methods of technical chemical analysis.

THE METROPOLITAN SCHOOLS.

Amidst the multitude of schools existing in London for imparting technical instruction, we select the following as being amongst the most popular. The Birk-

Birkbeck. Beck Institution (Brems Buildings, Chancery Lane, E.C.) has the credit of sending more men in for the London Science degree than any other school or college in London, and they are successful, too. It may be judged from that what the nature of the education is. The syllabus covers most departments of knowledge. In science we note the following classes:—Agriculture (principles of)—Monday, 6 to 7. Botany elementary—Monday, 6 to 7; advanced and B.Sc.—Monday, 7 to 8; practical—Monday, 8 to 10. Biology, part I., Friday, 7 to 8; part II.—Thursday, 7 to 8; practical I.—Friday, 8 to 10; practical II.—Thursday, 8 to 10. Inorganic chemistry, elementary—Tuesday, 8.30 to 9.30; advanced and B.Sc.—Thursday, 7 to 8; practical: elementary, advanced, and honours—Tuesday, 6 to 8, Thursday, 8 to 10, and Saturday, 7 to 9. Organic chemistry, general and B.Sc.: Elementary—Wednesday, 6.30 to 7.30; advanced—Wednesday, 7.30 to 8.30; practical—Wednesday, 6 to 9.30, and Friday, 6 to 9. The fees are low. Another good city school is the Charterhouse Institute, 210 Goswell Road, E.C., where instruction is given in most of the sciences at a nominal fee. Students of chemistry have the opportunity of working in a well-fitted laboratory, capable of accommodating sixty. The City of London College (White Street, Moorfields, E.C.) claims, with the Birkbeck, the title, "City Polytechnic." City College. Whichever has the right to it we need not try to settle; but the classes of the City College are well thought of, and are held in the evenings. For instance:—Botany—Wednesday, 7 to 8. Chemistry, inorganic: Ele-

mentary—Monday, 7 to 8; advanced—Tuesday, 7 to 8; honours—Friday, 9 to 10; Laboratory practice: Elementary—Monday, 8 to 10; advanced—Tuesday, 8 to 10; honours—Friday, 7 to 10. Chemistry, organic—Thursday, 7 to 8; laboratory practice—Thursday, 8 to 10. Magnetism and electricity: Elementary—Wednesday, 7 to 8; advanced—Wednesday, 8 to 9. Sound, light, and heat: Elementary—Wednesday, 9 to 10.

In the East-end we have Toynbee Hall and the People's East. Palace (Mile End Road, E.), the classes at the latter comprising:—Sound, light, and heat—Monday, 7.30 to 8.30. Magnetism and electricity, elementary—Tuesday, 8 to 10. Chemistry, inorganic: Elementary—Monday, 7.15 to 8.15; practical—Monday, 8.15 to 10; advanced—Friday, 7.15 to 8.15; quantitative analysis and special work—Monday, Tuesday, and Friday, 7 to 10. Chemistry of oils and fats—Tuesday, 7.30 to 8.30. Botany—Wednesday, 7 to 8. The fees are moderate.

So also at the Polytechnic (309 Regent Street, W.), where West. there are practical trade-classes for the City and Guilds Institute examinations, and evening classes in all the subjects taken in the South Kensington Scheme. These are so full that we must refer students to the "Prospectus," which they can obtain from the secretary.

In the South of London students will find ample arrangements at the Goldsmiths' Institute, New Cross, South. S.E. Lectures and practical classes are held in the evenings from 7.30 to 10.0. Also at Addey's Science and Art School, Church Street, Deptford.

PROVINCIAL COLLEGES AND SCHOOLS.

For detailed information see the published prospectuses of the respective institutions.

Aberystwith: University College of Wales.—The science classes are suitable for pharmacy, B.Sc., A.I.C., and medicine. An annual fee of 10*l.* covers the whole of the classes, except practical chemistry and the like. Single classes, 1*l.* per term. Students must be 16.

Bangor: University College of North Wales.—The conditions are the same as at Aberystwith.

Belfast: Queen's College.—For engineering, medicine, and pharmacy. Practical chemistry begins October 18 at 10 A.M., and continues every Monday at that hour. Laboratory work may be taken at any time arranged with the professor Fee, 3*l.*

Birmingham, Mason College.—For persons above fifteen, who propose to study medicine or science. Day classes to meet the requirements of B.Sc., A.I.C., and the College Associateship (A.M.C.), the last requiring three years' attendance. In the chemical laboratory attention is given to the requirements of pharmaceutical students. Lecture-fees, 3*l.* 3*s.* per session; laboratory, 2*l.* 12*s.* 6*d.* per term (three hours on three days weekly). Evening classes are held.

Bristol, University College.—The objects are similar to those of Mason College, but the Associateship takes two years. Chemistry day-lectures for juniors, Wednesdays and Fridays at 11. 3*l.* 3*s.* per session. Practical work daily: one day weekly, 5*l.* 5*s.* per session. Botany lectures, good, 5*l.* 5*s.* per session; also practical work. There are evening classes in botany, chemistry, and several branches of physics. The fees do not exceed 10*s.* per class.

Cardiff, University College of South Wales and Monmouthshire. Conditions same as at Aberystwith and Bangor. Junior chemistry day class (2*l.* 2*s.*), suited for young druggists, also botany during summer term (2*l.*).

Dundee, University College.—Reference is made under "Pharmacy" to the classes at this College.

Edinburgh. See under "Pharmacy."

Glasgow and West of Scotland Technical College.—Open to students above fifteen. Grants associateship of the College to persons who have gone through two years' curriculum, here or elsewhere, in necessary subjects and on examination. The scientific instruction in the day classes is good and exceedingly cheap. General chemistry is taught, also technical chemistry, the latter course (2*l.*), including

such subjects as the manufacture of aerated waters, soda industry, and photography. There are short courses on special subjects. We note the following evening classes as being suitable for students of pharmacy:—Botany, Fridays, 7.30-9.30; chemistry, junior, Tuesdays, 8.15; practical, Wednesdays, 7-10; organic, Thursdays, 8.30; experimental physics, Tuesdays, 8-10. The fees are low.

Leeds, Yorkshire College.—Open to students above fourteen. The instruction adapted to the Victoria University degrees and various diplomas, and the technical instruction pertaining to district industries (dyeing, wool-weaving, &c.) is exceptionally complete. Evening and special classes:—Practical chemistry, Saturdays, any hour between 9.30 A.M. and 12.30 P.M., 31s. 6d.; lectures on inorganic, Wednesdays, 7.30 P.M., 10s. 6d.

Liverpool—University College. Open to persons above 15. Otherwise the conditions and day classes are similar to Leeds. The botany evening class seems to be the only one suitable for pharmacy.

Institute of Chemical Technology, Hackins Hey.—Here a course of instruction is given which is intended for students who wish to gain a knowledge of chemistry and the allied sciences in their relation to industrial and commercial pursuits. In addition to the chemical studies, students who desire it can enter upon a special course, calculated to afford them knowledge useful in the erection and arrangement of manufactories and construction of apparatus.

Manchester.—Owens College.—Scientific training of a high order is provided in day and evening classes.

At the Municipal Technical School, Princess Street, there are day and evening classes in chemistry, &c.

Newcastle-upon-Tyne.—Durham College of Science. There are various courses of scientific study—e.g., for the Associateship, A.I.C., B.Sc., &c., open to those above 15. In the day classes the fees for chemistry (lectures and practical) amount to 15l. 9s. per session; botany, 2l. 2s. Evening classes are held in chemistry (Mondays, lectures at 8 and laboratory at 6) and botany (Thursdays at 7). The latter are the classes recommended to pharmaceutical students.

Nottingham.—University College.—For A.I.C., B.Sc., &c., the arrangements are complete and the fees moderate. The College gives special facilities to students of pharmacy.

Sheffield—Firth College.—Several good courses in chemistry here, notably a summer course for science teachers. Botany is also taught in the Summer session. Evening classes: Chemistry, Wednesdays 8.10s. 6d.; botany (beginning April 13), Wednesdays and Fridays 7.30, 10s. 6d. Also physics.

Stockport Technical School.—Evening classes are held in botany, chemistry (lectures and practical), and various technical subjects at fees fixed upon the grant system.

Swansea Technical Institute.—Like Stockport.

DENTISTRY.

THE conditions governing registration in the profession of dentistry are precisely the same as those relating to medical students, and registration as "dental students" must be effected through the General Medical Council's Registrars, in the manner already described under "Medicine." The conditions upon which the Royal College of Surgeons grants its diploma of

LICENTIATE IN DENTAL SURGERY

are the best indication of the nature of the training necessary in this profession. These conditions are that the candidate shall produce certificates—

The Curriculum. 1. Of registration as a dental student by the General Medical Council, 299 Oxford Street, London, W.

2. Of having been engaged during four years in the acquirement of professional knowledge subsequently to the date of such registration.

3. Of having received instruction in chemistry, including chemical physics, practical chemistry, and materia medica.

4. Of having attended, at a recognised medical school—

(a) A course of lectures on anatomy during not less than six months, or one winter session.

(b) A course of lectures on physiology during not less than six months, or one winter session.

(c) A separate practical course of physiology during not less than three months.

(d) A course of lectures on surgery during not less than six months, or one winter session.

(e) A course of lectures on medicine during not less than six months, or one winter session. [Students are required to attend examinations which are held in the several classes.]

5. Of having performed dissections at a recognised school during not less than twelve months.

6. Of having attended, at a recognised hospital or hospitals in the United Kingdom, the practice of surgery and clinical lectures on surgery during two winter sessions.

7. Of having attended, at a recognised school, two courses of lectures upon each of the following subjects—viz, dental anatomy and physiology (human and comparative), dental surgery, dental mechanics, and one course of lectures on metallurgy, by lecturers recognised by this College. [Students are required to attend examinations which are held in the several classes.]

8. Of having been engaged during a period of not less than three years in acquiring a practical familiarity with the details of mechanical dentistry, under the instruction of a competent practitioner, or under the direction of the superintendent of the mechanical department of a recognised dental hospital where the arrangements for teaching mechanical dentistry are satisfactory to the Board of Examiners in Dental Surgery.

9. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of dental surgery during the period of two years.

10. Of being 21 years of age.

Note.—Professional study prior to the date of registration as a dental student is not recognised except in the case of chemistry, practical chemistry, and materia medica, and of instruction in the details of mechanical dentistry. This does not imply that the chemistry, &c., must be obtained at a school, for if it be given by any pharmaceutical chemist it will suffice. The form of the certificate is as follows:—

It is hereby certified that Mr. (names in full)

has received instruction in the following subjects, viz. :—

Subjects	Signature of Instructor	Place of Instruction	Qualifications of Instructor
Chemistry and chemical physics			
Practical chemistry			
Materia medica ..			

Similarly a chemist and druggist who is also a registered dentist may teach his pupils mechanical dentistry, and such instruction will rank for qualification. The certificate to be given is in the following form:—

MECHANICAL DENTISTRY.

It is hereby certified that Mr. _____ has been engaged during not less than three years in acquiring a practical familiarity with the details of MECHANICAL DENTISTRY, under my instruction, commencing the ____ day of ____ 18____, and terminating the ____ day of ____ 18____.

Dated this ____ day of ____ 18____. Signature _____

Residence or
Place of Instruction }

Although the regulations specify four years' study, as a matter of fact, only two consecutive years are spent at the hospital and dental college, but it must be understood that if the candidate is to pass the professional examinations during and at the end of these two years he must have been registered as a dental student two years before beginning his college studies. There is only one examination for the

English dental licence, and it may be taken at the end of the curriculum if the candidate is of full age. The examination, which is held at the Examination Hall, Victoria Embankment, is written, practical, and oral, and comprises general anatomy and phy-

siology, general pathology and surgery, dental anatomy and physiology, and dental pathology and surgery. At the practical examination candidates may be examined, (a) On the treatment of dental caries, and may be required to prepare and fill cavities with gold or plastic filling or material, or to do any other operation in dental surgery. (b) On the mechanical and surgical treatment of the various irregularities of children's teeth, and (c) On mechanical dentistry. The oral examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, &c. The fee for the examination is 10*l*. 10*s*. All applications with reference to it should be addressed to Mr. F. G. Hallett, secretary, Examination Hall, Victoria Embankment, London, W.C. The General Medical Council allows one year's *bonâ fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, to count as one of the four years of professional study, and, as previously stated, the three years of instruction in mechanical dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

SCOTCH L.D.S.

This diploma is granted by the Royal College of Surgeons, Edinburgh. The two years' College curriculum closely resembles the English one, but attendance at courses of lectures on chemistry and materia medica and three months' laboratory instruction in chemistry are compulsory. There are two professional examinations in the curriculum subjects. Fee, 10*l*. 10*s*. A similar licence is granted by Faculty of Physicians and Surgeons, Glasgow. Communications in respect to examinations in Edinburgh should be addressed to Mr. James Robertson, solicitor, 1 George Square, Edinburgh, and respecting those in Glasgow to Mr. Alexander Duncan, B.A., Faculty Hall, St. Vincent Street, Glasgow.

IRISH L.D.S.

The curriculum of the Royal College of Surgeons in Ireland differs from both of the preceding in its being adapted to fit in with two professional examinations, but candidates educated in England and Scotland are admitted to the examinations under the conditions existing in those countries. When appearing for the primary dental examination every candidate is required to prove that he has attended a course of (a) lectures on practical anatomy, (b) demonstrations and dissections, (c) lectures on theoretical chemistry, (d) physiology (winter courses), (e) practical chemistry (summer or winter course), (f) histology (summer course), and that he has attended a medico-surgical hospital for nine months. The first examination is in the general subjects, but the *final* is in the special dental subjects—viz., dental surgery and pathology, dental mechanics, dental anatomy, dental metalurgy, and general surgery. The usual attendance at dental hospitals is, of course, required. Fees, 21*l*.

The College admits to examination, *sine curriculo*, candidates who were in practice before July, 1878, and whose names are on the *Dental Register*. The application of the candidate for examination shall be made on a form, obtainable at the College, setting forth a certificate, signed by two Fellows, members, or licentiates of a College of Surgeons, and by two licentiates in dental surgery in the Royal College of Surgeons in Ireland, or two members of the British Dental Association or of the Odontological Society, to the effect that applicant is of good moral character, was engaged in the practice of dentistry before July, 1878, and has not, during the past two years, attracted business as a dentist by advertising or other unbecoming practices. The application must also contain a declaration by the applicant subscribing to the terms of declaration for all candidates before receiving the diploma. The examination for candidates *sine curriculo* is the final dental. Fee, 21*l*.

WHERE TO OBTAIN DENTAL EDUCATION.

LONDON.

Dental Hospital, Leicester Square, W.—Dean, Mr. Morton Smale. Fees for dental lectures and practice only, 31*l*. 10*s*.

National Dental Hospital and College, 149 Great Portland Street, W.—Dean, Mr. F. H. Weiss. Fees, 25*l*. 4*s*.

Guy's Hospital, Borough, S.E.—Dean, Dr. Perry. Fees for complete instruction, 60*l*.

The medical subjects and hospital practice may be obtained at the following institutions at the fees stated, these in most cases including chemistry, physics, and materia medica:—*Charing Cross Hospital*, 56*l*. 14*s*; *London Hospital*, 42*l*; *Middlesex Hospital*, 55*l*. 14*s*; *St. Bartholomew's Hospital*, 66*l*. 3*s*; *St. George's Hospital*, 55*l*; *St. Mary's Hospital*, 55*l*; *St. Thomas's Hospital*, 65*l*; *University College*, 68*l*. 5*s*; *Westminster Hospital*, 50*l*. From the foregoing it would appear that the minimum cost of the complete curriculum at schools (dental and medical) in London is 67*l*. 14*s*.

PROVINCIAL.

Birmingham: Mason College, Dental Department.—Hon. Sec., Mr. J. Humphreys, 22 Newhall Street, Birmingham. Fees for all subjects, 63*l*.

Bristol.—Dental instruction is given in the General Hospital.

Dublin: Dental Hospital of Ireland, 25 Lincoln Place.—Dean, Dr. R. T. Stack. Fees for all subjects, 73*l*. 10*s*.

Edinburgh: Dental Hospital and School, 5 Lauriston Lane.—Dean, Mr. Bowman Macleod, 16 George Square. Fees for all subjects, 66*l*. 2*s*.

Exeter: Dental Hospital, Castle Street.—Hon. Sec., Mr. G. A. Townsend. (For hospital practice only, 5*l*. 5*s*.)

Glasgow: Dental Hospital and School, 4 Chatham Place, Stirling Road.—Secretary, Mr. D. M. Alexander, 117 Wellington Street. Fees for dental subjects 25*l*. 4*s*.

Liverpool: University College School of Dental Surgery.—Dean, Mr. F. T. Paul. Fees for all subjects, 73*l*. 2*s*.

Manchester: Owens College, Dental Department.—Registrar, Mr. H. W. Holder. Fees for all subjects, 73*l*. 2*s*.

Newcastle-on-Tyne: College of Medicine.—Fees for medical subjects and hospital practice, 44*l*. 2*s*. Secretary, Lieut. H. Fox.

Plymouth: Dental Hospital, Octagon.—Fees for dental subjects, 23*l*. 2*s*.

The only foreign dental degrees registrable are those of the Harvard and Michigan Universities.

Fee for registration as Dental Surgeon, 5*l*. 5*s*., to be paid on application to one of the Registrars of the General Medical Council.

VETERINARY SURGERY.

THE trend of education is all upwards. Now it is the Royal College of Veterinary Surgeons which follows the example of the General Medical Council, and on and after January 30, 1893, it is decreed that all students entering a veterinary college will be required to produce, prior to their First Professional examination, a certificate that they have passed the Preliminary examination in general education of the General Medical Council, or produce a certificate recognised by that body—that is to say, veterinary students must, a year hence, be prepared to register as medical students. It has also been resolved that, after April 7, 1895, "no student shall receive the diploma of the R.C.V. Surgeons until he proves to the satisfaction of the Council of the said College that he has studied at one or more recognised veterinary schools for a period of not less than four sessional years." Further, that after April 7, 1895, "each student who is a candidate for the diploma of the R.C.V. Surgeons shall, during his academical course, be subjected to four examinations."

The teaching colleges have not yet put their "houses in order" for this change; in fact, it has been so recently effected, that there has been no time, and, of course, all who begin their studies in October of this year are exempt from the new regulations. We need only indicate briefly, therefore, what the old regulations are, and advise those who

have the idea of becoming veterinarians to begin at once. The pharmaceutical Preliminary exempts from the entrance examination. The curriculum lasts three years, and at the end of each year there is an examination by the Board of the Royal College of Veterinary Surgeons, Red Lion Square. The examinations are held in Edinburgh, Glasgow, and London. The subjects are those of the curriculum, viz. :—

First Examination.—Chemistry, toxicology, botany, and rudimentary anatomy—equine and comparative.

Second Examination.—Anatomy of the horse and other domesticated animals, physiology, and histology.

Final Examination.—Morbidity anatomy and pathology, diseases of the horse and of the other domesticated animals (including veterinary medicine, surgery, and therapeutics); and a practical examination as to the soundness and diseases of horses and of other domesticated animals, and also in the writing of certificates and prescriptions.

The fee for each examination is 4*l.* 4*s.*, payable to the Royal College of Veterinary Surgeons. The following are the teaching-colleges in Great Britain (there is none in Ireland):—

ROYAL (DICK'S) VETERINARY COLLEGE,

Clyde Street, Edinburgh.

Principal, Professor Thomas Walley. Fees, 43*l.* 1*s.*, payable in three yearly portions.

THE NEW VETERINARY COLLEGE,

Leith Walk, Edinburgh.

Principal, Professor Williams. Total fees, 47*l.* 5*s.*, payable in three parts.

GLASGOW VETERINARY COLLEGE,

Buccleuch Street, Garnethill.

Principal, Professor James McCall. Total fees, 52*l.* 10*s.*, payable in three parts.

ROYAL VETERINARY COLLEGE,

Camden Town, London, N.W.

Principal, Professor G. T. Brown, C.B.; Secretary, Mr. R. A. N. Powys. Fees, 21*l.* each year.

AGRICULTURE.

PARTLY owing to the enhancement of the spirit-duty to the extent of 6*d.* by Mr. Goschen, and the impossibility of spending the sixpences as he at first proposed, there has been of late years a greatly increasing demand for instruction in the science of agriculture. That is due to the fact that County Councils are appointing lecturers (some of them, we are glad to say, chemists and druggists) to give popular discourses to farm hands. Apart from that, young farmers themselves are beginning to recognise what Mr. Warrington so fitly expressed at Edinburgh—viz.: What the British farmer has to do, in order to meet competition, is to look most carefully round him in every department of his work and see what waste is going on. Farmers should know more science to enable them to do that, and to produce their crops more economically. Consequently there is now offering by a number of University colleges special courses of instruction in agriculture, while several schools exist for instruction in this department only. We subjoin brief particulars:—

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

Systematic courses of lectures are given on the various branches of chemistry in its relation to agriculture, and in all correlated subjects. The College grants a diploma to those who complete the curriculum and pass the examinations.

COLLEGE OF AGRICULTURE, DOWNTON, NEAR SALISBURY.

Persons of 17 and upwards are admitted into this college, where the subjects taught include agriculture, and dairy and pastoral farming; estate management, land agency, and

forestry; mensuration, trigonometry, land surveying and building construction and drawing; book-keeping and commercial knowledge; physics and mechanics; chemistry and chemical analysis; geology; botany and vegetable physiology; zoology and entomology; veterinary surgery, including anatomy and physiology. The lectures and classes are so arranged that in the complete two years' course the student has laid before him everything necessary to enable him to pass the examinations of the Surveyors' Institution, of the Royal Agricultural Society of England, and of the Highland and Agricultural Society. The fees amount to 75*l.* per annum for outdoor students, and about 60*l.* more for those boarding in the College. Individual subjects may be taken.

WELSH COLLEGES.

There is a lecturer on agriculture at the Aberystwith College and also at the Bangor College, particulars of the work done in the departments (which are fully organised) will be found in the special prospectuses.

GLASGOW TECHNICAL COLLEGE.

The diploma of the Glasgow and West of Scotland Technical College is granted in agriculture. The first year's studies are natural philosophy, chemistry, mathematics, and drawing. In the second year drawing, applied mechanics, agricultural chemistry, agricultural botany, agricultural entomology, and geology; and in the third year surveying and agriculture. All the classes for the examinations may be taken at the College at moderate fees.

EDINBURGH UNIVERSITY.

There is a chair of agriculture in this University, and the B.Sc. degree is granted under certain conditions, for particulars of which apply to Professor Wallace.

DURHAM COLLEGE OF SCIENCE.

There are courses of one, two, and three years at this College, the last being intended for matriculated students who are proceeding to the Associateship in Science and B.Sc. The subjects are: First year—mathematics, physics and physical laboratory, chemistry and chemical laboratory, and either geology or biology. Second year—agriculture, agricultural chemistry, chemical laboratory, agricultural botany, land surveying and farm hygiene. Third year—special courses in agriculture and forestry, chemical laboratory, practical agricultural chemistry, and practical agricultural botany. There are evening classes in some of the subjects.

YORKSHIRE COLLEGE, LEEDS.

There are three courses of study, viz. (1) A winter course, fees 8*l.* 18*s.* 6*d.*; (2) a one year's course, fees 27*l.* 6*s.*; and (3) a two years' course, fees 52*l.* 10*s.* There is a course in veterinary science—fee, 3*l.* 3*s.*—which should make a good supplement to "Veterinary Counter Practice."

NOTTINGHAM UNIVERSITY COLLEGE.

The authorities have arranged with the Notts County Council to give a course of instruction, extending over two years, which is designed for those who intend to become farmers, bailiffs, land agents, colonists, &c. The classes are held in the daytime, and the fees are 15*l.* per annum for residents in Notts and 20*l.* for others. The course as sketched seems to be an excellent one.

EXAMINATIONS AND PRIZES.

The Royal Agricultural Society of England has an examination for prizes and certificates annually, in the month of May, at the Society's house, 12 Hanover Square, London, W. In order to obtain a *first-class* certificate a candidate must satisfy the examiners in the practice of agriculture, book-keeping, chemistry, land-surveying, and agricultural engineering. Each candidate obtaining a *first-class* certificate thereby becomes a life member of the Society. The following prizes are awarded to candidates placed in the first class for aggregate merit:—First prize, 25*l.*; second prize, 15*l.*; third prize, 10*l.*; fourth prize, 5*l.* The fee for admission is 1*l.*, which is returned if candidates sit for the examination. Application must be made before March 31. There is an examination for junior scholarships in November (10*l.* each).

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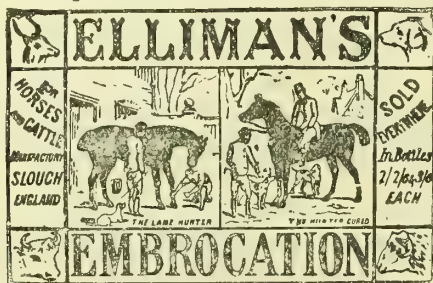
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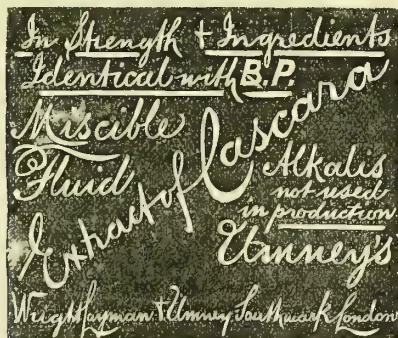


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Editorial Comments.

EDUCATIONAL.

OUR Educational Number attains its majority to-day. There is much meaning in the circumstance beyond the satisfaction which it affords ourselves. If THE CHEMIST AND DRUGGIST gave no specially collated educational information before 1871, we may safely conclude that there was little demand for it. And that was shown then in another way;

for the Pharmaceutical Society's School, Dr. Muter, and Mr. J. C. Braithwaite alone appeared to cater for pharmaceutical students. The Minor examination was still the old thing that sufficed for assistants in pre-compulsion days. There was no limit as to age; posology was not included; a term of experience in dispensing was not required, and the chemistry was somewhat superficial. The trade was just beginning to recognise that book-learning was a pharmaceutical essential, and in the fulness of time came THE CHEMIST AND DRUGGIST with its Educational number.

These twenty-one years are a tempting morsel to the historian. He wants to explain why the three pages of 1871 threaten to become thirty in 1892; how curricula have lengthened and examinations strengthened; how new occupations have emerged from the womb of science, and progress has refashioned all that was old in the professions. But recent history is more momentous, and requires our attention. In pharmacy we are just concluding the first year under the new regulations, and it is admitted on all hands to have been a satisfactory change. One thing it has brought out more prominently than any other, namely, that the weaklings are those who have not studied the subjects of the examination during the whole or the greater part of the time they have been in pharmacy. These are the bugbears to teachers and the abhorrence of examiners; they are their own poorest friends, and the least satisfactory servants of the public. We repeat, therefore, what has already been said in the first part of the journal, that apprentices and assistants should begin their professional studies early, taking full advantage of local educational arrangements. Masters also have their share of duty in the matter. It is their duty as employers to encourage the young men by affording them facilities for improvement. These are not the days of privilege that they should be appealed to in this matter. Therefore, we preach no sermon.

And while changes have been effected there are others to come. In pharmacy it will be noted, although it has not come home to all the schools, that the technical examinations are henceforth to be held quarterly—in January, April, July, and October, this being an arrangement which has worked admirably in Edinburgh for many years, and will work as well in London. Then in January next every candidate for the Minor will be expected to have a knowledge of the law regulating the sale of poisons. In the promotion of this innovation we have had our share, and it is in sympathy with our practical interest in the matter that we are furnishing students with a compendium of pharmacy law which will instruct them fully in regard to the responsibilities imposed upon chemists and druggists. This compendium is all the more necessary on account of the fact that, with the exception of Mr. Kirkby, of Owens College, no pharmaceutical teacher appears to have prepared for this important addition to the examination requirements.

Education authorities outside pharmacy show signs of prospecting the pharmaceutical field. What Nottingham has so successfully done, and Brighton is admirably attempting, is possible for every university college and science school in the kingdom. The principal of the Dundee University College has spoken very plainly about the necessity for more systematised pharmaceutical education. He appears to have had the Goschen sixpences in his eye. Still, his utterances may be placed alongside those of Professor T. R. Fraser, before the North British Branch a year or two ago, when he speculated upon the possibility of the Edinburgh University granting a pharmaceutical degree. Professor Fraser generally sticks to a thing when he gets hold of it, and we may not have heard the last of that matter. All of which is encouraging to, if patronising,

the pharmacist—as Mr. Stanford would call the chemist and druggist.

Medicine is even more shifty than pharmacy this year. All who begin their studies now have to face a five years curriculum. The subjects are but slightly altered, physics is now compulsory in the first examination, and greater attention is paid to practical knowledge in the purely medical subjects, but alteration is chiefly evident in rearrangement of the professional examinations, and the stringent requirements in respect to medical and surgical practice during the fifth year. This is very good, especially for the prospective patients of those now beginning their medical career. A remarkable change has been quietly effected in the curriculum at the Scotch universities. By an ordinance, which comes into effect on October 1, competition is annihilated, and the medical and surgical degrees of all four universities are rigidly unified. The net result of the changes on the medical curriculum when reckoned in the coin of the realm is that students must pay from 10% to 25% more in fees, and they have to face an additional year's maintenance during the time they will be playing the part of medical men without salary.

Veterinary surgery must also take rank with the higher branch of medicine. They must be phenomenal groomers and horsey men who think of becoming "vets." nowadays, for henceforth the same standard of preliminary education will be required of candidates as is required of medical students. A year is also added to the professional curriculum, making it of four years' duration, and there is a rearrangement of the professional examinations.

In the other departments of education there is little alteration. We give somewhat fuller information regarding science degrees, for which there are many aspirants in the ranks of pharmacy, and it will be noted that a similar unification to that in the medical degrees has been made in Scotch science degrees. Most pharmacists find their own examinations science enough; some have profitably applied their scientific training as teachers under the South Kensington scheme. There is room for developing this, and the assistance afforded by the Government deserves greater attention. It is the young who should look to it.

CHEMISTS AND THE POISON LAWS.

"You are a registered chemist, and ought to know what the Poisons Act says." This was Mr. Coroner Brighthouse's well-deserved reproof of the chemist who came before him the other day and was unable to say whether it was or was not lawful for a girl of 14 to be left in charge of a chemist's shop, with power to vend poisons enough to destroy the whole of the neighbouring population. Few cases have proved so forcibly the importance of a more strict administration of the penal sections of the Pharmacy Act than that to which we have been accustomed. The indifference of the executive of the Pharmaceutical Society to the statute entrusted to them in the past is severely, but not on the whole unjustly, stigmatised in the Editorial note which we copy from last week's *British Medical Journal*. It is becoming essential that the Pharmaceutical Council should regard the enforcement of the Pharmacy Act as their primary duty. There may be some little risk of unpopularity, some probability of a sneer at the Society as a trade union, instead of the sweeter compliments on its services in the cause of education and research. But this must be disregarded. There is nothing more clear than that the representatives of the public who are in a position to form an opinion of value, judges, magistrates, coroners, and medical men, desire to

have this Act enforced. In these days, when it is so universally accepted that for the sake of the public health individual rights must be infringed, it is scarcely appropriate or chemists to object to the fulfilment of their statutory duties in regard to the sale of poisons. That their interests and their duty in this respect are coincident, does not affect this argument, though it should have made it unnecessary.

A noteworthy recognition of the importance of a familiarity with the law as it affects the Sale of Poisons, is the addition to the Examination Schedule which now appears for the first time as an item in our Educational information. Before the 'qualifying' certificate is granted, candidates for the Minor examination of the Pharmaceutical Society will be required from January next to satisfy the Board that they possess a close acquaintance with the legal conditions under which poisons can be sold. This is already required of Irish candidates, and it has certainly not been too hurriedly added to the subjects of examination in London and Edinburgh. It is both a disgrace and a danger that the acquirement of this knowledge, of the essentials to the proper conduct of a pharmaceutical business, should have been optional and so much disregarded hitherto.

Publicans are expected to be, and generally are, familiar with the licensing laws; pawnbrokers know exactly what they may or may not do with pledges; manufacturers soon discover the necessity of acquaintance with the Factory Acts; medical men find it necessary to know the requirements of the Public Health Acts. The public expect that chemists should be just as correctly informed on all that relates to the Sale of Poisons, and the laws affecting pharmacy. We hope that the new section in the Minor Syllabus, aided by the book on "The Pharmacy and Poison Laws of the United Kingdom," the publication of which we announce this week, will have no inconsiderable effect in ensuring the possession of this knowledge in an accurate and available form by all who assume the title and duties of chemists and druggists.

DUBLIN CASTLE MODIFIES THE IRISH PHARMACY ACT.

THE protest of the Council of the Pharmaceutical Society of Ireland against the action of the Lord Lieutenant in reference to the remission of fines imposed under the Pharmacy Act, which forms a prominent feature in the report of the last Council-meeting appearing in this issue, is worthy of special attention. The letter of remonstrance sent by the President on behalf of the Council, although of somewhat unusual tone in official correspondence, is not, in our opinion, one whit too strong under the circumstances. The Council saw reason to prosecute a druggist at Bangor, in the North of Ireland, for four infringements of the Irish Pharmacy Act. The defendant had compounded medical prescriptions, and the law says that if an unqualified person does this he shall be liable to a penalty of 5*l.* for each offence. The Bangor magistrates dismissed two of the summonses so as to practically reduce the penalties, and then recommended a still further reduction, but they had no power themselves to modify the fines which the law imposes on convicted offenders. The defendant (no blame to him in the matter) memorialised the Lord Lieutenant, and "their Excellencies were pleased"—without consulting or even advising the plaintiff Society—to reduce the fines from 5*l.* to 1*l.* each. This is most unsatisfactory. Parliament has seen fit to pass a certain law, and has imposed on the Pharmaceutical Society the duty of carrying out the provisions of that law. The Council proceed with their task, a duty which cannot be an agreeable one, and then they discover

that the Lord Lieutenant is going about behind them destroying the effect of their action. This is despotic Government pure and simple. The Lord Lieutenant, or whoever may represent him, no doubt thinks he is much wiser than Parliament, and he gives effect to that opinion, not by recommending to Parliament a repeal of the Act, which would be constitutional, but by a perfectly ridiculous use of the prerogative entrusted to his discretion. There is no evidence of anything peculiar in this particular case, and therefore how the Lord Lieutenant with any appearances of justice can maintain the legal penalty in subsequent cases is incomprehensible. If there were any circumstances in the Bangor case which rendered the remission of the fines desirable, these certainly ought to have been communicated to the Pharmaceutical Council before their action was thus stultified. Something more than a formal reply to the complaint which the Council has submitted is required from the authorities at Dublin Castle.

At a later period of their meeting, the name of the defendant in the case alluded to was submitted for associateship in the Society, and he and several others who were described as "law-breakers" were, by the majority of the Council, refused admission to the Society. Two other persons who are as yet only under threat of an action were also rejected. This treatment seems to have been a little harsh and unjust. One candidate had been found by a Court to be not a law-breaker. Mr. Wells says the Court was biased; but it must be remembered that he and his associates on the Council had appealed to that Court, and the magisterial decision must be accepted while it stands. In Mr. Cosgrave's case fines had been imposed, it is true, but they will be paid and the offence purged. Mr. Cosgrave is quite justified in getting off as cheaply as he can, and it is at any rate not fair to punish him for the conduct of the Lord Lieutenant. We mention this matter because it seems to us that the policy inaugurated by the majority of the Council in rejecting candidates for associateship for the reasons given in the cases referred to is a dangerous one. It affords the druggists a valuable ground of complaint against what they will call the tyranny of the legally-imposed majority.

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Legal Reports.

THE MEDICINE-STAMP ACT—HERBALIST FINED.

AT the Birkenhead Police Court, on Friday, September 9, Henry Smith, of 52 Argyle Street South, Birkenhead, was summoned at the instance of the Inland Revenue authorities for exposing for sale a certain box containing a preparation to be used as medicine, to wit, "Smith's Invaluable Ointment for Cancers," without a paper cover wrapper and label provided by the Commissioners of Inland Revenue for denoting the duty charged on such box. There was a second information charging defendant with exposing for sale certain medicine liable to stamp duty without having taken out a licence. Mr. Wolfenden, supervisor of Inland Revenue, who prosecuted, said that they had in the borough of Birkenhead about fifty persons who had taken out licences and who duly stamped their medicines, and it was unfair to these persons that people like the defendant should carry on this business without contributing their quota to the revenue. Mr. Batten, an excise officer, proved the case, and stated that he had seen a printed advertisement in the window of defendant's house on June 21. He bought a box of the ointment, for which he paid 4d. The stamp duty on the box would have been 1½d. Mr. Wolfenden added that the Commissioners had offered if the defendant would take out a licence and pay a small fine of 10s. they would not proceed further in the matter, but the defendant had refused to do this, and therefore they had to bring the case into court. Defendant said that he had obtained the recipe from his father, who had sold the ointment for a number of years without interference. A penalty of 20s. and costs was imposed in the first case, and the defendant was ordered to pay costs of the other summons.

THE HALF-PRICED CLOSED-LETTER COMPANY (LIMITED) AND THEIR AGENT.

IN the City of London Court, before Mr. Commissioner Kerr, on September 7, the case of the Half-priced Closed-letter Company (Limited), of 34 Acton Vale, v. John Brothers, of Ashford, Kent, chemist, was heard. Mr. Jones appeared for the plaintiff company, and Mr. C. H. Smith for defendant.

The plaintiffs' claim was for 9l. for balance of calls upon one 10l. debenture share or bond in the plaintiff company, and 5s. interest on same. The defendant pleaded that the plaintiffs obtained his signature to the agreement appointing him an agent and taking a share in the company by misrepresentation or suppression of facts as to the necessity for affixing the Inland Revenue enamelled-iron plate on his shop premises and the compulsory sale of postage-stamps, and counterclaimed for the return of the 1l. deposit paid by him and interest thereon, and the sum of 20l. for damages. The facts of the case are as follows:—The plaintiff company was formed to supply patent safety envelopes with a penny postage-stamp and a sheet of letter or memorandum paper for one halfpenny each, and this was done by means of

advertisements attached to the envelope and sheet of paper. On August 30, 1890, the plaintiffs wrote to the defendant asking whether he would like to apply for an agency in the company. The defendant replied asking for particulars, and as to whether it would be necessary for him to affix one of the enamelled-iron plates usually seen outside licensed stamp-dealers, and saying that he objected to this. To this the plaintiffs replied, and in their letter said: "Our transparency is all that you need put in your window; it is very neatly done," &c. The defendant then signed a form sent him by the plaintiffs applying for the agency for the Ashford district, and subscribing for one 10l. debenture, and sending 1l. as deposit, it being a rule of the company that all agents should take at least one share or debenture in the company. Subsequently, when the defendant was going to get the licence from the Inland Revenue authorities in April, 1891, for the sale of the envelopes, &c., he found that the licence stated that the Inland Revenue enamelled-iron plate must be exhibited, and that he was bound to sell postage-stamps at all hours when his shop was open for business. To this the defendant demurred, and declined to take the licence or to have anything further to do with the matter.

The plaintiffs contended that the Inland Revenue enamelled-iron plate need not be exhibited outside the premises, but could be put up anywhere inside the premises. The defendant contended that exhibiting the enamelled-iron plate meant putting it up in a conspicuous place for the public to see.

The Judge held that the defendant's contention was correct, and that, therefore, he was not bound by the agreement, and gave judgment for the defendant on claim, and for 1l. on counterclaim, and costs.

Defendant agreed to stay execution for plaintiffs to submit a case to be agreed on by the defendant to the Commissioners of Inland Revenue as to the meaning of the word "exhibit" in the Post-office licence, and then to be at liberty to apply for a new trial.

NOT RESPONSIBLE FOR THE PRINTER.

IN August last, at the Morpeth County Court, a Mr. Hancock, of Amble, was sued, under the Apothecaries Act, for alleged infringement of that statute. He had visited a child as the assistant to a local doctor, but the plaintiffs failed to prove that he had supplied any medicine, and the Judge found for the defendant, with costs on the higher scale.

At Alnwick Petty Sessions on September 3, Mr. Hancock was charged under the Medical Act with having falsely pretended to be a doctor of medicine, thereby implying that he was registered under the Act. It was stated that the prosecution was instituted by the Medical Defence Union, of Birmingham. The principal evidence produced was a bill announcing that a lecture was to be delivered on "Food and Drink" by "Dr." Hancock. The printer could not produce the manuscript of the bill, and it was alleged for the defence that the "Dr." had been substituted in the printing-office for the "Mr." which had been written. The summons was dismissed.

USING MARKED BOTTLES.

AT the Bradford Police Court on Wednesday, Mr. J. H. Mitchell, chemist, Manchester Road, Bradford, was summoned at the instance of Messrs. Newball & Mason, manufacturing chemists, Nottingham, for an offence under the Merchandise Marks Act of 1887. It was stated that on May 23 last the defendant had a number of bottles in his shop window, bearing his own label, but embossed on the glass with the words Mason's Herbal Extract. A bottle of the extract was purchased by a traveller, and this formed the ground of the present proceedings. Mr. Newell, on behalf of the defendant, submitted that his client had used a few of the plaintiff's by accident, but with no intention to defraud. Counsel for the plaintiffs quoted a decision by the Queen's Bench in a mineral-water bottle case that it was not necessary to prove intention to defraud. The stipendiary held that the defendant had contravened the statute, and inflicted a fine of 1l. and 2l. 4s. 8d. costs, or in default, 21 days' imprisonment.

WINDING-UP COMPANIES.

THE AUTOMATIC SCENT-FOUNTAIN COMPANY (LIMITED).

AN order for the winding-up of this company was made on August 11 last, and a summary of the accounts has just been issued. So far as the creditors are concerned, the gross liabilities amount to 7,235*l.* 15*s.* 5*d.*, of which 5,325*l.* 11*s.* 10*d.* is expected to rank. The assets are valued at 1,864*l.*, but these are covered by debenture bonds for 2,593*l.*, so that the estimated deficiency is 5,325*l.* 11*s.* 10*d.* In regard to contributories the deficiency is stated at 17,325*l.* 11*s.* 10*d.* The company, which was registered on April 26, 1889, was formed with a nominal capital of 20,000*l.* for the acquisition of the business and patent rights of the Automatic Scent-fountain Company. An account, prepared up to December 31, 1888, showed that the vendors had assets valued at 5,249*l.*, while the liabilities were about 4,121*l.* The vendors were to have 12,000*l.* fully-paid 1*l.* shares, and these, as a fact, were the only shares allotted by the company. Money to pay off liabilities accepted by the company was raised by debentures. The year's trading prior to the formation of the company resulted in a loss of 421*l.* The company lost 1,624*l.* in 1889, 1,990*l.* in 1890, and 1,035*l.* in 1891, and its failure is attributed to the heavy liabilities taken over, to the expensive type of automatic machine used, and to excessive rentals charged by the railway companies. The Official Receiver proposes to carry on the business temporarily as a going concern with a view to the disposal of the property.

THE SANITARY FOOD COMPANY.

MR. C. J. STEWART, the Official Receiver and Provisional Liquidator, has just issued a summary of the accounts filed under the proceedings for the winding-up of this company, which was formed in April, 1891, with a nominal capital of 50,000*l.*, to take over as a going concern the business of the Sanitary Food Company, carried on at Wandsworth by Mr. John Sturzenegger. The unsecured creditors rank for 8,375*l.* 0*s.* 11*d.*, the partly secured for 1,203*l.* 9*s.* 6*d.* (the value of the securities being 465*l.*), there are loans on debentures to the amount of 4,000*l.*, against which assets are held for 497*l.* 12*s.* 11*d.*, and the preferential claims amount to 181*l.* 1*s.* 11*d.* The total expected to rank for dividend is 12,796*l.* 19*s.* 5*d.* and the net assets are returned as *nil.* As regards contributories the accounts show a deficiency of 24,863*l.* 19*s.* 5*d.* The company only issued capital to the amount of 12,067*l.* They agreed to pay Mr. Sturzenegger 24,000*l.* for the business as a going concern, of which 12,000*l.* was in fully-paid shares. The balance was paid 8,000*l.* in the company's acceptances and 4,000*l.* in debentures. The failure of the company is attributed to insufficiency of working capital, it being stated that there was no falling-off in trade or complaint against the goods supplied. The deficiency account shows that the gross profit made from the business between the formation of the company and the date of the winding-up order (July 2 last) was 282*l.* 7*s.* 4*d.*, but whereas for the assets taken over by the company it was agreed to pay the vendor 24,000*l.*, those assets are now only valued at 5,463*l.* 9*s.* 8*d.*—a depreciation of 18,536*l.* 10*s.* 4*d.*

The first meetings of creditors and contributories were held on Wednesday before the Official Receiver. So far as the creditors were concerned, the meeting had to be adjourned to allow proofs to be put in proper order. The contributories carried a resolution in favour of the appointment of Mr. N. J. Whitcombe, 1 Gresham Buildings, Basinghall Street, E.C., as liquidator, and this will be duly reported to the Court.

DEED OF ARRANGEMENT.

Duncan, Alexander, 125 Moss Lane East, Moss Side, near Manchester surgeon. Trustee, Thomas B. Brooks, 12 North Street, Manchester (G.A.), with a committee of inspection. Dated, September 6; filed September 12. Unsecured liabilities, 1,297*l.*; estimated net assets 469*l.*; creditors fully secured, 210*l.* The following are scheduled as creditors:—

	£	s.	d.
Duncan, Mrs., Moss Side	80	0	0
Etchells, Solomon, Greenheys,	23	0	0

	£	s.	d.
Innes, Colonel, Torphins, N.B.	210	0	0
Jeans, Edward, Hulme	12	0	0
Ligertwood, Dr., Aberdeen	700	0	0
Manchester and Liverpool District Bank, Manchester	17	0	0
McConnochie, Miss, Aberdeen	45	0	0
McDonald, Mrs., Aberdeen	55	0	0
Monatt, George, Whalley Range	55	0	0
North of Scotland Bank, Aberdeen	180	0	0
Richardson & Co., Leicester	12	0	0
Taylor, James, Aberdeen	25	0	0
Woolley & Co., Manchester	50	0	0
Yardley, Thomas, Manchester	10	0	0

PRIVATE STUDY.

THE following paper has been written by the head of a pharmaceutical college, whose extensive experience with young men who expect to be "prepared for examination" and who have not had the necessary preliminary training, has forced these suggestions.

In all branches of study there is a great deal that a student can learn for himself, if he will, and a great deal that he must go to a teacher to learn; and the wise student will make the former division of his work as large as possible, as there is more pleasure in doing it, it is more valuable and permanent, and is done more cheaply.

This is especially the case with pharmaceutical students, and it is a fact well-known to all who are behind the scenes, and to many in front of them—that the greater number of chemists' apprentices and junior assistants do very little scientific work indeed. This is for several reasons, some of which are worth considering before we proceed to discuss what these young men can do with the most valuable portion of their whole lifetime.

The first two excuses are, unfortunately, the commonest and are the most easily remedied. They are:—

1. "Have not yet passed the Preliminary." Then get it done, at any inconvenience, as soon as possible. It must be done, and the sooner the easier.

2. "Have not got any scientific books." Then buy some. If you are under twenty, and have not much spare cash, get them second-hand, and don't give more than one-fourth or one-third of full price for them. That is all they are worth; but they are worth that. In any other case buy new ones. You must have them; and if you cannot get them without self-denial so much the better—practise it, and get them.

The third excuse has a good deal of weight, but still is only an excuse, and can be overcome. It is—

"Have no time for study." Well, when one is in business from 8 A.M. to 8 or 9 P.M., and "on duty" till 10 P.M. on two or three nights a week, and occasional Sundays, it does seem difficult to find time for study; and it would be impossible to do so if we did not study our work—if the subjects of our study were not the subjects of our every-day life. And that is the key to the whole thing.

Take a scientific interest in everything you do, then you will unconsciously become a scientist.

Science is but another name for classified and applied knowledge. Therefore, know what you can about everything you handle. Don't try to do it all at once, and don't say, "There is no need to know this." All knowledge is power; get to know all you can about everything with which you come in contact, as you cannot tell what portions of this knowledge will be of use in subsequent years, and you may be practically certain that most of it will, and the more varied your knowledge the more use it will be to you.

Having overcome these obstacles, the next thing is what to study, and how. Use your books at first chiefly for reference; see what they have to tell you about the substances you are among; keep a note-book in your pocket, and don't try to keep it too clean; enter into it as shortly as possible what your books say about such things as mag. sulph., rad. gentian, pil. rhei co., and don't be satisfied till you know something about the common things about you. By such simple means as this you will obtain a practical

knowledge of chemistry, materia medica, and pharmacy. Then, as your facts accumulate, you can begin to classify them by transferring the entries from your daily note-book into others reserved for special subjects.

But we have not yet done with our counter-work, and dusting is an exceedingly important part of it to all in the shop. Let all juniors remember that it is an essential part of their duty to their employers and to themselves to keep the shop in first-rate order, and that the time spent over the bottles should be employed in recognition practice by making a point of noticing the general characters of their contents, as also should be utilised the general routine of counter-work in all its endless varieties. Force yourself to observe the characters of every article you sell, or dispense, or use, and take the first opportunity of jotting down any information you can obtain about it from your various books.

The time for doing this is waste time—the “fragments that remain,” which the wise gather up and use. Most employers object, and rightly, to their employes making a parade of their books during business hours; but that does not mean that one is never to look at a book in business hours, and I do not think that any employer would object to such a use of books as that I have suggested.

All this is not to be done without a certain amount of self-compulsion and of self-denial, but let every youth fully make up his mind while he is young that he cannot have his life twice over, and that his time, like his life, is not his own, but is lent to him to use to the best advantage; and let him remember “it has often been said that it is a fearful thing to die; but bethink you all, and bethink you well, it is a fearful thing to live.” Another point that will, I trust, influence the juniors who read this paper is the fact that a taste for work such as that I have described, once developed, generally lasts a lifetime, and is an unfailing resource for occupying time which would otherwise drag, and in proportion as it is cultivated other higher faculties of the intellect are developed with it.

Now comes the application of this knowledge to the purposes of “studying for the Minor,” and then “for the Major.” This is simply the careful reading of the books adopted and the application of the knowledge so acquired, as it will be found that pharmacy, materia medica, and chemistry have become very fully studied, and all that is needed now is to consider the laws of chemical action, the details of manufacturing processes in pharmacy, and the laws of physics and their applications.

It will be noticed that I have not said anything yet about Latin, practical chemistry, botany, and microscopy. Latin is a troublesome subject to keep up in business; one gets so used to employing abbreviated Latin for the drugs and preparations, and the directions of prescriptions, that one has to make an effort to keep up the grammar of our early days.

Practical chemistry.—Most masters have had an apprentice who went in for experimental work, and remember what a nuisance he was until a way was discovered by which his energies could be utilised, and that was by employing him in testing the chemicals as they came in, and checking their quality by the P.B. tests. He did discover a “mare’s nest” once in a while, but he really did become very useful, and often picked out adulterations that would have done a lot of harm if they had got into a customer’s hands, until at length, in the last year or two of his “time,” he was supplied with a 10s. set of volumetric apparatus and a 1s. set of French weights, and he prepared a set of standard solutions which he labelled extensively and were the pride of his heart, and with which he estimated the “sodæ bicarb.” or “acid. hydrocyanic. dil.” This is not a fancy sketch, but I can give you the names of more than one or two men who have done it.

Botany is a subject to which the objections given in the first part of my paper are especially applied; it is best studied by “proceeding from the known to the unknown.” Find out in your books what you can about common things—potato, cabbage, rose, daisy, fuchsia, geranium, primrose, daffodil; put down in your note-book any information you can gather about leaves, stems, flowers—their colours, structure, and uses. Then, again, apples, plums, strawberries, gooseberries taste ever so much better if you know something about them and their structure. If you do not believe

me, try it. Get a pound of apples, dissect one of them by the aid of your books, fill a page of your note-book with a note on it, then see if the rest do not taste better than those you ate when you were in the darkness of ignorance. So also with flowers; while their history and structure are unknown more than half their beauties are unknown likewise. Do not buy an expensive microscope at first; get a pocket-lens for about 1s. 6d., and a penknife, work well with them before you go in for cells, and when you do get a microscope always work with the lower powers, and use the higher ones only when you have seen all you can with the others.

Here ends my paper. I know that this number of THE CHEMIST AND DRUGGIST will be read by many first and second year apprentices, as well as by many older. Let me beg of those who are young to utilise fully the precious days when everything is easy and all difficulties seem but made to be overcome; let me encourage the older ones to resolve to waste no more time, assuring them that the energy and firm resolve of manhood can do very much in aid of their resolution to do the rest of their life’s work well.

CHOLERA PREVENTION.

ADVICE BY THE COLLEGE OF PHYSICIANS.

AT the request of the Local Government Board, the Royal College of Physicians has drawn up instructions in case of diarrhoea, with a view to the prevention of its development into cholera. The Local Government Board state that in the event of the extension of cholera into England and Wales they will issue regulations requiring local sanitary boards to provide and dispense, without charge, “medicines and medical appliances” for the sick. The College of Physicians describes in considerable detail the sanitary precautions that ought to be taken, as well as the care which should be exercised in dietary, and in regard to medicines gives the following advice:—

“Avoid the use of strong aperients, and especially of strong saline aperients. If there is obstinate constipation, take at bedtime either a teaspoonful of Gregory’s powder or one or two teaspoonfuls of castor oil.

“If looseness of the bowels should set in, send immediately for medical assistance, but if not immediately available, take as soon as possible, in capsules or in hot milk, or in any other manner preferred, two teaspoonfuls of castor oil. If, when the action of the oil may be fairly supposed to have ceased, the looseness increases to a watery diarrhoea, let the hips be well raised, and carefully inject into the bowels a quart or more of hot water containing 2 drachms of benzoate of soda or 30 grains of tannin. Furthermore, if there be much pain in the bowels, 15 to 30 drops of laudanum may be added to the injection. The injection should be retained as long as it is comfortable to the patient, and it may be repeated once or twice daily during the continuance of the diarrhoea, and until medical assistance has been procured.

“After the administration of the injection, if one has been found necessary, the following mixture should be taken at intervals of from three to four hours, according to the urgency of the symptoms:—

Mist. cretæ aromat.	..	..	..	1 oz.
Tinct. camph. comp.	..	..	..	$\frac{1}{2}$ drachm
Tinct. chloroform. comp.	..	..	..	20 drops
Sp. ammon. arom.	..	..	..	20 drops
Cerit et bismuthi salicyl.	..	..	..	5 grains
Ess. menthæ pip.	..	..	..	10 drops

Fiat dos 1.

“Should this mixture disagree, or in twenty-four hours fail to give relief, the mixture following should be substituted, and taken every three or four hours:—

Acid. sulph. arom.	..	..	..	15 drops
Tinct. camph. comp.	..	..	..	$\frac{1}{2}$ drachm
Tinct. chloroform. comp.	..	..	..	20 drops
Tinct. coto.	..	..	..	20 drops
Syrupi aurant. flor.	..	..	..	1 drachm
Aq. menthæ pip. ad	..	..	..	1 oz.

Fiat dos 1.”

CHOLERA—ON THE FRENCH FRONTIER—THE PASTEUR PROPHYLACTIC.

THE epidemic of *cholera nostras*, which has existed in a mild form in the outlying quarters of Paris and the suburbs for some time past, is still on the wane, the approach of autumn facilitating its departure. In such a country as France it requires a certain amount of ingenuity to get at the bottom of facts, such a simple thing as "truth" being quite a secondary consideration in official reports. There is no doubt, however, that precautions of a most exceptional nature have been taken. The elaborate system of a medical examination at the sanitary posts all along the Eastern frontier will probably serve to keep Asiatic cholera, in a severe form, out of France. Our correspondent had a "sanitary" experience at the frontier-station of Feignies in returning from Brussels a few days ago. In leaving the train, and before entering the Custom House, the passengers had to defile singly before, first, an elaborately uniformed "gendarme," and, secondly, before a young man about 30, who, on inquiry, stated himself to be the examining physician. He was very pleasant, however, could sport a few words of English, and wore gloves. But such gloves! They were abominably dirty, and the fingers appeared through the ends. The *C. & D.* would fain have asked if they had been disinfected, but courtesy forbade. After having assured himself that a passenger was in a sufficiently good state of health to crack a joke, the medical man passed him on to a cheerful individual wearing a gold-braided hat. This official had two clerks working under his orders. One of these took down the passenger's name and address, while the other filled up the same details on card, termed "Sanitary Passport." This document sets forth that the traveller, on arriving at his destination, must declare himself to the nearest mayor, under penalty of from three to fifteen days' imprisonment and a fine of 5*fr.* to 50*fr.* Then came the question of having soiled linen disinfected, a process which occupied nearly an hour; but, by paying the carriage, it had been thoughtfully arranged to send this by parcel post to the passenger. The whole business was performed very expeditiously, and after a delay of half an hour the train continued its journey. All the employés were exceedingly good-natured, and seemed to vie with each other in facetiousness.

THE PASTEUR CHOLERA PROPHYLACTIC.

The Paris *New York Herald* is sending a man to Hamburg to write up the cholera there. Before starting he got a column of copy from M. Pasteur about his cholera vaccination. Replying to the correspondent M. Pasteur is reported to have said, "I would certainly advise you to be vaccinated if you are going to a cholera centre. I have no doubt in my mind as to the effectiveness of this vaccination, but at the same time we have not had sufficient experience to judge as to how effective a subcutaneous vaccination will be against a severe attack of cholera which has poisoned the bowels through and through. If we had cholera every year we would be in a better position to judge of the effects, as we could then make this vaccination general, and compare the mortality."

"Have you vaccinated many persons for cholera so far?"

"Only about twenty as yet."

"And have there been any ill effects?"

"No. Dr. Haffkine, full of confidence in his vaccine, was the first to try it. There are other cases, principally of doctors."

"Is the vaccination made in the arm, as it was by Dr. Ferran?"

"No. The vaccine is introduced on the lower part of the abdomen."

"Is once sufficient?"

"No, the method is to vaccinate twice: the first time with the attenuated preparation, then the second with stronger virus."

"Is the vaccine a cholera bacillus?"

"Yes, it is the comma bacillus."

"Is the second and stronger vaccination painful?"

NOT PAINFUL.

"No, it is even less painful than the first. But, anyhow, the pain is very slight; a small swelling, that is all."

"And how long do you consider the vaccine guarantees against an attack of cholera?"

"Well, at present, we consider it to be good against cholera for about six months. There should be an interval of two or three days between the two vaccinations. The vaccine itself is a modified form of that which was brought to notice by Dr. Koch."

The efficiency of the Haffkine cholera prophylactic, M. Pasteur said, had been most thoroughly proved upon animals, but up to the present moment it had only been tried on a very limited number of human beings. They were vaccinating a hundred dog-bitten patients a day, but so far there were but a score who had submitted to the cholera vaccination.

He admitted that the English anti-vaccination societies were very much against him, but, on the other hand, he looked upon them as mere infatuated individuals, who scarcely knew what they were talking about.

M. Pasteur was asked what he thought was the best preventive for the Parisians. He said cleanliness and absence of fear were the best antidotes, and above all great care that drinking-water should always be boiled.

"But why not bottled waters?" he was asked.

At this M. Pasteur assumed a sceptical air and replied, "Well, some of them are all right, but a whole lot of others are made of nothing but pure Seine water, the nature of which is very well known."

Then he sat down at his table and wrote as follows:—

M. HAFKINE, à l'Institut Pasteur.

M. le Correspondant du *New York Herald* demande incessamment à être vacciné contre le choléra, et commencer tout de suite car il est envoyé à Hambourg.

(Signed) L. PASTEUR.

Within a few days, says the journal, our readers will be able to know the details. If the issue is fatal it will not be concealed, as another member of the staff will be ready to take up the thread where the *vacciné* ceases to be able to write up his symptoms. But if it is successful there will be nothing to prove the success of the experiment better than a visit to the nearest hotbed of cholera.

The representative of the *New York Herald* who has undertaken to "do Hamburg" is a Mr. Stanhope, an Englishman, formerly a clerk in the West-end branch of the Bank of England. In an interview with our correspondent in Paris on Thursday, just before starting for Hamburg, he said he had experienced no after-effects from the Pasteurian inoculations. He was in excellent health. He will seek to obtain employment in one of the Hamburg hospitals, either in the nursing or pharmacy departments.

Trade Notes.

AMONGST the new tabloids which Messrs. Burroughs, Wellcome & Co. have added to their list are ichthyol and resorcin. The ichthyol tabloids contain $2\frac{1}{3}$ grains each of sodium ichthyolate, and they are elegantly sugar-coated; the resorcin tabloids (3 grains) are without this coating, as they are intended for making hypodermic and other solutions, as well as for immediate internal administration. The specific purposes for which the drugs are used are in each case indicated on the labels.

NON-CUTTING ARRANGEMENTS.—Mr. Charles Bromley, of Liverpool, goes beyond most of the other makers of proprietary medicines who seek the aid of chemists, inasmuch as he offers to print their own advertisements for those of them who will sign his non-cutting agreement and stock his gout and rheumatic pills. His advertisement is worth attention.

In another advertisement published this week, Mr. Geddes, of the Charles A. Vogeler Company, tells very straightly his experience so far as he has yet gone in his attempt to establish a non-cutting arrangement for the Vogeler Curative Compound. He is giving the experiment a fair chance for twelve months, but it is evident from his advertisement that he is losing hope of its success. We gather from what he there says that the biggest buyers of proprietary medicines are, as a rule, those who do not want a price arrangement.



Notice to Retail Buyers:—It should be remembered that the quotations in the section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

[42 CANNON STREET, E.C., September 15.

The London Markets.

The New York Market.

Our last mail advices from America are dated September 7 (see also our correspondent's subsequent cablegram), and report that the cholera scare, then just commencing to set in in the States, is seriously affecting the prices of disinfectants. *Opium* and *Morphia* are firm, but unaltered; the former at \$1.70 and the latter at \$1.35 to \$1.45, in bulk. The demand for *Quinine* has been excellent, and over 100,000 oz. are said to have been purchased for consuming purposes during the first week of September. German, in bulk, is quoted at 18½c. to 19c. *Castor oil* is dearer, at 11½c. to 12c., and *Ergot* has advanced to 60c. to 65c. for Spanish, and 55c. for German. *Lycopodium* is being bought up by speculators, and the quotation has risen to 42½c. for fine quality. The first-hand supply of *Para* and *Angostura Copaiba* has been cleared. There has been a decided attempt to "bear" oil of *Pennyroyal*, which is now offering at \$1.50 to \$1.75, and the market is unsettled. The same applies to *Peppermint*. Mexican *Sarsaparilla* remains firm at 16c.; but there is an undercurrent pointing towards lower rates, and sales have been made, "to arrive," as low as 13c. per lb. The *Cotton-seed oil* market has been unsettled, and lower prices have ruled, but at the close prime yellow summer oil is again dearer, as the new crop of seed in the Southern States is likely to fall below last year's average. Sales have been made at 30½c. to 31c. for prime summer yellow.

Death of a German Quinine Manufacturer.

A report reached us to-day announcing the death of Mr. Ernst Boehringer, of the firm of O. F. Boehringer & Sons, of Mannheim, quinine and chemical manufacturers. Mr. Boehringer, who was in his thirty-third year, succeeded his father as a partner in the firm about seven years ago, and was subsequently joined by Dr. Engelhorn, who is now the only surviving partner. The mercantile part of the business was under Mr. Boehringer's direct control, while his partner managed the manufacturing part of the works. Mr. Boehringer, who was a man of robust appearance, was very popular among all those who came in contact with him, and was well known to a good many persons connected with the drug trade in London. He died at Chiavenna, in Italy, where he was on a holiday, after an illness of only a few days.

The Perfumery Drawback.

The Board of Customs have declined to accede to the request of the Perfumery Section of the London Chamber of Commerce to extend the hours of labour in the warehouses where perfumery is manufactured in bond to ten daily (8 A.M. to 6 P.M.). The Customs have improved the occasion by giving a hint to the bonded perfumers, in whose interest the application was made, that they must not expect any additional indulgences. "I am to point out," runs the last paragraph in the letter written by Mr. Prouse on behalf of

the Board, "that concurrently with the recent Treasury decision favourable to the continuance of existing privileges in the matter of the manufacture of perfumery in bond to those who are desirous of exercising them, their Lordships sanctioned an arrangement whereby those who elect to manufacture out of bond may, on exporting their products, get a drawback of the duty on spirit used, and that it is, of course, open to those firms in whose interests the present application is made to accept that alternative course, and thus to avoid Customs supervision with attendant restrictions in the matter of hours."

ACID (CITRIC).—Again firmer. There is very little offering in second-hand at present, and 1s. 5½d. per lb., which is quoted by one of the English makers, is the rock-bottom price. Another manufacturer asks 1s. 6d. per lb. for B.P. acid, but does not care much to sell at that price. Juice is also dearer, at 20½. to 20½. 10s., f.o.b. Messina.

ACONITE.—Japanese aconite-root is said to be selling privately at 22s. per cwt. At auction to-day 20s. was refused for 40 bags.

ALOES.—Sixty-nine packages Cape aloes have arrived from Algoa Bay per *Pretoria* this week. There is not much demand for *Socotrine* aloes, but fine *Zanzibar* in skins is scarce and would bring full prices. A parcel of 7 cases so-called *Socotrine* aloes, mostly consisting of leaves, mixed with some black juice, sold without reserve at 4s. to 5s., a little better quality at 21s. per cwt. At to-day's sales *Cape* aloes was steady, and of 44 packages offered 28 sold at 22s. for fine bright hard, 21s. for good, and 18s. to 18s. 6d. per cwt. for soft and drossy mixed. *Curaçao* was all bought in; it did not include anything of good quality. There were 44 packages *Socotrine* aloes of good but soft red brown colour and fair flavour. For these an offer of 95s. was refused; the owner would sell, he said, at 100s. per cwt.

ANISE.—Twenty-eight bags from Bombay were bought in at 19s. per cwt. to-day.

ANNATTO remains cheap. For 33 packages good bright seeds from Ceylon only 2d. per lb. was offered to-day. The parcel was bought in at 3d. per lb. Another lot sold at 2d. to 2½d. per lb. for fine. Of another parcel of 11 bags 5 sold at 2½d. per lb. for fairly bright seed from Madras.

BARROBA is quoted a little higher, about 1s. 2d. to 1s. 2½d. per lb. being now asked for fair natural.

ARECA-NUTS.—For a parcel of 40 bags from Colombo 28s. per cwt. is now asked.

ARSENIC has advanced to 12s. 9d. per cwt. for best white powder.

BALSAM (CANADA).—One barrel sold to-day at 10d. per lb.—a very low figure.

BALSAM COPAIBA.—There was a new arrival of 108 42-lb. tins thick clouded brown to dull grey balsam from Bahia at to-day's auctions, part of which sold at 1s. 4d. per lb.

BLEACHING-POWDER is not quite so scarce as last week, and it is possible to-day to buy in London at 10½. On the Tyne and in Liverpool the price is 9½. 5s. f.o.b.

BUCHU is scarce, and sells well. At auction to-day 2 bales dull round leaves sold at 4½d. per lb.

CALUMBA.—In fairly good supply. For good clean yellow and brown mixed sorts 22s. 6d. per cwt. was refused to-day.

CANARY-SEED.—Rather easier. A few odd parcels of *Turkish* seed might probably be picked up at 75s. to-day.

CANNABIS INDICA.—Plenty is offering at present, and prices have an easier tendency. At auction to-day 10 robins fair green, slightly stalky, sold at 3d. per lb.

CANTHARIDES.—Russian flies of this year's crop are being offered now at 2s. 9½d. per lb., c.i.f. terms, for natural, and 3s. 1½d. per lb., c.i.f. terms, for sifted flies.

CARDAMOMS.—Of a good supply of 332 packages about one-half sold at rather irregular prices, but mostly about 1d. below valuations. *Ceylon-Mysore*: Medium to bold good pale brought from 3s. to 3s. 6d.; medium, 2s. 8d.; small long pale, 1s. 8d.; long and round ditto mixed, 1s. 9d. to 1s. 10d.; fair small to medium and brownish, 1s. 1d. to 1s. 4d.; ordinary brown split and stalky, from 1s. to 10d. per lb.

Ceylon-Malabar: Small to medium fair yellow brought 1s. 5d.; small round brown, 1s. 3d. per lb. For ordinary pale Seed from 1s. 3d. to 1s. 4d., and for good brown 1s. 5d. was paid.

CASCARA SAGRADA.—New York quotes 30s. c.i.f. for good quality, but it is possible to buy here at 25s. per cwt. At auction that price was asked for 67 bales, for which only 22s. was bid, however. For another parcel 20s. per cwt. was declined.

CASCARILLA.—There was a parcel of 24 bales small and thin to partly silvery bark at to-day's auctions, of which the best bale sold at 27s. per cwt.

CEVADILLA.—Very firmly held at 220s. per cwt, c.i.f. terms.

CHAMOMILES.—Belgian flowers are rather firmer again. Sales have been made this week at 66s. 6d. per cwt. for superior pale new flowers, which recently sold at 63s. 6d. per cwt.; fair to good pale are held at 57s. 6d. to 62s. 6d. per cwt.; "current quality" at 50s. to 51s. per cwt.

CHLORATE OF POTASH.—It is reported to-day that there is quite a run upon the article in Liverpool, and that it is no longer possible to buy there at 7½d. per lb. on the spot; that price would still be taken by some London sellers, and for delivery during next month the same quotation is made.

CINCHONA.—A parcel of 23 bales Guayaquil bark was mostly bought in; only a few bales rather broken quill sold at 9½d. per lb. For 5 bales dull split damaged *Cartagena* 5d. per lb. was accepted. Two cases damaged *Jamaica* bark, also included in the sale, were withdrawn. The shipments from Ceylon between January 1 and August 15 have been:—In 1892, 3,972,380 lbs.; in 1891, 3,306,191 lbs.; in 1890, 4,893,437 lbs.; in 1889, 5,590,380 lbs.

COCCULUS INDICUS.—Neglected and easier to sell. The nominal price at present is 8s. to 8s. 6d. per cwt.

COLOCYNTH.—A very fine bold pale parcel of *Turkey* apple was shown and bought in at 1s. 4d. per lb. nominally. *Spanish* was also bought in at 9d. per lb. There is no demand for either.

CORIANDER.—At auction on Wednesday 52 bags Dutch coriander-seed sold at 12s. 9d. to 13s. per cwt.

COTO BARK.—An importer reports that he has sold a parcel of sound and damaged mixed bark at an average price of 3s. per lb. recently. For good sound bark he now requires 3s. 6d. per lb. A parcel of 12 bales (245 lbs. each) very bold, split bark, rather dark colour, all damaged, imported *via* Hamburg, was all bought in at 3s. 6d. per lb. There were no offers. This is said to be genuine coto. Spurious (*para-coto*) bark sold some short time ago at 2d. to 3d. per lb., but now much higher prices are asked by those who control the supply. There has been a large business in coto bark lately on account of its recommendation as a cholera remedy.

CREAM OF TARTAR still remains very neglected, at 83s. 6d. per cwt. for best white French crystals, and 85s. per cwt. for powder.

CUBEBS.—Thirteen 1-cwt. bags from Singapore, bold blueish-grey berries with hardly any stalk, sold at from 6l. 7s. 6d. down to 6l. per cwt. Five bags very small and shrivelled berries, largely mixed with stalk, imported from Batavia, sold at 100s. per cwt. to-day. This is a fairly good price, considering that this quality is not liked by our druggists.

CUMIN.—Best Malta *Cumin*-seed is offering at 38s. 6d. per cwt. (new crop), being thus rather lower in price.

CUTTLE-FISH.—Quiet. A bid of 2¾d. per lb. was refused for a parcel of small to bold fair pale East Indian to-day. The lot may be had at 3d. per lb.

DRAGON'S BLOOD.—For 1 case of good bright red saucers a bid of 9l. 5s. was refused.

ELATERIUM.—Fine pale and greenish Malta is selling slowly at 3s. 3d. per oz., dark ditto at 2s. 9d. per oz.

ERGOT OF RYE.—At auction to-day none was sold, 2s. 2d. being refused for rather dusty old *German*. We hear that

there has been a deal more inquiry, and from the Continent much higher prices, with large business transactions, are reported, and for new Spanish 2s. 9d. per lb. is asked; old is quoted on the spot here at 2s. 6d., and Belgian at 2s. 3d. to 2s. 4d. per lb. An official report on the failure of the Russian harvest in 1891, issued this evening, contains some interesting figures with regard to the deficiency of the harvest of rye, a cereal which in ordinary circumstances is the principal crop of central Russia. Taking the average yield during the years 1883-87 at 100, the harvest in one of the sixteen central Russian Governments last year was 75, in three others from 64 to 67, in one 58, in three from 50 to 55, in two from 40 to 45, in one each respectively 34, 29, 18, 13, and 3. In August of this year (1892) new-crop rye was selling in Russia at 80 copecks per pound, whereas the average price in normal years is about 60 copecks, and just before the new crop came in—in June, 1892—the quotations ranged from 90 to 113 copecks. From information supplied to the Russian Government at the end of June, the crops sown last winter have failed in four governments, they are bad in eight, average in eight, and above the average in seventeen. But the provinces where the crops are below par are by far the most important. The spring crops have been much damaged just before ripening.

GAMBOGE.—In fairly good supply, but firmly held, and the 7 packages which sold out of the 21 offered realised an advance of fully 5s., 11l. 12s. 6d. being paid for dull pipe partly cakey and broken, of fair fracture, and from 11l. 5s. to 11l. 10s. for rather more broken and ricey ditto. Fine gamboge was not sold.

GENTIAN.—French gentian-root is firmly held at 18s. 6d. per cwt, c.i.f. terms.

GUM AMMONIACUM is coming down in price rapidly, and to-day a decline of about 10s. on the last valuations was accepted; good small to bold detached drop partly cakey and mixed with seed, selling at 42s. 6d. per cwt.

GUM ARABIC.—The supply offered at to-day's auctions consisted to a great extent of genuine *Soudan* sorts, newly imported from Suez and Aden. For good quality, rather dusty, and mixed with glassy pale amber drops, 75s. is asked, but owners could not effect business at that price at the auctions. Of *white Mogadore* gum a few casks good pale, rather dusty, sold at 82s. 6d. per cwt.

GUM BENZOIN.—The stock of Sumatra is becoming small, and at to-day's auctions only about 35 cases were offered, of which one-third sold at an advance of 2s. 6d. to 5s. per cwt.—namely, Sumatra seconds old fracture small to bold almonds, fairly good packed corners, 6l.; small to medium almonds, thin red borders, 5l. 15s.; and rather false packed seconds with few almonds at 5l. 10s. to 5l. 12s. 6d. Of Palembang only a parcel of common thirds sold at 20s., and for Siam there is no demand at the limits at which it is held.

GUM ELEMI.—Fine white Manila gum of good flavour is being offered at 41s. per cwt, c.i.f. terms. At to-day's auctions 30 cases fair pale, slightly dirty mixed gum were bought in at 45s. per cwt.

GUM KINO.—Much dearer; 100s. was paid privately at the end of last week, and since then we hear that 110s. has had to be conceded. At to-day's auctions two packages of good bright East Indian were held for that price.

GUM MYRRH.—Sales have been made privately at 80s. to 82s. for fair pale *Aden* sorts. At to-day's sales very good prices were realised, and there was a pretty good demand. Good sorts sold at 80s., good picked at 6l. 7s. 6d., fair ditto at 5l. 15s., nice clean sittings at 67s. 6d. to 80s., and good pickings at 51s. per cwt.

GUM OPOPONAX.—Ten tins from Bushire, small damp brown coagulated grain mixed with chaff, and with a fermented syrup flavour, were bought in at 10s. per lb.

HONEY.—Jamaica honey is dull of sale and slightly easier; 27s. was the highest bid made for fine clean amber, while for rather dark ditto from 26s. down to 22s. was accepted. A parcel of Mexican honey in the comb was again offered; a much lower price would now be taken for this than was accepted some months ago, when 65s. was realised. No bids were made to-day even at 25s. per cwt.

INDIARUBBER is firmer, with buyers of fine Pará on the spot at 2s. 9d. per lb., but no sellers below 2s. 9½d. per lb. A large business in African rubber at very full rates is reported from Liverpool.

INDIGO.—The next quarterly sale will take place October 10. The declarations amount at present to 2,900 chests, of which it is estimated 1,300 are Bengal and Oade, 1,130 Kurpah, 30 Madras, 320 Bombay figs and Hoodie, and 120 Bimlipatam.

IPECACUANHA.—There has been a strong demand privately, and up to 7s. 3d. was the highest figure paid for good sound *Rio* root. At to-day's sales 61 packages of that description were offered. It was generally expected that they would realise higher prices, though the advance which they actually brought—namely, 1s. 1d. to 1s. 2d. on the last auction rates—was not foreseen. The buying was mostly for America, and not a single bale was left unsold; fair to slightly woody to good stout sound root realised from 7s. 6d. to 7s. 11d., first-class damages from 7s. 7d. to 7s. 11d., second-class damages 7s. 10d., and a lot damaged by grease from 7s. 6d. to 7s. 7d. per lb. *Carthagena* root, of which some very fine bales were offered, was about 6d. to 7d. per lb. dearer, fine bright plump very bold slightly damaged realising 6s. 2d., first-class damaged 5s. 6d., and very fine bold selected 8s. per lb. According to the *Oil, Paint and Drug Reporter* of September 7, some 400 serons of ipecacuanha are on the way to London.

KOLA.—There is a steady demand for well-dried *West Indian* kolas, and 5 bags of this character sold with good competition at 9½d. to 10d. per lb. for fine, and from 9d. to 4d. per lb. for good to dull, which is about 1d. per lb. dearer.

LIME-JUICE.—Large arrivals of lime-juice continue to come from the West Indies. The imports this week amount to 255 packages, mostly from Dominica, and prices, as a consequence, are still tending lower. For good clear juice 1s. 1d. to 1s. 2d. per gallon is still asked; but at to-day's auctions 11 puncheons ordinary dark and dirty juice sold at 10d. to 10½d. per gallon, showing a considerable decline. About 133 puncheons were offered.

MANNA.—Twelve tins (altogether 1 cwt.) were offered to day, and sold with excellent competition at 4s. 6d. per lb., about 6d. above the valuation. This parcel was fine bold flake of last year's crop, but somewhat wormy. From Palermo the quotation comes to-day at 5s. 11d., f.o.b., for finest flake, and 2s. 11d., f.o.b., for broken flake.

NUX VOMICA.—A parcel of 102 bags small but good grey pale seed from Madras sold at 8s. 6d. for sound, and 8s. to 8s. 3d. per cwt. for damaged seed. Mail reports just to hand from Calcutta (dated August 23) state that the Madras crop has failed. The arrivals of seed on the Calcutta market are very small.

OIL (CASTOR).—Calcutta reports say that there is no fine pale medicinal oil offering in that market. The arrivals of seed for crushing are small, and a scarcity in the supplies is anticipated later on.

OIL (COD LIVER).—Norwegian oil realised an advance of about 1s. 6d. per 40-gallon barrel to-day, 25 barrels being sold "without reserve" at 57s. to 60s. each.

OIL (OLIVE) is dearer. In Liverpool a large business has been done in cargo oils at rising prices, and now there is very little to be had. The market closes strong at 34s. 6d. to 35s. for good *Syrian*, 35s. to 35s. 6d. for *Levantine*, 35s. 6d. to 36s. for *Candia* and *Smyrna* oils, 37s. to 37s. 6d. for *Spanish*, and 38s. to 40s. for *Neapolitan*. Stocks are much reduced.

OILS (ESSENTIAL).—*American peppermint* oil (HGH) is quoted at 12s. 3d. to arrive, or at 12s. 9d. on the spot, with sellers in both positions. *Lemon* is reported still higher in Italy, and it is said that the new season is likely to start with prices of about 7s. 6d. to 8s. for fair quality in Messina. Four cases fair *Cajuput* oil from Singapore were bought in to-day; holders say that they are selling privately at the rate of 2s. 6d. per bottle. Fifty cases, each of two 35-lb. tins, of Japanese *Camphor* oil, were bought in at 22s.—there was no bid at 19s., which was suggested. *Citronella* oil is quoted at 3s. 4d. per oz.; and for 4 cases *Cassia* oil an offer of 3s. 3d. per lb. was accepted.

OPIUM.—There has not been much business in *Turkey* kinds this week, but the market remains firm. Some old crop Tokat has been sold at 7s. 6d. per lb., and for Gueve (Constantinople pats) 8s. per lb. is now asked. In *Persian* opium, on the other hand, there has been a very extensive business, mostly for shipment to China, at rising prices; from 9s. 6d. to 9s. 9d. has been paid, and 10s. is now asked for anything of good quality.

OPIUM SALTS.—*Hydrochlorate of morphia* in powder may be had at 3s. 3d. per oz.; *Codeia* at 11s. 6d.

ORRIS.—We hear that up to the present the growers and dealers in Italy have not been able to come to terms yet, as the latter refuse to buy at the prices demanded. Several fairs have been held, at which orris was offered, but no business has resulted up to the present.

PERMANGANATE OF POTASH.—There are several dealers here now who have supplies available, and prices are coming down again. Sales have been made at 80s. to 82s. 6d. for small crystals and probably an offer of 77s. 6d. would not be refused to-day. The combination price remains unchanged, and the agents say that they are in a position to deliver now. The highest price paid for small crystals during the recent boom has been 87s. 6d. per cwt.

QUICKSILVER.—The market has been without much animation this week, and the quotations are 6l. 7s. 6d. from the importers, and 6l. 5s. 6d. from second-hand holders.

QUININE remains very quiet, and the market is, if anything, easier. There are second hand sellers on the spot at 9½d., but no buyers apparently above 9½d. per oz.

RHATANIA.—Stocks of *Payta Rhatania* are becoming small, and the demand keeps up pretty well. Natural root is quoted at 5½d.; fine quality at 6d. per lb. c.i.f. terms.

RHUBARB.—Nearly 200 cases were offered to-day, and in spite of the fact that one of the brokers announced that, according to cablegrams received from Shanghai, the whole of the crop has now been shipped, there was very little disposition to buy, and most of the transactions show a decline of about 1d. per lb. on the valuations. We hear that about 20 tons are at present afloat from China to London, and about 12 tons to the United States. The following prices were paid to-day:—*Shensi*, flat fair to rough coat, half pink and half grey fracture, rather loose, 1s. 4d. *Canton*, small to medium, rather grey fracture, round, 1s. 5d.; small ditto, fair coat, three-fourths pinky grey, one-fourth dark fracture, round, 1s. 3d.; medium to bold flat fair coat and fracture, 1s. 5d.; smaller ditto, 1s. 4d. per lb. *High-dried*, small and horny coat, 10d. to 10½d.; ditto, duller fracture, 9d. per lb.

SAFFRON.—Prices are reported higher from Spain to-day. "Current Superior" *Valencia* is still offered here at 26s. 6d. per lb., but on the Continent 27s. f.o.b., is asked for fair, extra fine is also said to be 2s. per lb. dearer. A *Valencia* correspondent writes that the sales of saffron are very much larger this season than in 1891. "The stock," he continues, "is diminishing considerably, and, as the existing supplies are always a factor of importance in estimating the course of the market when the new crop comes in (in October), this fact should not be lost sight of by intending buyers. The coming crop promises to be a good one, and it is the general opinion here that prices will recede still further during the winter campaign. French and German firms have the intention to purchase largely this season, as they expect prices to fall so low that very little will be planted next year, and the crops from 1894 to 1896 will be small, with high prices." This view, we note, is quite opposed to that of our informants in London, as expressed in our market report of last week.

SARSAPARILLA.—Grey Jamaica root was quite 1d. dearer to-day, and sold with strong competition, 18 packages finding buyers at 1s. 6d. for sound, and 1s. 3d. to 1s. 4d. for damages. For *Crown Honduras* a bid of 1s. 2d. is to be submitted.

SENEGA.—There has been a very considerable rise this week, and from 1s. 11d. to 2s. per lb. has been paid for middling to fair quality, owners now asking 2s. 6d. per lb. The advance is caused by cablegrams from America, either declining altogether to quote or asking extreme prices. This

is what a large New York export firm state in a report dated end of August:—"From what we can learn, the crop of Minnesota root this year will be of better quality than the last, but the Manitoba crop will show no improvement, and besides will be very small. It appears, the low prices of the last few years have discouraged digging. We have done no business in senega this year as yet, for we have been unable to arrive at a satisfactory arrangement with the North-western dealers as to mode of payment. Last year, when we bought prime quality, we could not ship it on arrival on account of its poor quality, and were obliged to secure supplies elsewhere, and fill our orders at a considerable loss. This year we refuse to pay for the root until we see and examine it, and have in consequence come to a deadlock for the present. We hope soon to be in a position to book orders." Another American firm give no quotations for senega at all at present, and it therefore appears that the advance is owing rather to a quarrel between the New York buyers and the root-gatherers than to the actual absence of crop.

SENEGA.—About 200 packages *Tinnerelly* of the new crop were offered to-day and sold mostly for export with excellent competition at extreme prices, the valuations being nearly doubled in some cases. Medium to good bold green slightly stalky leaves realised from 5½d. to 7½d., but the bulk was sold at from 5d. to 3d. for small to medium rather dull, and at 2½d. down to 1½d. for ordinary to very common black. *Pods* were cheaper in price, 41 packages selling on the basis of 1½d. per lb. for sound. The new crop is now beginning to arrive. By the *Ganges* we received 266 bales from Bombay this week.

SHELLAC.—At the auctions the heavy supply of 1,127 cases was offered, of which very little sold, the tone being very dull, and prices generally 1s. per cwt. lower for orange, while garnet and button lacs showed no change. Good bright unworked *Second orange* brought 82s. to 83s.; fair ditto, 80s. to 81s.; fair reddish worked, 79s. to 80s. per cwt. *Garnet lac* sold at 74s. for blocky and 75s. for fair AC. Button lac sold at 88s. for dark blocky firsts, 87s. for good seconds, and 77s. for dark thirds. Since the auctions the market has been fairly active, and somewhat higher prices have been paid for parcels which were bought in at public sale.

SODA SALTS.—*Nitrate* is quoted at 9s. 1½d. to 9s. 3d. per cwt. for refined, and at 8s. 7½d. per cwt. for ordinary. Seventy-per-cent. *Caustic soda* on the spot is worth 10l. 7s. 6d. to 10l. 10s.; 60-per-cent., 9l. 2s. 6d. The Tyne and Liverpool prices are 10l. 5s. for 70-per-cent., and 11l. 10s. for 77-per-cent. (Tyne), all f.o.b. *Crystals* are held for 67s. 6d. by the London manufacturers, 67s. 6d. ex ship, 70s. landed, and 60s. f.o.b. Tyne.

STROPHANTHUS.—Twenty-three cases of this drug, which has not been offered at our drug-sales for a long time, were shown to-day. The seed was brown West African, very wormy, and was bought in at 1s. per lb. nominally.

TAMARINDS continue in a neglected state. Six barrels fair but broken *Nevis* (West Indian) sold at 8s. per cwt. Good *Barbadoes* are worth 10s. For a lot of 7 cases very seedy and pulpy *East Indian* tamarinds no bids were made.

TONQUIN BEANS.—A forced sale of six packages *Pará* to-day resulted in a decline of about 3d. to 4d. per lb., *Pará* fair black, rather small, bringing 1s. 8d. to 1s. 9d.; dull black, 1s. 4d.; rotten and broken from 4d. to 6d. Other holders, however, are not inclined to make concessions, and say the prices are likely to be higher; they refuse 2s. 3d. for medium-frosted *Pará* to-day.

TURMERIC.—Slow of sale. At Tuesday's auctions 345 bags were offered, and all bought in at 17s. per cwt. for mixed bulb and finger *China*; 25s. for fair lean *Cochin* finger; and 8s. 9d. for bright split *Cochin* bulbs. *Madras* remains steady; 10 bags good bright finger offered to-day sold at 32s. per cwt.

VALERIAN-ROOT.—New Belgian root, bold stout pale brown, is offering for immediate shipment at 42s. per cwt., and for later delivery at 35s. to 38s. per cwt. The quality of the new crop is said to be excellent. The thin and dark *French* root may be had at 28s. per cwt. for prompt shipment.

THE LIVERPOOL MARKET.

ANISE (RUSSIAN).—The cholera has affected *Russian* anise in common with other Russian produce, and importers are now asking 20s. per cwt.

CANARY-SEED.—Holders of *Spanish* and *Turkish* are not so firm, and 75s. is mentioned by some as value, while others still hold for 80s.

COCA-LEAVES.—Twenty-two bales fine greenish-brown *Curco* have arrived, and will be offered at auction.

FENUGREEK-SEED.—The market has been cleared of ordinary at 8s. 6d. to 8s. 9d.; and now second-hand holders ask 10s.

GUM ACACIA.—The *Soudan* sorts continue to sell steadily, and sales this week have been made at 75s. to 80s. for yellowish to fair white.

GUM SANDARACH.—Sales of fine at 87s. 6d.; but now owners say they must ask more money, as advices from Mogadore speak of a failure of the crop.

IPECACUANHA.—A further arrival of 11 bags *Carthagena*, good sound root, has found ready buyers at 5s. 6d. per lb.

OIL (CASTOR) is in a decidedly firmer position. The demand is steady, and arrivals have fallen off. *Calcutta* good seconds are now 27½d.; first-pressure *French*, 28½d. per lb.

QUILLARIA.—Sales continue to be made steadily at 16l. for fair thin bark in quantity.

WAX (BEES').—Seven bags half-bleached *Chilian* sold, 7l. 15s. being paid for part.

THE AMSTERDAM MARKET.

AMSTERDAM, September 9.

THE cinchona bark auctions to be held in Amsterdam on September 29 will consist of 459 cases and 5,108 bales, about 445 tons, divided as follows: From Government plantations, 63 cases and 502 bales, about 47 tons; from private plantations, 396 cases and 4,606 bales, about 393 tons. This quantity contains, of *druggists' bark*: *Succirubra* quills, 174 cases; broken quills and chips, 176 bales, 109 cases; root, 82 bales; *Calisaya* quills, 112 cases; broken quills and chips, 36 bales, 32 cases; root, 24 bales. *Lancifolia* quills, 17 cases; broken quills and chips, 15 cases. *Manufacturing bark*: *Ledgeriana* broken quills and chips, 3,423 bales; root, 840 bales. *Officialis* broken quills and chips, 45 bales. *Hybrid*, broken quills and chips, 448 bales; root, 29 bales. The manufacturing bark contains about 17½ tons sulphate of quinine, or 4.42 per cent. on the average. About 1 ton contains 1.2 per cent.; 62 tons contains 2.3 per cent.; 121 tons, 3.4 per cent.; 109½ tons, 4.5 per cent.; 49 tons, 5.6 per cent.; 31 tons, 6.7 per cent.; 14 tons, 7.8 per cent.; 10½ tons, 11.12 per cent sulphate of quinine.

THE NEW YORK MARKET.

(By Cable from our Correspondent.)

NEW YORK, Wednesday night.

ORDINARY kinds of sarsaparilla are very much lower this week. Sales of Mexican have been made at 12c., but now 11c. would be accepted.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, September 14.

THIS week's sales of opium amount to 50 cases, at the following parities:—Good *Karahissar*, 7s. per lb.; usual kind of manufacturing, 6s. 4d.; and *Yerli* manufacturing at 6s. 6d. per lb., f.o.b.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Election of Examiner in Pharmacy.

SIR,—My position as a servant of the Society precludes my entering into a newspaper controversy as to the action of the Council; but, as Mr. McWalter's letter may give rise to misapprehension as to the legality of the appointment of Mr. Robinson, I think it well not altogether to keep silence.

I did not consider that it was in any way incumbent upon me to notice the anonymous communication to which Mr. McWalter referred.

A perusal of the report of the Council meeting, which appeared in your issue of August 13, will show that, before the election of examiner took place, Mr. Robinson had ceased to be a member of Council, and was therefore "eligible for the office of examiner."

The appointment of Surgeon Evans, five years before, took place under precisely similar circumstances, and was never called in question.

As to my publishing the names of unsuccessful candidates, Mr. McWalter, as a member of the Society, must be aware that I never do so. Besides the probable objection those gentlemen might have to my doing so in the present instance, there is the additional reason that, as is usual in such cases, the election was proceeded with in committee.

Mr. Robinson's appointment has been approved of by his Excellency the Lord Lieutenant and the Privy Council, and I think also by members of the Society generally.

I am, Sir, yours faithfully,

ARTHUR T. FERRALL,

Registrar and Clerk to the Council.

67 Lower Mount Street, Dublin, September 12.

The Charge for Appropriated Medicine stamps.

SIR,—With reference to your recent note on the subject of the charge of 8*l*. for new plates for appropriated stamps being henceforth annual, it appears to us that the new arrangement really constitutes the imposition of a new tax. Of course, it may be that the Commissioners of Inland Revenue would be acting within their rights in thus modifying present arrangements; but it appears to us that one effect of such an innovation would probably be to greatly reduce the number of appropriated stamps drawn from the department. We can just recall one instance in which the value of such stamps used annually was below the 8*l*. in question.

We trouble you with these observations that you may, if so disposed, correspond with the authorities on the subject, as you alone appear to have received intimation of the threatened change.

Yours, with compliments,

F. NEWBERRY & SONS.

1 King Edward Street, E.C., September 8.

[The person to correspond with the authorities ought to be—and no doubt will be—someone who is directly concerned.]

Analytical Chemists and the Still Licence.

[SIR,—It may be of interest to your readers to know that following letter has been received from the Excise

authorities, in reply to a memorandum laid before them by Mr. Carteighe (Vice-President), in accordance with the request of the Council of the Institute of Chemistry.

I am, Sir, yours faithfully,

G. H. ROBERTSON, Secretary.

Institute of Chemistry, 9 Adelphi Terrace,

Strand, W.C., September 10.

[COPY.]

Inland Revenue, Somerset House,
London, W.C.

SIR,—Having laid before the Board of Inland Revenue your letter of July 28, I am directed in reply to acquaint you, for the information of the Council of the Institute of Chemistry, that the Board have no desire to extend the obligation to take out a licence to analytical chemists using stills solely for the purposes of distilling water. If an analytical chemist called upon to take out a licence by one of the Board's officers will submit his case to the Board, they will be prepared to give the matter careful consideration.

I am, Sir,

Your obedient servant,

(Signed) W. B. HEBERDEN,

Assistant Secretary,

To M. Carteighe, Esq.

Water-analysis.

SIR,—There is one point upon which Dr. Frankland and myself have long been in perfect accord, and that is that his process and mine are mutually exclusive. Either one or the other must go to the wall.

The following passage may be quoted from Frankland's paper in the *Journal of the Chemical Society* for the year 1876, page 847:—

"Against these advantages it must be acknowledged that the process (his own) involves more trouble and more careful manipulation than are usually bestowed upon what are called commercial analyses. Now, although these drawbacks ought not to be paramount considerations where such important issues are involved, yet if any more simple method existed by which trustworthy quantitative information about the organic matter in water could be obtained, the process which I have been describing would cease to have a *raison d'être*."

Having expressed himself in that manner, Dr. Frankland devoted four pages of the *Chemical Society's Journal* to an elaborate misrepresentation of the ammonia process of Wanklyn, Chapman, and Smith.

Dr. Frankland has not changed the views of chemists in this matter. His process is not accepted by independent chemists either here or elsewhere. But the commanding official position which Dr. Frankland has occupied ever since the late Professor Hofmann left London has enabled him to force his process upon reluctant analysts. The numerous analyses mentioned by Mr. Parry are all of them consequences of the uninterrupted operation for a quarter of a century of that pressure which Dr. Frankland's official position has enabled him to exert in favour of his own process of water-analysis.

New Malden, Surrey,
September 10.

Yours, &c.

J. ALFRED WANKLYN.

Pulv. Aromat. and the Cholera mixture.

SIR,—I do not know exactly when the Board of Trade formula was published, but I can find no trace of any time when "pulv. aromat." meant "pulv. cretæ aromat."

Before the B.P. 1887 was published, the preparation now called "pulv. cretæ aromat." was known as "conf. aromat.," and this is given as a synonym in that Pharmacopœia and the present one, but I cannot see that "pulv. aromat." ever meant anything other than "p. cinnam. comp."

"Pulv. aromat." is the name under which it was official in the Edinburgh Pharmacopœia, and is taken from that and continued as a synonym in the succeeding British ones.

Yours faithfully,

3 West Kensington Terrace,
September 9.

W. PICKARD.

The Sale of Laudanum.

SIR,—In your notice of the laudanum-poisoning case in last number, page 336, you omitted to state that at first I refused to sell the sixpennyworth of laudanum, but upon

strictly questioning the woman in the presence of my assistant, and another woman who came with her (and who was partly known to me) why she required so much, I was assured she was in the habit of taking it, and could not do without it. I have a great objection to selling laudanum even in small quantities, but this seemed a special case.

I am, yours obediently,
Cambridge. ARTHUR DECK.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents,"

A list of "Books for Chemists" is given in THE CHEMIST'S AND DRUGGIST'S DIARY, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

64/36. *J. N. I.*—We cannot name the seeds. They appear to be little known generally.

229/92. *Bos*—The sample of Grease for Dipping Sheep for winter consists of whale oil, resin, soft soap, and a mercuric salt. It would hardly make a suitable lubricant for cart axles—whale oil and sulphur would be better for that purpose.

101/74. *Tansy*.—Your specimen is *Tanacetum vulgare*, *Tansy*. It is an old-fashioned tonic and stimulant, and the flowers were formerly used as an anthelmintic.

6/92. *Fogged*.—Your botanical specimens are:—(A) *Atriplex deltoidea*, (B) *Sueda fruticosa*, (C) *Atriplex portulacoides*, (D) *Atriplex angustifolia*, and (E) *Statice occidentalis*.

96/61. *J. I.*—Biology is a subject included in the General Medical Council's curriculum, but few of the licensing bodies require a knowledge of botany, although some universities (amongst them the Scotch) do. This we have always noted. See the special information in this issue.

112/43. *Ergot*.—We do not regard it as our business to furnish formulæ to produce imitations of proprietary articles.

101/29. *R. Forde*.—See THE CHEMIST AND DRUGGIST, July 13, 1892, page 96, for polish for brown leather boots.

108/43. *Enquirer*.—Sorry we cannot assist you in the matter. You know what many of these cures for stuttering are:—"G-g-go to D-d-doc-tor —; he-he-he c-c-cured me," remarked one who had been there.

* * Many replies to queries are held over this week owing to the crowded nature of our columns.

THE HANBURY INSTITUTE.—An interesting ceremony took place at the University of Genoa last week, when the Hanbury Institute was formally handed over to that body. Mr. Thomas Hanbury, whose house at La Martola, near Ventimiglia, is well known to visitors to the Riviera, had already won the gratitude of Italian by his generous works in that neighbourhood, and a year or two ago he offered 4,000*l.* to found an institution in Genoa for the encouragement of the study of botany. Senator Secondi, president of the University, gave expression to the sincere feeling of gratitude towards Mr. Hanbury, and accepted the gift of the institute in the name of the University. A large number of distinguished botanists, who were attending the botanical congress at Genoa, were present at the ceremony.

IRISH REGISTERED DRUGGISTS' EXAMINATION.

The following are the questions which were given this month:—

Examiner: J. EVANS, L.R.C.S.I., L.A.H.

1. Write a summary of the Sale of Poisons Act, giving a list of substances contained in Parts I. and II.
2. What is the capacity of a teaspoon, a tablespoon, a wineglass, and a tumbler.
3. Give the measures of capacity and weights of the British Pharmacopœia.
4. Write out the pharmacopœial names of the following, stating those which are poisons:—Calomel, grey powder, cream of tartar, prussic acid, Epsom salts, white precipitate, paregoric elixir, Glauber's salts, saffron, raisins, horseradish-root, nitrate of silver, Plummer's pill, castor oil, litharge.
5. Compound multiplication: $17\text{ s. } 8\frac{1}{2}\text{ d. } \times 365$.
6. Compound division: $3,831\text{ l. } 1\text{ s. } 6\text{ d. } \div 504$.
7. Reduce $7\text{ l. } 7\text{ s. } 6\text{ d.}$ to half-crowns.
8. Reduce $7\text{ s. } 6\text{ d.}$ to fraction of 20s.
9. Simple addition: $5,732,486 + 549 + 23,423 + 15,420,746 + 432 + 9,327,474 + 8,421 + 728,434$.
10. Simple multiplication: $86,483,729 \times 110$.
11. Simple division: $845,329 \div 132$.
12. Multiply $4\frac{1}{2} \times 5\frac{1}{2}$.
13. State how many grains there are in 1 dr., in 1 oz., and in 1 lb. avoirdupois.
14. State how many fluid ounces there are in 1 pint and in 1 lb.
15. How much corrosive sublimate would you add to a gallon of water to make it the strength of 20 per cent.?
16. Describe the appearance of sulphate of magnesia, Barbadoes aloes, and sulphate of iron.

NEW COMPANIES

ANGLO-INDIAN CONDIMENTS, CORDIALS, AND ESSENCES MANUFACTURERS (LIMITED).—Capital, 24,000*l.*, in 1*l.* shares. Objects: To carry on the business of condiment, cordial, essence, and perfume manufacturers, &c. The first subscribers (who take one share each) are:—T. R. Wyles, 93 Leadenhall Street, E.C.; H. H. Doby, 11 Queen Victoria Street, E.C.; J. Lyle, 22 Comerford Road, Brockley, S.E.; O. Hellstern, 3 Hillsborough Terrace, East Dulwich; J. Thompson, 116 Choumert Road, Peckham; T. Ross, 7 Bridge Avenue, Hammersmith; E. Rayner, The Terrace, Barnes. There shall not be less than two nor more than seven directors. Qualification, 50*l.*

C. CARRINGTON & SON (LIMITED).—Capital, 3,000*l.*, in 5*l.* shares. Objects: To acquire and carry on the business of chemist and druggist, patent-medicine vendor, grocer, &c., now carried on by Charles Carrington, at Victoria Buildings, Heaton Lane, Stockport. The first subscribers (who take one share each) are:—C. Carrington, 109 Wellington Road South, Stockport, grocer; Emma Carrington, same address; C. H. Carrington, 109 Wellington Road South, dentist; H. B. Carrington, 109 Wellington Road South, grocer; H. G. Carrington, 109 Wellington Road South, student; J. T. Owen, 39 Daudonald Street, Stockport, grocer; and Marinda Owen, 109 Wellington Road South, spinster. There shall not be less than two nor more than five directors, and the first shall be C. Carrington (managing director), C. H. Carrington, and H. B. Carrington. Qualification, 25*l.* Remuneration to be determined in general meeting. Registered office, Victoria Buildings, Heaton Lane, Stockport.

DISTILLERS' CHEMISTS COMPANY (LIMITED).—Capital, 3,000*l.*, in 1*l.* shares. Object: To carry on the businesses of distillers' chemists and druggists, drysalts, chemists' sundriesmen, &c., in all their respective branches. The first subscribers (who take one share each) are:—H. J. Balls, 17 White Post Lane, Manor Park, E.; F. N. O'Dowd, 166 Coningham Road, Shepherd's Bush; P. Parsons, 36 Keeton's Road, Bermondsey; B. Worthington, 8 Elliott Road, Brixton; W. Biggar, Thorpe Banks, Acton Vale, W.; A. Dray, 12 Warner Road, Camberwell, and R. Powhall, 39 St. George's Square, N.W. There shall not be less than three nor more than five directors; the first are to be elected by the signatories to the memorandum of association. Qualification, 50*l.* Remuneration to be determined by the company, but not to exceed 2*l.* 2*s.* each for each board attendance. Registered office, 81 Gracechurch Street, London.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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AUSTRALASIA.

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SUPPLIED regularly to every member of the following Societies, who have adopted *THE CHEMIST AND DRUGGIST* as their official organ.

The Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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Summary.

ANOTHER instalment of original and tried recipes is given this week.

WE print concise particulars of official appointments open to chemists and druggists.

THE novelties which are described and illustrated this week merit the attention of chemists.

THE Midland Counties Chemists' Association have decided not to continue their pharmaceutical classes.

WE print the list of creditors of the Automatic Scent Fountain Co. (Limited), which is being wound up.

MR. GLADSTONE has been appealed to regarding the appointment of inspectors under the Shop Hours Regulation Act.

WE give a sketch of the new Medical School affiliated with the Mason College, Birmingham, and some particulars of the arrangements therein.

SOME of the humours of technical instruction are described under "Botanical Obscurities" by a contributor in extracts from examination papers.

THE Glamorganshire County Council have decided, notwithstanding the recent Magisterial decision, to prosecute in flagrant cases of beer-salting.

THE Soudan is resuming its old position as the chief source of supply of acacia gum, and we comment upon that fact in our Editorial notes.

PHARMACEUTICAL education in the States is dealt with in an article illustrated with an engraving of the Philadelphia College of Pharmacy's fine new building.

THE Liverpool Justices have decided that the use of the description "Veterinary Infirmary for Horses" by an unqualified person is an infringement of the Veterinary Surgeons Act.

OUR trade report notes the ups-and-downs of the market as usual, and calls attention to the run which appears to be setting in on camphor, the rise in senega, and the continued demand for ipecacuanha.

A REPRESENTATIVE of *THE CHEMIST AND DRUGGIST* has had an interview with Dr. Reece, who is in charge of the Port of London Sanitary Department at Gravesend. An account of this is given, with a portrait of the doctor.

THE rival parties in the Irish Pharmaceutical Society are very closely balanced. The registration contest, which has been fought very keenly, is narrated in an Editorial note. Arguments for electors are given in our Correspondence section.

WE print further comments upon pulv. aromat. and cholera mixture in our Correspondence section, and amongst other letters one by a German assistant, who defends the cause of his class. Answers to correspondents are exceptionally numerous.

THE Board of Inland Revenue have been defeated at Glasgow in an attempt to get a penalty from a man whose boy had sold a patent medicine, the defendant satisfying the magistrates that he was only a traveller for the goods, and that the sale was only an isolated one.

THE CHEMISTS' AND DRUGGISTS' DIARY FOR 1893

is now being prepared. It will contain as a special feature a remarkable treatise on "Diseases and their Treatment," which has been written expressly for this work by a London physician. This will be found to be of great interest and of notable value, and it will render the 1893 DIARY one of the most popular of the long series. The author is one of the modern school of medical men, and in his advocacy of remedies is most eclectic.

Advertisers will please send in their instructions for the DIARY as promptly as possible. It is a very heavy work to produce, and we must absolutely close for press on October 22. This is necessary in order to enable us to get the work in the hands of all our colonial subscribers before the New Year. Our Australian copies (which form a very large consignment) will be despatched by the mail steamer leaving London on November 4, and to catch that steamer we cannot keep open for advertisements beyond the date mentioned.

AS *THE CHEMISTS' AND DRUGGISTS' DIARY* is now so universally recognised as the chemist's desk-companion and reference-book, every firm having anything to sell to chemists should be represented in its pages.

English News.

The Welsh Beer-analyses.

At a meeting of the Local Government Committee of the Glamorgan County Council on September 15, at Cardiff, Dr. William Morgan, the county analyst, presented a report in which he alluded to some recent analyses of beer which he had made, some of which, as we lately reported, were the subject of magisterial inquiry. He said the chlorides present in the various samples were equal to from $12\frac{1}{2}$ to 100 grains of common salt per gallon of beer, and in all cases above 52 grains he had certified that in his opinion the amount present was excessive. He relied upon the experience formed during the past eighteen years as public analyst, and the fact that in all the cases heard by the magistrates in his district 50 grains had been recognised as a limit. He had obtained samples of beer from the stores of the large Burton brewers, and in no case did the chlorides reach 50 grains. He maintained that in giving the amount of chlorides as equivalent to so much common salt he was doing the least prejudice to the sellers, chloride of sodium being the most harmless form of chloride which could be used. In dealing with those beers he had no knowledge as to the water used; and when the excess of chlorides is attributed thereto it would be desirable that a sample of the water should be taken in order to guide the magistrates. In reply to the Clerk, Dr. Morgan said he did not carry the analysis further than the examination of the amount of chlorine. He got only half-a-pint of beer, and the quantity of ash therein (.3 per cent.) was so minute that he would defy anyone to make a complete analysis of it.

The Clerk: Do you mean to say that Dr. Attfield made his analysis from something more than the sample?

Dr. Morgan: Yes, I do.

The Clerk: Then the evidence ought not to have been allowed. A man may analyse anything given to him, and these people could throw a cake of salt into their wells just before.

After some discussion it was decided, notwithstanding the decisions of the magistrates, to proceed with further prosecutions, and the Clerk was instructed to engage counsel and any expert evidence which he might deem necessary.

Shop-inspectors Wanted.

Mr. Gladstone has sent to the Home Office a letter which he had received from a correspondent who wrote asking the Prime Minister "to cause steps to be taken for the appointment of suitable Shop Hours Regulation Act inspectors," the contention being that "the Act is laughed at by nine out of every ten employers of shop-assistants, because the Government has refused to appoint a single person to see that the provisions of the statute are carried out."

Midland Counties Chemists' Association.

A Council meeting of this Association was held at the Mason College, Birmingham, on Friday, September 16, Mr. Charles Thompson, President, in the chair, when arrangements were made for the opening meeting in October and the evening meetings during the session. The Secretary announced that several useful papers had been promised. With regard to the classes, it was unanimously resolved:—"That, considering the facilities which exist in Birmingham, the Council do not think it advisable to make any arrangements for classes for pharmaceutical students during the coming session." Mr. Hutton, one of the representatives at Leamington, having resigned his seat on the Council, it was resolved to ask Mr. S. Smith to accept office in his stead.

The members and friends of the Association had a half-day's excursion to Solihull on Wednesday, September 14. The arrangements were carried out by the committee of the recreation section, under the direction of the Secretary, Mr. Sol. Taylor (of Wyleys, Limited). The weather was favourable. A "Married v. Single" cricket match was played, and proved an exciting event. The singular people went in first and totalised 53 runs. The bowling of Cripps was found to be particularly destructive. The Benedicts missed reaching their opponents' figures by two only, their last four men accumulating 0 between them. Hull, on the

Single side, was credited with the top score, 26, no one else reaching double figures. Lawn tennis, bowls, quoits, and other amusements were also provided. An excellent tea at the George Hotel was shared in by about forty ladies and gentlemen. The revelries wound up with a smoking concert, the President, Mr. Charles Thompson, in the chair.

Corner for Students Half-yearly Prize.

The result of the third month's returns in the special prize competition, as regards the first twenty competitors, is as follows:—

J. A. Hare	293	H. F.	262
Walton Porter	291	Ulexine	261
Belladonna	288	Pepsine	259
A. Lander	281	H. Bowden	258
Zirconium	280	Moyhitt	254
Bee Gee	275	Danwer	252
John	274	H. McL. R.	247
Verax	285	Ornum	247
W. Hood	264	T. K. Dublin	245
A. Howard	263	P. Macrocephalus ..	236

It will thus be seen that A. Bunsen, Cogito, F. F. A. Tunbridge, Atropine, and L. F. M., who held places in the first twenty last month, have now dropped out, giving way to H. F., Ulexine, H. McL. R., Ornum, and P. Macrocephalus.

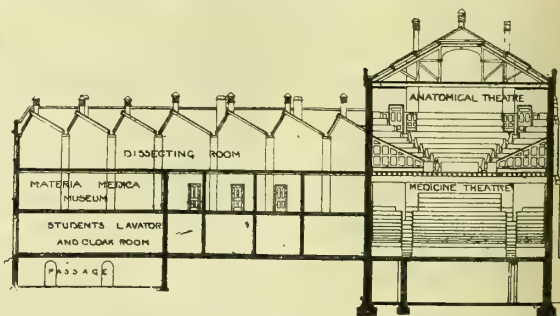
Mr. Vogt, the winner of the first prize this month, is a new competitor.

A Jury Thinks Ammonia should be Labelled "Poison."

At an inquest held at Hindley, Wigan, on September 15, before Mr. Brighthouse, County Coroner, it appeared that the wife of a coachman had in ignorance drunk some of the contents of a bottle of ammonia. To a verdict of accidental death the jury added the presentment "that persons ought not to be allowed to sell ammonia without attaching a label, to the bottle pointing out that it is a poison and dangerous to life."

Medicine at Mason College, Birmingham.

At the end of this month the Faculty of Medicine, hitherto forming part of the Queen's College, Birmingham, will be housed in Mason College, to which college the Faculty has been entirely transferred. The new buildings for the medical school form two attached blocks, separated from the existing college by a quadrangle, but communicating with it by a covered bridge. The arrangement of the



plan is L-shaped, one of the blocks containing, on the basement floor, a gymnasium and other rooms; on the ground-floor a medicine theatre, 52 feet by 45 feet, with seats for 326 students, and over it, on the first floor, an anatomical theatre, 45 feet by 36 feet, with seats for 230 students. Adjoining each theatre are convenient preparing and professors' rooms and lavatories. The theatres are approached by ample staircases of stone and iron, and every part is well lighted. The other block contains the working-rooms and museums. In the basement are spacious anatomical stores, servants' latrines, &c. The buildings contain materia medica, public health and anatomical, and dental museums, as well as a bacteriological laboratory, and every modern convenience for teaching medical science. The session is to be opened on September 30, when Sir George Humphry, M.D., F.R.S., will deliver an inaugural address.

Drug-contracts.

Mr. Balchin, chemist, of High Street, Gosport, has obtained the contract for the supply of sanitas soap at 31s. 9d. per cwt., and carbolic soap at 30s. 6d. per cwt., to the Alverstoke Union for the ensuing half-year.

The Sheffield Guardians, by advertisement, invited "chemists and druggists within the Union" "to state what discount they would allow from the wholesale lists of Messrs. Evans, Lescher & Webb and S. Maw, Son & Thompson.

At the last meeting of the Plymouth Board of Guardians it was decided that the Dispensary Committee should consider all tenders for drugs, ales, wines, and spirits.

The Bishop Auckland Board of Guardians have accepted the tender of Mr. Thorburn for the supply of cod-liver oil and quinine to the Union Workhouse.

The Ludlow Board of Guardians on Monday accepted the tender of Mr. F. W. Smith, Castle Street, Ludlow, for the supply of drugs to the Workhouse for the ensuing half-year.

The Dinner-season Beginning.

The annual dinner of the Westminster College of Chemistry and Pharmacy is announced for October 11, at the Holborn Restaurant. Captain Cecil Norton, M.P., has promised to take the chair.

Chemists' Dishonest Errand-boys.

At the Market Harborough Petty Sessions, on September 13, Herbert Botterill, errand-boy to Henry Robert Maynard, chemist and druggist, of Market Harborough, was charged with stealing, on August 31, the sum of 2s. 6d. Prosecutor said he took defendant in his employ last March, and on August 31, from information received, he marked some money and put in the till after the boy had gone to his dinner. Amongst the coins marked were a florin and a sixpence. The boy returned at ten minutes after 1, and witness left him in the shop alone about two minutes. He then went back in the shop and looked in the till, when he perceived that the marked florin and sixpence produced were missing. On being accused of the theft, after protestations of innocence, the boy took the money off a shelf close by, and laid it on the counter. The boy pleaded guilty, and was ordered to receive six strokes with a birch rod.

At the Greenwich Police Court, on Saturday last, William James Jones, 14, errand-boy, of 71 Mill Road, Lewisham, was charged with stealing a shilling, marked money, the property of W. H. Bolton, chemist's assistant, of 61 High Road, Lee. Mr. Bolton said that he and his brother managed the chemist's business of Mr. H. J. Smith, 61 High Road, Lee. The prisoner was employed as errand-boy, and, suspecting him, he placed some marked money in the till, and afterwards missed a shilling. He accused the prisoner of taking it, but he denied the accusation. Afterwards he took 1s. 4½d. from his pocket, including the marked shilling. The boy said he had saved up the 1s. 4½d., and Mr. Bolton gave him a shilling on an errand. He must have changed his own shilling, and not that given him by Mr. Bolton. Mr. Bolton said he would not have given the boy into custody but for the father's interference. Mr. Marsham said that he had some doubt about the case, thinking that the prisoner might possibly have been given the marked shilling. He discharged the prisoner.

Students at Cricket.

The return match between the South London and the Westminster Schools of Pharmacy took place at Nunhead on September 10. "Muter's Eleven" scored 106 in one innings, their captain (Armstrong) topping the figures with 31. "Wills's Eleven" had two attempts, realising 35 in the first innings, and 38 in the second.

A Chemist's Assistant's Vote.

At the Dartford Court for the revision of the Voters' List on Friday the claim of Mr. Percy Knight to be on the list was objected to. Mr. Knight is an assistant to Messrs. Horrell & Goff, chemists and druggists, of High Street, Dartford, and he claimed as a lodger. Mr. Dixon, on behalf of the Liberal side, objected, on the ground that as Mr. Horrell, the senior partner of the firm, resided at Margate, Mr. Knight was only a caretaker, and should have claimed under the service franchise, while Mr. Gales, for the Conservatives, con-

tended that as Mr. Goff, the other partner, did live on the premises the claim was properly made. The claim was allowed.

A Lady and the Cholera.

Miss Annesley Kenealy, a sister of the lady doctor, communicates to the *Nursing Record* of this week some notes on her experience as a nurse in the Eppendorf Hospital, at Hamburg, during the cholera epidemic. She says that one could not possibly forget, when once seen, a typical cholera case. There is nothing like it. The face is pinched and wan, and of a peculiar blackish colour, the limbs are shrunken and shrivelled, the eyes are dull and sunken. There is more or less constant purging, the agonising pain and rice-water stools being most characteristic. Vomiting is, in many cases, even more distressing than diarrhoea, and there is a ravenous thirst. In a later stage the limbs are so cramped that when rubbed one feels the muscles contracted into hard, stiff knots. Very remarkable, too, is the dull, heavy apathy of the patients. They seem perfectly indifferent to their surroundings, and often oblivious of their pain. The thirst is so intense that they clutch, and will by no means let go, the cup until the whole of its contents has been taken. The disease is peculiarly fatal to infants and old people, healthy adults standing a fair chance of recovery. Some cases, however, of strong young people she had seen proved fatal in less than four hours from the beginning of the illness. The dead are removed at once; and it is rather appalling, Miss Kenealy says, to see dead women carried off without ceremony by the porters, but, of course, such scenes are inevitable in time of epidemic. After the descriptions she had read of corpses piled in heaps along the corridors, awaiting burial, and of these heaps diminishing never, because they were hourly added to from the wards, she finds the facts not so gruesome, though, in the horrors of the seizure and the frequency of deaths, they were bad enough. She is told that the state of things represented did actually exist in the early days of the epidemic, but now all the arrangements are admirable. One sentence in Miss Kenealy's article deserves special emphasis. It is:—"Cholera seems to be, like typhus, a disease of the dirty and ill-fed, and those who have been in the habit of drinking stand but little chance of recovery."

"Bound" over Chloroform.

Bowskill, the chemists' assistant, whose supposed attempted suicide with chloroform was reported in THE CHEMIST AND DRUGGIST last week, and who is said to hail from London, was on Tuesday again brought before the magistrates and "bound over."

Grogging.

The Inland Revenue authorities are suspicious that grogging has not yet stopped, and orders have recently been issued to check this by directing that casks carried from one warehouse to another shall occasionally on arrival at their destination be rinsed out with water or spirits of a given strength, and the rinsings tested, the idea being that this will show whether any spirit has been extracted from the wood or not.

The Chemist and His Wife.

The summons at West Ham against W. H. Denn, of Barking Road, the retired chemist who was remanded on a charge of assaulting his wife, was dismissed by the Magistrate when the adjourned hearing was taken, the wife's story being uncorroborated.

Fire.

A rather serious fire occurred on Sunday night on the premises of Mr. T. Homman at 343 Upper Street, Islington.

The Sheffield School of Pharmacy.

The eighth session of the School of Pharmacy conducted under the auspices of the Sheffield Pharmaceutical and Chemical Society will be opened on Thursday evening, October 13, at 6 p.m., when an address to students will be delivered by Alderman W. Gowen Cross, J.P., of Shrewsbury, Vice-President of the Pharmaceutical Society of Great Britain. After the distribution of prizes the annual dinner of the Society will be held at the Masonic Hall.

To Wake Up the Medical Council.

On Saturday Mr. A. W. Wyatt held an inquiry at Lambeth respecting the death of George Thomas Rossiter, aged 36 years, a farrier. Evidence showed that deceased while talking to a man suddenly staggered and fell to the ground. A local medical man was at once sent for. Mr. Wyatt: Is he in attendance? Dr. Dorin: No, I believe he is a non-qualified man. He is not here. The Coroner: Oh, I suppose he is one of those eighteenpenny cheap dispensary doctors. Is there not a society for the prosecution of these unqualified men? Dr. Dorin: There is the Medical Council, but they never take any steps in such matters. They leave it to the public. They never act themselves unless the public take up the prosecution, which, of course, is not worth their while. Dr. Dorin having stated that he had made a *post-mortem* examination of the body, which showed that death was due to syncope and serous apoplexy, the jury returned a verdict accordingly.

Analysts Differ.

At the last meeting of the Lewisham District Board of Works Mr. Laidman, the Board's solicitor, reported the dismissal, with costs against the Board, by the Greenwich police magistrate of summonses for alleged adulteration of butter against two tradesmen, the Somerset House analysts having certified, contrary to the certificate of the Board's analyst, that the samples taken were not adulterated. It was now decided to forward these to the Board's analyst, with a request for his report thereon.

Mr. Sargent's Letters "Not Worth Notice."

At the meeting of the Chesterfield Town Council on Tuesday, a letter was read from a Mr. Sargent as to alleged violations of the Pharmacy Act in the town, and Alderman Booth said that they might look upon this letter as the production of a mind which was not quite correctly balanced. (Laughter.) The writer had an idea that the Pharmacy Act was not properly attended to, and he had written to all the chemists in the town. The letter, he considered, was really not worth notice, and Mr. Hadfield said Mr. Sargent had written a similar letter a year ago. It was resolved that the letter lie on the table.

A Chemist and First Aid.

One night last week, at Acton, a disturbance amounting almost to a riot occurred in consequence of the refusal of a chemist to come down and dress some wounds. A young man named Comerford, with his brother, were walking home when they came into contact with a party of men and women singing to the strains of a concertina. The musical party considered that the Comerfords had collided with them purposely, and they are alleged to have rather brutally assaulted them. Anyway Charles Comerford was pushed through a plate-glass shop window and severely cut on the head and wrist. He was bleeding freely, and was carried by some sympathisers to the shop of Mr. Lewis, chemist. Mr. Lewis had retired for the night, and, having been made aware of the seriousness of the injuries Comerford had received, he, speaking from an upstairs window, declared that the case was one for a doctor, and that he could render no assistance. A large and noisy mob had by this time gathered together, and Mr. Lewis's refusal to come down and attend to the case was received with hoots and howls and other expressions of strong disapprobation. It is stated that Mr. Lewis also refused to throw out a bandage required to stop the bleeding. So strong was the feeling against Mr. Lewis that missiles were thrown at his windows, three panes upstairs and one large plate-glass pane in the shop front being smashed by stones and apples. Ultimately the ambulance was obtained from the police-station, and Comerford was taken first to the residence of Dr. Lingham and afterwards to the West London Hospital, where he remained for nearly a week. Two of his assailants are in custody.

Irish News.

The Coming Election.

The "campaign" goes merrily on, and the druggist and pharmaceutical contingents are endeavouring to out-

manoeuvre each other. At present the latter seem to have the advantage. What happened at the end of the last Council meeting is told in an Editorial note. Subsequently the pharmacist party requisitioned a special meeting for the election of their nominees for Wednesday, September 21. Accordingly a summons was issued by the Registrar giving the requisite notice (four clear days). On receipt of the notice Mr. Boyd, observing that the associates proposed by himself and Mr. Gibson were not named on the agenda, served a regular "f.i.f.a." writ on the President (Mr. Hayes) and the Registrar, requiring that the proposed associates should be included in the business of the special meeting. This writ was received by the Registrar after office hours on Friday, September 16 (5.30 P.M.), and by the President on Saturday morning, whereupon the President directed that a supplemental list of the associates should be issued for the special meeting. This was done with all expedition, and the lists were posted by evening post on Saturday, 17th.

The special meeting was duly held on Wednesday. There were present: Mr. Hayes, President; Messrs. Wells, Grindley, Beggs, Evans, Downes, Tichborne, Hodgson, Burnes, Boyd, and Merrin. Mr. Boyd demanded that the list of twelve candidates proposed by himself at the last meeting should be put forward for election, but the President ruled that they had not been legally proposed, no quorum being present at the time. He also ruled that the sole business which could be conducted at the meeting was that for which it had been requisitioned—namely, the election of the candidates proposed by Mr. Wells. Over thirty names had been proposed by Mr. Gibson (who was now absent) at the last meeting, but none of these had paid their subscriptions, and then could not be elected. The result was that ten pharmaceutical chemists and four druggists were elected. This is estimated to leave the pharmaceutical chemists with a majority of about twenty-one.

Candidates for Council.

The following are the new candidates proposed for seats on the Council in opposition to the seven retiring members who seek, and are eligible for, re-election:—Luke J. Healy, druggist and general merchant, Drogheda, proposed by W. F. Moore, Linen Hall, Dublin, seconded by J. J. Dowling, 46 Mary Street, Dublin; W. F. Moore, wholesale druggist (H. Moore & Co.), Linen Hall, Dublin, proposed by Wm. Alexander, Great Strand Street, Dublin, seconded by S. P. Boyd, Bride Street, Dublin; James Hanson, retail druggist, Capel Street, Dublin, proposed by S. P. Boyd, Bride Street, Dublin, seconded by W. F. Moore, Linen Hall, Dublin; Sir Jas. Haslett, Kt., wholesale merchant, Belfast, proposed by W. F. Moore, Dublin, seconded by Thos. McMullen, Belfast; S. Turkington, druggist, Cookstown, proposed by Sir Jas. Haslett, Belfast, seconded by Samuel Gibson, Belfast; James McWalter, pharmaceutical chemist, North Earl Street, Dublin, proposed by R. Duggan, Dublin, seconded by M. F. O'Donnell, Dublin.

We are requested by Mr. Stanley Harrington to state that he is not a candidate for election on the Council of the Pharmaceutical Society of Ireland.

The members of the Council who seek re-election are:—Wm. Hayes, President, pharmaceutical chemist; W. F. Wells, pharmaceutical chemist; G. H. Grindley, pharmaceutical chemist; Johnston Montgomery, pharmaceutical chemist; Hy. Conyngham, pharmaceutical chemist; P. Merrin, pharmaceutical chemist; Samuel Gibson, druggist. The nomination of Mr. James McWalter for the Council has been rejected by the President of the Society on the grounds that his seconder was not entitled to so act, not having paid his subscription. Mr. McWalter also suffered through an informality at last year's election.

Tenders for Medicines.

The Board of Guardians of the Armagh Union invite tenders for supply of drugs, &c., to the workhouse and eight dispensaries of the Union, and will consider same on Tuesday, September 27. Tenders will also be considered by the Cork Board of Guardians on September 29 and the Dunshaughlin Board of Guardians on September 27.

Methylated Spirit in Dublin.

Messrs. Boyd & Goodwin assure us that there is no foundation for the statement we published last week that the Dublin

Excise authorities had seized a quantity of methylated spirit on their premises, on the allegation that it did not contain sufficient naphtha.

The Lord Lieutenant's Interference.

We understand that a brisk correspondence is in progress between the President of the Pharmaceutical Society and the Castle in reference to the extraordinary course taken by the latter in remitting penalties imposed under the Pharmacy Act without consultation with the Council.

Scotch News.

Advertising by Soap.

A new method of advertising has been patented by Mr. G. D. Macdougall, public analyst for Dundee. The device consists in injecting into soap by an arrangement of hollow needles, in the form of any lettering or words desired, a solution of a harmless dye. The result is that the marking remains while the soap is used to the thinness of a wafer.

Edinburgh Professors' Salaries.

From a parliamentary paper it appears that the following were the sums earned by the various medical professors during the year ending September 30, 1891:—Prof. Crum Brown (chemistry), 2,519*l.*, less 1,190*l.* for expenses; Prof. Bayley Balfour (botany), 1,785*l.*, less 289*l.*; Prof. Cossar Ewart (natural history), 1,829*l.*, less 320*l.*; Prof. T. R. Fraser (materia medica), 2,431*l.*, less 370*l.*; Sir Douglas MacLagan (medical jurisprudence), 999*l.*, less 252*l.* The richest chair is that of anatomy (Sir William Turner), which yielded 2,984*l.*, less 493*l.* for expenses. The salaries of the professors' assistants absorb most of the expenses. These vary from 50*l.* to 300*l.* It would appear, therefore, that Prof. Crum Brown pays most on this account, he having five assistants at salaries ranging from 50*l.* to 275*l.*

German Yeast and Cholera.

There has been a small scare in Glasgow regarding the use of German yeast, somebody having thrown out the suggestion that it comes from Hamburg, and may consequently be mixed with cholera microbes. Full contradiction to this has been published—viz., the assurance that all the "German yeast" used in Scotland is produced in Scotch and Irish distilleries.

A Picnic.

The members of the Edinburgh Pharmacy Athletic Club held their first picnic on Monday last—the general holiday in Edinburgh—when, along with some friends, the company numbering forty-five, they went to Linlithgow. The outing was very enjoyable. In the first place, the old palace, famous as the birthplace of Mary, Queen of Scots, was visited, and inspected with much interest. After luncheon, served in the Town Hall, a cricket match took place, while boating on the loch was also indulged in. Later on there was some dancing, interspersed with songs by Misses Roberts and Telford, and Messrs. S. Traill and J. P. Gibb.

Heriot-Watt College.

At a meeting of George Heriot's Trust, held on Tuesday, John Gibson, Ph.D. (Heidelberg), Senior Demonstrator of Chemistry, University of Edinburgh, was elected Professor of Chemistry in the Heriot-Watt College, in room of Professor Perkin, who has been appointed successor to the late Professor Schorlemmer in Owens College, Manchester. There were eleven applications for the Edinburgh post.

Dr. Littlejohn on Diarrhoea.

The Edinburgh authorities have taken exceptional precautions to prevent cholera taking a hold in the city, and Dr. Littlejohn, the Medical Officer of Health, has issued a series of hints. In these he says that diarrhoea, and in its severe form, choleraic diarrhoea, admit of immediate treatment by means of drugs. A pill should be administered at once, consisting of the ordinary pharmacopoeial "lead and opium pill," with the addition of 1 grain each of camphor and

capsicum, to be repeated after every loose motion. This pill should be halved for patients between eight and fourteen years. Above that age the whole pill is the dose. For young children powders should be provided, each containing 1 grain of the chalk and opium powder; one powder to be given for each year of the child's age up to eight years. Dr. Littlejohn's disinfectant consists of powders containing mercuric chloride and ammonium chloride, of each 20 grains, and aniline blue $\frac{1}{4}$ grain, each to be dissolved in a pint of water.

French Pharmaceutical News.

(From our Paris Correspondent.)

A FIRE, alarming in magnitude, has just destroyed the chemical works of Messrs. Gilliard, Monnet & Cartier, at St. Fons, near Lyons. The damaged is estimated at 1,200,000*f.* (48,000*l.*)

BORDEAUX PHARMACISTS AND CO-OPERATIVE TRADING.—The fourth National Congress on co-operative trading was opened last Sunday at Bordeaux, and pharmacists took a prominent part in it. In the evening the medical committee and the syndicate of pharmacists held a joint meeting of welcome in honour of the delegates. A number of speeches were made, including one by M. Dambier, president of the Bordeaux Syndicate of Pharmacists.

A VERSATILE PHARMACIST.—Among the French pharmacists who are seeking laurels in other fields than those belonging to their own profession is M. Alfred Leconte. That gentleman, in addition to having gone into political life and become a deputy for the Department of the Indre, has wandered into the groves of literature and produced a large number of short stories, historical articles and reviews, patriotic and philosophic poems, satires, sonnets, and ballads—all literature, in fact, has become his province. An edition of the pharmaceutical politician's complete literary works, in two volumes, has just been published in Paris. Among the verses are a good many relating to pharmaceutical and chemical subjects.

POISONING IN A PRISON.—Some sensation has been caused here on account of the circumstances attending what was at first supposed to be an outbreak of cholera in a prison at Beauvais. Some fifteen prisoners had fallen ill, when it was discovered that they were suffering from poisoning, and not from cholera. It appears that the prison dispenser had, by mistake, given extract of belladonna, instead of extract of walnut-leaves, from which a morning hygienic drink was concocted for the prisoners. The error was discovered by Dr. Lesage, who, while searching to discover the cause of the supposed epidemic, took a teaspoonful of the mixture in a glass of water, and fell down insensible, his life being saved only with the greatest difficulty. The dispenser will be prosecuted.

STILL ANOTHER EXPLOSION of chemicals occurred in Paris on Friday last, the scene of the disaster being the premises occupied by G. Contela & Cie, well-known wholesale druggists, of 43 Rue des Francs Bourgeois. An employé was engaged in a cellar emptying a cask of benzine, when, by an awkward movement, he brought a naked light in contact with the contents. An explosion immediately took place and the cellar rapidly became ignited. The firemen were soon on the scene. A sergeant, followed by four men, entered the cellar and brought up the unfortunate victim. He was badly burnt on the body and right arm. The Pharmacie du Bow Pasteur forms the frontage of Contela & Cie's premises, and there the man was attended to. Meanwhile, a second explosion took place—a large bottle of alcohol, becoming heated, burst, in its turn making new victims. Amongst them were two firemen, Messrs. Engel and Girard, assistant-druggists, and the head of the firm, M. Contela. The fire in the cellar burnt for two hours and caused damage to the extent of 10,000*f.*

A SINGULAR ANOMALY in the administration of justice has just been discovered here, not foreseen at the time the Béranger law was passed. A pharmacist in the Rue de Kennes discovered, about a month ago, that a laboratory

assistant, who had been in his employ for the past two years, was robbing him of a considerable quantity of medicaments and selling them again at a low price. When the pharmacist had sufficient proof, he prosecuted the thief, and the latter was sentenced, a fortnight ago, to six months imprisonment, but benefited by the Béranger law. Left at liberty by the terms of this law, the assistant summoned his former employer on Saturday last before the Justice of the Peace of the Sixth Arrondissement for the balance of wages, which, on discovery of the theft, had, somewhat naturally, not been paid. The pharmacist was stupefied to learn that, as a sentence is not inscribed until two months after being passed, and as his unfaithful assistant is at liberty, he has to pay the amount claimed with costs. There is apparently, no appeal against this finding.

THE CHOLERA.—The epidemic in Paris is now on the wane. A reassuring proof of this is that on one day during the present week it is stated that not a single death, from any cause, was reported in a crowded district of Paris (the Eighteenth Arrondissement) which has itself a population approaching a quarter of a million. This confirms the opinion expressed in *THE CHEMIST AND DRUGGIST* of July 16. The correspondent of *THE CHEMIST AND DRUGGIST* has been twice called on by an official from the Mairie (Town Hall) of his district as a sequel to the frontier "Sanitary" experience report of last week. This proves that the arrangements for preventing the introduction of cholera are carried out systematically. It is further pleasing to note that the state of the hospitals is so favourable that the officials are arranging to commemorate the September 22 centenary in each hospital.—Mr. Stanhope, the *New York Herald* cholera enthusiast, has been admitted to the Eppendorff Hospital, Hamburg, and has obtained full permission to lead the same life as the cholera patients. This was on Monday. The *Fremdenblatt* of Hamburg states that Mr. Stanhope will remain in the hospital for eight days. He will drink the water of the Elbe, swallowing bacilli with it, and thus prove that he is protected against cholera. But, says our Hamburg contemporary, "We do not understand why he comes to Hamburg to make experiments which could be more easily carried out in Paris, where M. Pasteur would have administered the bacilli. Should Mr. Stanhope outlive his eight days' experience he will have proved nothing in favour of the Pasteur system of vaccination."

Foreign and Colonial News.

THE WHOLESALE DRUG-HOUSES AT ST. LOUIS have under consideration the practicability of closing on Saturdays at noon. Heretofore they have closed at that hour during the four warm months.

DO NOT CONFUSE THE TWO.—It is proposed, says the *Apothecary*, that the contributions to the proceedings of the Columbian World's Congress of Pharmacists shall be mainly of an historical character, showing the beginning, progress, and present status of pharmacy in the various countries. This does not refer to the International Pharmaceutical Conference.

HEAVY FAILURES.—According to the *American Journal of Pharmacy*, at the last meeting of the Pharmaceutical Examining Board of Pennsylvania, in Williamsport, 47 candidates for registered pharmacists and 27 for qualified assistants were examined; 20 of the former and 14 of the latter were successful. This is as bad as we have it in England.

BATTERY-SOLUTION FOR COMMUNION-WINE.—At Amenia, N.Y., one of the officials at a Presbyterian Church placed for the Communion service a wine-bottle containing a battery-solution, in which sulphuric and nitric acid were ingredients, instead of the proper wine. A number of persons partook of the poison with serious, but happily without fatal results in any instance.

A PARACELSUS LIBRARY.—On August 18, died at Frankfurt-on-the-Main (this fact has only just become known) Dr. Edward Schubert, the owner of the largest Paracelsus

library in the world. He devoted many years of his life to works on Paracelsus and pharmaceutical alchemy, and studiously collected the literary material relating to these subjects. His valuable collection is going to be sold if possible *en bloc*.

A PHARMACEUTICAL MAYOR, CAPE TOWN.—Mr. Johan G. Moeke, of Long Street, Cape Town, chemist and druggist, after several years' prominent service on the Town Council, has this year attained the position of Chief Magistrate. Mr. Moeke was born in Cape Town in 1848, and received his education at the South African College, afterwards entering business in 1866.

A PASTEUR INSTITUTE IN CEYLON.—Mr. J. W. Charles De Soysa, a prominent citizen of Ceylon, has offered the Ceylon Government a contribution of 10,000rs. towards the erection in the island of a Pasteur Institute for the treatment of hydrophobia and the investigation of bacterial diseases generally. The Institute will be called the "De Soysa Pasteur Institute." The Ceylon Government have accepted Mr. De Soysa's offer.

CHICAGO EXHIBITION NOTES.—A supply of mineral spring-water will be laid on for the use of visitors to the show. The water is to be "piped" from Waukesha, in Wisconsin, a distance of 100 miles, and it will be on tap at a cent. a glass.—An offer of \$120,000 in cash has been made for the exclusive privilege of selling peanuts at the Exposition.—The nitrate industry of Chile will be illustrated by an elaborate exhibit at the Fair.

AN AMERICAN CHEMICAL-WORKS BURNED DOWN.—The works of the Lancaster Chemical Company, in Lancaster, U.S.A., were recently destroyed by fire. The plant cost \$42,000 dollars, and it was almost entirely destroyed. Machinery and stock worth \$30,000 went with the building. The insurance is \$19,500. Three tramps were seen running from the building in the morning, and it is supposed they fired the works, but no cause for the act can be found.

THE KEELEY CURE.—Hydrochloride of apomorphine is said to be an ingredient in the Keeley "bichloride of gold" cure. This we have, says the *Pharmaceutical Record*, on the authority of one who has compounded large amounts of the whisky employed as an adjuvant to the cure. The feeling of nausea and sickness which follows each dose of the whisky as supplied by the Keeley cure people has usually been ascribed to the action of the atropine and strychnine contained in the hypodermic injection, but the symptoms are more consistent with the effects of apomorphine.

MODERNISING MONTEZUMA'S EMPIRE.—A syndicate of American capitalists has secured an option on the volcano Popocatepetl, in Mexico, which they propose to operate as a sulphur-mine. The volcano is the property of Gen. Sanchez Ochoa, who has worked it on a small scale without modern machinery, securing good returns; but the Americans intend to run an electric railway up the mountain and bring down sulphur, which will be mined on a large scale by modern machinery, and also to utilise the railway by bringing down natural ice to compete with the artificial ice-factories in the city. The sulphur is of excellent quality, and is now only used for making powder for the Mexican army.

THE AMERICAN WHOLESALE DRUGGISTS' CONVENTION.—The National Wholesale Druggists' Association of America holds its annual conference (the eighteenth of its kind) at the Windsor Hotel, Montreal, this week. The programme is as follows:—September 19, first business session, 8 P.M. September 20, second business session, 10 A.M. to 1 P.M., and third business session, 2.30 to 5.30 P.M. President's reception and promenade concert, 8.30 to 11 P.M. September 21, fourth business session, 9.30 to 12 A.M.; excursion on Ottawa River and shooting Lachine Rapids by special steamer, to be followed by a concert in Windsor Hall at 8 P.M. Thursday, fifth business session, 10 A.M. to 1 P.M., and sixth business session, 2.30 to 5.30 P.M.; banquet at 7.30 P.M.

VETERINARY DISPENSARIES IN INDIA.—According to the last report of the Agricultural Department of Bombay there are five veterinary dispensaries in working order in the Presidency, and others are to follow. The dispensaries are in charge of graduates of the Bombay Veterinary College, who are paid by the district Boards. In addition to ordinary

hospital work, their duties comprise the superintendence of Government stallions, attendance at shows, and repression of epidemic disease in the district. When possible, a travelling veterinarian is provided for attendance at epidemics and for work in the villages. "Through these officers," says the report, "much improvement in the treatment of stock should result; they will encourage owners to send difficult cases to the hospital, and they are to report the existence of epidemic disease for the Imperial Bacteriologist."

UNITED STATES TRADE-MARKS.—The following were registered at Washington on August 30:—"Benger's," for infant's food, by F. B. Benger & Co. (Lim.), Strangeways, Manchester, England; "Renovene," for detergent liquid, by Petersen & Ruge, St. Louis, Mo.; "Henry's Tri-iodides," by Remz & Henry, Louisville, Ky.; "Phenodyne," for analytic preparation, by E. B. Smith, Ipswich, Mass. Registered on September 6:—"Kurum," for tablets for throat and lung diseases, by Kurum Chemical Company, St. Paul, Minn.; "Murline," for hair-curling compounds, by Ada M. Petri, Minneapolis; "Blue Seal," on label, for vaseline, by Chesebrough Manufacturing Company, New York; portrait of a child with a plaster upon its breast, for medicinal plasters, by F. Merz, Brooklyn, N.Y.

U.S. CHEMICAL PATENTS.—Mr. Paul Volkmann, Elberfeld Germany, for the Farbenfabriken, vormals Fr. Bayer & Co. has obtained a patent for a new process of producing piperazin which consists in treating the dinitroso compounds of diphenylpiperazin, ditolylpiperazin, dixylylpiperazin, dinaphthylpiperazin, or the sulpho-acids or other substitution-products thereof, with sulphurous acid or alkaline bisulphites. Mr. Bruno R. Seifert, Radebeul, Germany, for Dr. F. von Heyden Nachfolger, has also patented a process for converting phenols which are difficultly soluble in water into disinfecting-mixtures which are easily soluble in water. The process consists in taking such mixtures as "crude carbolic acid" (consisting mainly of cresols) and mixing them with water and with a metallic salt of an aromatic compound of the classes of aromatic acids and phenols. The product of the process is also protected.

THE INDIAN OILSEEDS CROP.—According to a memorandum on the crops of India issued by the Indian Revenue and Agricultural Department, the exports of oil-seeds of all kinds from India as compared with wheat are valued at 1,001.50 and 732.45 lakhs of rupees respectively. These figures represent the average of the ten years ending 1890-91. Broadly speaking, the linseed trade belongs to Calcutta, while rape and mustard are exported chiefly from Bombay. The consignments go in the largest quantities to the United Kingdom, France, Belgium, and the United States. In 1891-92 Germany received a large share of rape. The period of active trade is from March to July inclusive. As is well known from the reports on external trade, the dispatches of vegetable oils, as compared with the foreign exports of seed, are insignificant. The oil chiefly exported is castor oil, which goes principally from Calcutta for lubrication of machinery.

THE INDIAN GROUND-NUT SEASON.—With the close of the month of August, says the *Madras Times*, the ground-nut season has come to an end. Only some 550,000 bags have been obtained this year, as compared with 1,300,000 bags in 1891, which gave a bumper harvest with low prices and high freights. The sowings of ground-nuts commence in May and June; and the good rains that have fallen in South Arcot this year give promise of an excellent harvest next time, as everywhere the arachis is growing freely. In the absence of any system of manuring, and from the fact that the ground is yearly cropped with this most exhausting product, it is not to be wondered at that the quality of the Pondicherry ground-nut is inferior to that of Bombay and Senegal, and commands lower prices. If the system is not changed, it is most probable that the local ground-nut will continue to diminish in size, or that some disease will appear and destroy it entirely.

SULPHURIC ACID IN BRAZIL.—There is in Brazil only one sulphuric-acid factory; it is established at Rio de Janeiro, and its products are much used in the local calico-printing and mineral-water industries. The acid for these factories costs 190 reis per kilo, including package, which is cheaper than the European product. The Brazilian acid is

packed in cases containing each two 30-kilo. demijohns. The Companhia Formicida Paulista, founded at San Paulo in 1890 with a capital of 500,000 milreis, is engaged specially in the manufacture of sulphide of carbon used in the destruction of ants, which are a plague in the country. It will probably make also sulphuric acid for native establishments. The new tariff does not modify the duty on sulphuric acid, which remains as follows:—Pure or colourless, 80 reis per kilo.; impure, 10 reis—duties estimated for both at 15 per cent. *ad valorem*. Tare is fixed as follows:—In earthenware jars, 30 per cent.; in cases, 10 per cent.

THE NEW OPIUM REGULATIONS IN BURMAH.—We have already referred to the new opium regulations recently introduced into British Burmah. The principal object of these rules is the prohibition of dealings with adulterated opium. The only kind of opium which may now be legally sold or possessed is raw opium and *beinse*, or refined opium. *Kunbon*, which is a preparation of opium and betel-leaf, and *beinye* and *beinchi*, which are refuse opium, are prohibited. These preparations have been prohibited because it is reported that they are used to allure people to the consumption of opium, whereas people are said to take less readily to the practice when they can procure the pure drug only. Very strict rules are being enforced with regard to the possession of opium by Burmans; but foreign travellers and horse-dealers from beyond India enjoy special privileges in regard to possession of opium. They may have in their possession up to a limit of fifteen tolas for each traveller or horse, provided that such opium is not produced in India and that it is not intended for sale or barter. In Upper Burmah persons specially licensed by the Deputy Commissioner may have in their possession quantities of opium in excess of ten tolas. The persons so specially licensed are dealers in jade and indiarubber, who, from the nature of their employment, are compelled to remain for lengthened periods in remote and unhealthy tracts.

Trade Notes.

DAN RYLANDS (LIMITED) have opened a workshop at 3 Dyer's Buildings, Holborn, E.C., in connection with their London showrooms at 62 King William Street, E.C.

THE GUY'S TONIC Co., of 4 Ludgate Circus, London, E.C. are now sending out a prettily designed slip show-card for window or counter decoration. It is printed in colours by Sir Joseph Causton & Sons. Chemists are invited to apply for a few.

MR. W. D. GIBB, chemist, Winchester, has been elected a member of the Winchester Town Council, to fill the vacancy caused by the death of one of the members. The election was contested, and Mr. Gibb beat his opponent, a brewer and corn-merchant, by thirty votes.

SPRATTS (LIMITED), of Bermondsey, S.E., now have their "pepsinated puppy-meal" ready for the market. The shilling tin is a big bargain, considering the value of the meal as a food for weak or very young puppies; and chemists in "doggie" districts will be able to do good business in the article. It will be noticed that the company have their revised price-list ready, and offer to send copies of it to those who have not yet got it, and who ask for it.

AN elegant scarlet-bound price-list comes to us from Messrs. W. H. Bailey & Sons, makers of surgical instruments and appliances, 38 Oxford Street, W. The list is exceptionally well illustrated, and in such departments as trusses, elastic stockings and suspensory bandages (which are made in the firm's own factory) the information given is remarkably full; but in regard to surgical appliances generally we notice that instructions for measurement, &c., are given in all those cases where a chemist may be called upon to take orders, and for that reason the list should be a useful one to have handy. The firm tell us that they will send a copy of the list to any chemist who asks for it.

AN ECONOMIC HERBARIUM, comprising all varieties of cultivated crops, is being formed at the Botanical Gardens, Saharunpore, British India.

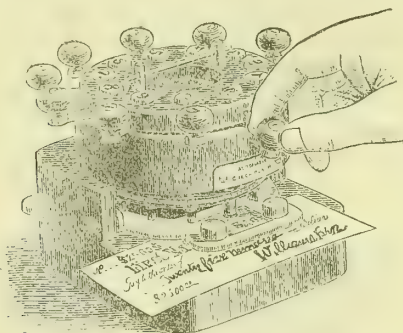
Notes of Novelties.

"THE MOIST TONGUE."

THE German technical journal *Prometheus* describes a new departure in label-dampers which has recently been patented by a firm in that country, and to which the expressive name indicated in the heading of this paragraph has been given. The apparatus consists of a small square holder of transparent glass, which serves as a reservoir for water. In it is a porous block of kieselguhr, rounded at the top, and covered with a small piece of velvet. The water, by the law of capillary attraction, rises to the top of the kieselguhr block, and penetrates the velvet just enough to moisten it slightly. The hairs of the velvet exercise to a certain extent the similar functions in the wetting of the object drawn across them as do the glands of the human tongue.

AN AUTOMATIC BANK PUNCH.

MESSRS. HATRICK & Co. (LIMITED), of 31 Snow Hill, E.C., are European agents for the "Automatic Bank Punch" here represented. The object of the "punch" is to render the



falsification of the face-value of cheques, drafts, and similar documents impossible by cutting out the amount they represent from the body of the paper. This is done by pressing the knobs at the revolving table on the upper part of the instrument. Each of these knobs corresponds with a die bearing the representation of one of the numerals, and there is an odd die, representing a star, for the purpose of marking the division between £, s., and d. You press the button, the machine does the rest. The little pieces of paper cut out of the document by the mould fall upon the table below. Messrs. Hatrick & Co. showed us quite an imposing list of British bankers and merchants who use the instrument. It is also a significant commentary upon the distrust in which man is held by his fellow-men that in the United States alone over 15,000 of these machines are in use. We suggested to Mr. Hatrick that chemists might have more use for the machine if, in addition to the numerals, it contained dies with the representation of the letters of the alphabet—were converted, in fact, into a kind of punching typewriter. Mr. Hatrick saw no reason why that should not be done, though, of course, extra dies would increase the cost.

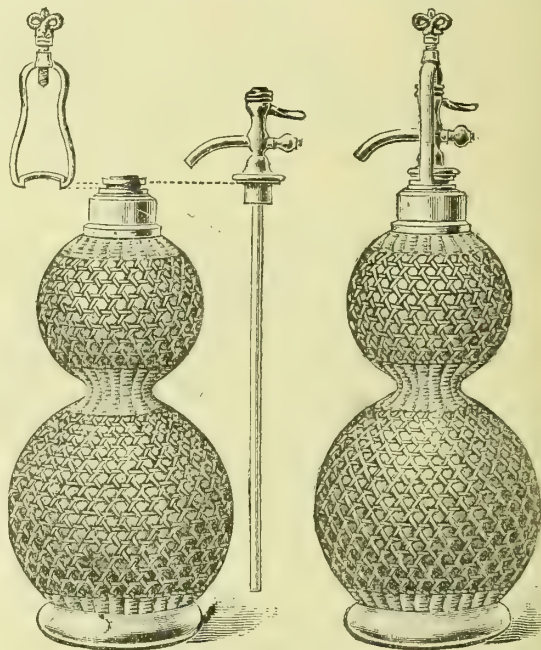
SCHUTZE'S IMPERISHABLE HOT-WATER BOTTLE.

MESSRS. F. SCHUTZE & Co., of 38A, Aldersgate Street, have registered a new form of hot-water bottle, which they fairly designate the "Imperishable." It is made of nickel tin, which is rustproof, and it is rendered bearable to naked

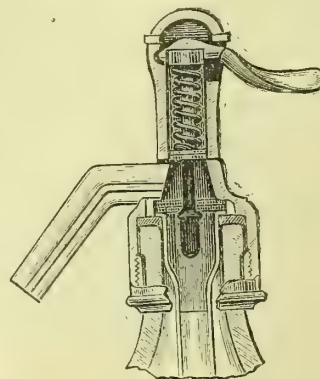
feet, and, at the same time, capable of retaining its heat for a long time, by being cased in a rather thick plush bag. The prices for this novelty are quoted in Messrs. Schutze's advertisement.

GERAUT'S PATENT SELTZOGENES AND SYPHONS.

THE new seltzogene which Messrs. Eugene Geraut & Co. have patented is novel in respect to the neck and shoulder, where the top-fittings are attached to the body of the apparatus. Instead of the metal screw by which these are generally



fitted, in Messrs. Geraut's patent the tube-attachment fits into the neck of the seltzogene by a smooth surface with an indiarubber washer at the top. The clamp is then applied to the grooved outside neck, the key-screw at the top is turned, the washer is perfectly tightened, and the machine is both gas and water tight. Leakage is avoided, a fresh drink is ensured, and, what is very important, the considerable risk of dirt or corrosion in the thread of the screw is avoided. The novelty in the patent syphons is that the



glass tube is fitted on to ebonite plugs, so that there can be no metallic contact with the waters while they are at rest in the syphons, and, moreover, when the tubes break they can be refitted more cheaply than in ordinary syphons.

COOK'S NEW SOAPS.

MESSRS. EDWARD COOK & SON, the well-known soap-makers of Bow, E., have lately introduced several new soaps which are worthy of attention. The principal of these in several respects is the "Hygienic Tooth-soap." In conversation with Mr. Henry Cook we have learnt that this originated with a prescription for a tooth-wash by Dr. Miller, of Berlin, which he had obtained for personal use, and which proved so advantageous and pleasant in use that it occurred to him to incorporate the active ingredients in a soap. After considerable experiment, and with modifications suggested by a West-end dentist, the soap in its present form was produced. As a dentifrice it is sure to take a foremost place, on account of its antiseptic, detergent, and refreshing properties. The soap is claret-coloured, and in use is quite destitute of saponaceous taste or odour—in fact, it is slightly sweet and aromatic. It is put up in a new style of earthenware box, the base of which is quite shallow, the lid deep, and, as the cake is well compressed, it wears off evenly, not becoming pasty. We understand that the soap, packed as described, retails at 1s. Another novelty is the series of "Riviera" super-fatted soaps, of the nature of *Savon de Luxe* but not so expensive. These soaps are made with a pure fat basis, and in the process of milling a fixed percentage of fresh fat is incorporated with it, the whole being delicately scented. The soap is moulded into oval cakes, and is packed in artistic floral wrappers and boxes. From a similar compound basis the "Riviera" shaving-stick is made. This gives a good non-frothy lather, which does not irritate the skin in the least. It is put up in a floral-decorated case and, like the toilet-soap, may be retailed at 6d. These soaps are stocked by the wholesale and sundries houses.

NEW COMPANIES.

WEST RIDING CANDLE COMPANY (LIMITED).—Capital, 10,000*l.*, in 1*l.* shares. Object: To acquire the undertakings of the West Riding Candle Company, Rotherham, and the Sheffield Candle Company, carried on at Heeley Mills, Sheffield, and to carry on the business of soap and candle manufacturers in all its branches. The first subscribers (who take one share each) are:—T. Wigfield, 3 Collegiate Terrace, Rotherham; W. Wigfield, 3 Collegiate Terrace; G. H. Lodge, 3 South Terrace, Rotherham; A. T. Cocking, 12 Westgate, Rotherham; Caroline Wigfield, 3 Collegiate Terrace; Eliza Swain, Moorgate, Rotherham; and Richard Sands, 5 Baker Street, Nottingham. There shall not be less than three nor more than five directors; the first are to be elected by the signatories to the memorandum of association. Qualification, 100*l.* Remuneration to be determined by the company in general meeting.

THE PYBON SYNDICATE (LIMITED).—Capital, 1,000*l.* in 1*l.* shares. Objects: To carry on the business of chemists, druggists, manufacturers of and dealers in chemical, medicinal, and toilet articles, &c. The first subscribers (who take one share each) are:—G. A. F. Smart, Upton, Bexley Heath, clerk; A. C. Cartwright, 396 Clapham Road, S.W., clerk; J. L. Middleton, 13 Walbrook, E.C., agent; J. W. Clarke, 35 Oakhurst Grove, East Dulwich, gentleman; C. J. Bosdet, 72 Bishopsgate Street Within, secretary; W. Thompson, 57 Vicarage Road, N.W., gentleman; and M. G. Webb, 70 Finsbury Pavement, E.C., civil engineer. Registered without articles of association.

WINDING-UP COMPANIES.

THE AUTOMATIC SCENT-FOUNTAIN COMPANY (LIMITED)

The creditors and shareholders of this company met on Monday last at Carey Street, W.C., before Mr. O. J. Stewart, Official Receiver, to appoint a liquidator and committee of

inspection under the winding-up proceedings instituted against the company last month. The particulars and accounts have already been given. Resolutions were passed for Mr. Stewart to act as liquidator and wind up the company, with the assistance of the following committee of inspection—viz., Messrs. Everitt, Bush, and Goslin.

The following are the principal creditors, viz.:—

Unsecured.

	£	s.	d.
Bush, W. J. & Co., chemists, 19 Artillery Lane, E.C.	833	6	10
Everitt, P., 47 Cannon Street, E.C.	2,989	18	6
Goslin, S. B., 24 Artillery Lane, E.C.	420	3	11
Great Western Railway Company, Paddington	69	11	7
London & South-Western Railway Company, Waterloo	36	5	0
Lancashire & Yorkshire Railway Company, Manchester	54	3	4
Metropolitan District Railway Company, Westminster	25	0	0
Metropolitan & Metropolitan District Railway Company, Westminster	36	9	5
North-Stafford Railway Company, Manchester	25	17	9
South-Eastern Railway Company, London Bridge	15	0	0
	55	1	4

Fully Secured.

Metropolitan Railway Company, Paddington	26	5	0
London & North-Western Railway Company, Euston	19	7	6

Debt-holders.

Everitt, P., 47 Cannon Street, E.C.	1,000	0	0
" " " (Interest)	296	14	10
Bush, W. E., 19 Artillery Lane, E.C.	1,000	0	0
" " " (Interest)	296	14	10

THE SANITARY FOOD COMPANY (LIMITED).

THE adjourned meeting of the creditors of this company was held at Carey Street, W.C., on Wednesday last, before Mr. C. J. Stewart, Official Receiver. The particulars of the failure were given in our last week's issue.

The Chairman said the only business to transact was to decide upon the appointment of a liquidator, whose duty it would be to wind up the company. At the meeting of contributories held the previous Wednesday a resolution was passed for an application to be made to the Court to appoint Mr. Nathaniel James Whitcombe, Gresham Buildings, Basinghall Street, to the post, and it now remained for the creditors to express their opinion upon the matter. After some discussion the meeting resolved to make no application for a liquidator's appointment, preferring to leave the case in the hands of Mr. Stewart, to be wound up in the usual way. As the matter now stands, therefore, the application of the contributories for the appointment of Mr. Whitcombe will not be supported by the creditors, and the Official Receiver will probably act as liquidator for all parties.

COMPANY DIVIDENDS.

THE DIRECTORS OF THE BORAX COMPANY (LIMITED) have declared an interim dividend on the ordinary shares for the half-year ended June 30 at the rate of 5 per cent. per annum, tax free, payable on September 30.

THE DIRECTORS OF MANSELL, HUNT, CATTY & Co. (LIMITED), makers of paper bottle-caps, &c., have declared an interim dividend of 8 per cent. on the ordinary shares for the six months ended June 30 last.

A WORLD'S PATENT.—Two French inventors have patented a hypodermic syringe all over the world. It seems that an article can be protected in sixty-four countries. Sixteen of these are in Europe, eight in Africa, four in Asia, twenty-seven in America, and nine in Oceania. The total cost of the patent in all these countries amounts to 3,600*l.*

A VISIT TO LONDON'S SANITARY OUTPOSTS.

IF Dr. Thorne, the principal Medical Officer of the Local Government Board, may be compared to the chief of the staff of our anti-epidemy forces, the Medical Officers of Health of the Port of London resemble Uhlans, into whose keeping the outpost on the main route connecting the Russian and German plague spots with our metropolis has been given. The captain of this outpost is Dr. William Collingridge, and he, during all those anxious days, when the cholera shadow hung threatening over our shores, and our sanitary authorities were girding themselves for the battle they believed to be imminent, was cruising in the little Customs launch *Dolphin* off Gravesend with his assistant, Dr. Richard James Reece, boarding every vessel from infected ports as she hove in sight, questioning and cross-questioning the captain, inspecting crew and passengers, quarantining, fumigating, and exorcising. The crisis is now happily past, and Dr. Collingridge has returned to headquarters at Greenwich, but Dr. Reece still keeps watch and ward at the further outpost, and a CHEMIST AND DRUGGIST representative who went to interview him a few days ago thus reports what he saw and heard:—

"No prophet is honoured in his own country, and the half-dozen Gravesenders from whom I successively sought enlightenment as to the whereabouts of the "Port of London Sanitary Authority" could only hazard vague suggestions connecting that body in some manner with the Custom House, the Salvation Army Barracks, or the Sailors' Home, the only point of agreement among them being that it was somewhere in the direction of the "Ship and Lobster," apparently a far more venerated and popular institution. At the Custom House, however, they knew all about Drs. Collingridge and Reece, and there an ancient mariner was told off to conduct me to the latter. This guide rowed me to a crazy black hulk moored in the middle of the river, with a figure-head that looked as if it had been mauled for years by some vicious Quilp, and generally mastless, riggingless, and rotten.

DR. REECE'S QUARTERS.

"Is that where the doctor lives?" I queried with surprise, and my vision of a magnificently-equipped lazaretto faded as did the mists upon the Essex coast before the beams of the suddenly-appearing sun. Yes, that was it. And the doctor divided his home between this hulk, where was his dwelling, the little Customs launch, and the hospital yonder on the Kent side of the river. In answer to my inquiry, a young, spare, athletic, but somewhat tired-looking man, in lounging jacket and cloth cap, stepped forward from among four or five Customs officers, with whom he shared the deck cabin as common sitting-room. For a Cambridge graduate, who also holds the titles of M.R.C.S., L.R.C.P., and D.P.H., and to whom exceptionally fatiguing and responsible duties have been assigned, more comfortable quarters might well have been provided, but Dr. Reece did not seem to mind the primitive nature of his habitation, though he contrasted it smilingly with the descriptions of the slippered ease and luxurious environment in which the sanitary officer has recently, in a society paper, been pictured as spending his days. Behind the sitting-room is a sleeping apartment, some 10 feet wide by 7 feet long and high, with four berths, of which Dr. Reece occupies one. Fortunately for himself, he is blessed with a muscular frame, and has proved his powers of physical endurance as captain of his College-boat, and as an expert bicyclist, for the wear and tear of the last four weeks must have heavily taxed his strength.

INSPECTING ARRIVALS.

"We receive advices here every day," he said, "of ships due at this port. The average number passing here is from between thirty and thirty-five a day. They all have to be boarded, and their masters questioned according to a set formula. All vessels must have their bilge water pumped out, and their closets, urinals, and water-tanks thoroughly cleansed before passing up the river. When, however, vessels arrive from ports infected with zymotic disease, such as Hamburg, Cronstadt, and Havre are declared to be at the present moment, we inspect all the passengers, and if any of them show symptoms of disease, we remove them,

if necessary, to the hospital yonder, where they are placed under the care of Dr. Whitcombe, a local practitioner, who is the Medical Officer of Health of Gravesend. In fact, the person in charge of the incoming ship is bound, of his own accord, to give Dr. Whitcombe notice of any case of cholera, diphtheria, erysipelas, measles, scarlatina, small-pox, typhus or typhoid fever he may have on board, under a penalty of, I believe, 50*l*."

CHOLERA PATIENTS.

"Are there any cholera patients in the hospital at present?"

"No; there are none there now, but we have had several cases during the last six weeks. Three patients from the steamer *Gemma* died straight off the reel, and of two others who were brought here on board the *Helene*, I think, one succumbed the day before yesterday from secondary fever following cholera. There are a set of 'cholera questions' formulated by the superior authorities which we must put to masters of ships coming from infected ports. And if a ship has a case of cholera on board of too serious a nature to allow the removal of the patient, the vessel is placed in quarantine, and a 'yellow jack' hoisted at her foremast.

"The disinfecting of ships is done by means of burning sulphur, and no charge is made for it. The cholera patient's clothes? No, we don't disinfect them. That would not satisfy us. We burn every blessed rag he has got on him, and furnish him with a new rig-out at Government expense. The



RICHARD JAMES REECE, M.A., M.D.

sanitary authorities don't mean to spoil the ship for the sake of a ha'porth of tar, and I have heard that they were prepared, in case of a serious cholera attack, to spend 10,000*l* on clothing to replace effects burnt by order of the local authorities."

"Talking of authorities, Dr. Reece, would you tell me by whose authority you exercise your office? When I had a talk with Dr. Thorne the other day, he told me that there were sixteen thousand odd sanitary districts in this country, all of them so many little home-rule units, and each left to its own devices."

"We are here," said Dr. Reece, "under the authority of the Corporation of the City of London. This order, as you will see, is signed by its Town Clerk at the Guildhall. Our district extends from here to Teddington Lock. But from here to the mouth of the Thames there are several other authorities—at Sheerness, Chatham, and elsewhere."

THE LITTLE YACHT.

While this conversation was proceeding, we had walked towards the side of the vessel, and were now leaning over her bulwarks, watching the sun dance on the water, and battling with the grey mists that hung over the Essex swamps. Suddenly Dr. Reece pointed to a small yellow-funnelled steamer in the distance. "That is our yacht," he said; "we are on board her the greater part of our time, by the

courtesy of the Customs, for it is to that department that the vessel belongs. I am sorry she is not now within reach, or I would take you on board and show you that she is by no means so luxuriously fitted as some cavillers have asserted. But I can take you to the hospital, though I should not recommend you to go there, as we have an unusually severe case of small-pox there—an Italian, I believe, who has just come in on board a German vessel. No; there is no pharmacy or dispensing-room for you to look at. Old Dr. Whitcombe brings his own medicines. We have a supply of cholera medicines and disinfectants on board the launch, and here"—reaching in a corner at the lower end of his bunk—"I keep a case of morphia, and other drugs for hypodermic injections. Practically, we use no other disinfectants than sulphur, carbolic acid, and corrosive sublimate. Of the latter, the solution I use is exceptionally strong—viz., 1 in 768.

THE DESTITUTE ALIEN.

"You should have been here a short time ago," continued the doctor, "when we had forty-seven Russian Jews camping on shore. They were stopped under the new order of the Local Government Board, which prohibits the landing of passengers 'in a filthy or otherwise unwholesome condition' until they have satisfied the Medical Officer of Health of their names, destination, and addresses at their places of destination. This clause practically gives the sanitary authorities the power to stop such passengers (who, in almost every case, are Russian Jews) for an indefinite time. The party of forty-seven, of which I speak, seemed to be quite happy. Dr. Collingridge and myself saw them every day; and Dr. Collingridge—who was with the Serbian army as surgeon-major during the war against the Turks, and speaks almost every Slavonic language you could name—got on splendidly with them. They were kept here at the expense of the shipbrokers, and we became quite friendly, through Collingridge's distribution of tobacco among them *à largesse*.

"It is no sinecure here," said Dr. Reece. "You are liable to be called up at all hours of the night, for the arrival of ships depends much upon the tide, and I often have to snatch an hour's sleep just when I can get the chance. Sometimes, of course, days pass that we have very little to do.

THE LIBRARY AND THE DARK ROOM.

"This is my library," continued the doctor, pulling some half-dozen books out of the corners round about his bunk, and a few more from underneath his pillow and mattress (He was the only man on board who boasted the luxury of a mattress in his bed.) "The Customs officers with whom I live here are very companionable fellows, but otherwise there is not much amusement." I suggested photography. "No; I haven't done anything in that line here," said the doctor, "though there would be some facilities, for we have a nice dark room below." "A dark-room?" "Yes, for use of the Customs. People often arrive here from abroad with a lot of photographic negatives, and as it happens that tobacco and cigars have sometimes been smuggled under that denomination, the negatives are inspected in the dark-room provided for that purpose.

"Besides the duty of inspecting vessels I am also keeping a look-out upon the quality of foodstuffs imported, and not a small part of my time is spent in examining fruit, wheat, meat, and other imports, and condemning them if unfit for food, so that you see I have quite enough to do to keep me going."

And with that our representative took his leave from the young doctor, and returned to town, impressed more with the calibre of the men than with the efficiency of the appliances provided by the Corporation to ward off the disease from our doors.

WINDOW-DRESSING.—Mr. J. M. McNeil, of Scottdale, Pa., is ingenious in this matter. He tells the *Pharmaceutical Era* of many of his devices, and says, amongst other things, that he has used for several years the pictorial journals, *Puck* and *Judge*, one in each window, and turns one leaf every morning; it is surprising how many people come daily to see them. They occupy little room, and attract attention. People see all in the window then.

Business Changes.

Mr. G. J. BOUTALL, of Marchmont Street and Holborn, is opening a new pharmacy in Ludgate Hill, E.C.

Mr. EDWIN W. ROUTLEY has acquired the chemist's and druggist's business lately carried on at Beckenham by Mr. F. Bright.

Mr. J. J. GRAY, chemist, Calts, Aberdeenshire, has disposed of his business, which he recently opened there, to Mr. J. R. Reith.

THE chemist's and druggist's business of the late Mr. H. Durden, 13 Cornhill, Dorchester, has been acquired by Mr. W. L. Pearce, who was assistant to Mr. Durden for many years.

Mr. F. W. HARRIS, chemist and druggist, of 83 Brockley Road, Brockley, has purchased the lease of No. 87 Brockley Road, and will shortly remove his business to the latter address.

MESSRS. WESTON, APLIN & Co., chemists and druggists, of the Parade, and other places at Chislehurst, have acquired the pharmacy established by Messrs. Lockyer Brothers, at the Parade, New Eltham.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

REDWOOD—HORNER.—At St. Mary's Church, Walthamstow, on September 15, Iltyd Isaac Redwood, youngest son of the late Theophilus Redwood, Ph.D., of Boverton, Glamorganshire, to Katharine, third daughter of W. Sims Horner, of Fernhill, Walthamstow.

DEATHS.

BAKER.—At Harrogate, on September 18, Mr. William Baker, of Retford, Aged 76. The deceased was for many years in business in the Market Square, Retford, as a chemist and druggist, from which he retired about twenty-three years since. He was a Churchman and Conservative, and was highly respected for his many charitable acts.

ROBERTS.—Mr. John Roberts, of Ottawa, one of the pioneer druggists of Canada, who died on August 5, in his 78th year, was a native of Kilmross, Scotland, and one of the richest druggists in Canada, having left a fortune of \$519,000. Mr. Roberts worked hard thirty years ago to get pharmacy placed on a proper footing in Ontario, and was at one time a member of the College of Pharmacy there. The greater part of his estate is bequeathed to his nephew, Mr. J. Roberts Allan, who was associated with him in business.

WATSON.—The death is reported of Mr. Henry Watson, druggist, at Milton, Ontario. Deceased was a native of Scarborough, Yorks, where he, along with a brother Joseph, was trained to the drug-trade, and both of them emigrated to Canada almost fifty years ago. They first took up their abode in Hamilton, Ontario, but afterwards settled in Milton, Joseph later on going to South America. Mr. Henry Watson was very successful, and the *Canadian Pharmaceutical Journal* says of him that he was a staunch representative of the good old English school, hearty, kind and honourable; a man of deeds rather than words, who won the respect and confidence of all who knew him. He leaves a family of six sons and four daughters. The eldest son is a partner in the firm of McDowell & Co., druggists, Vancouver, B.C. Deceased was in his 68th year.

MINERAL SPRINGS IN MEXICO.—Mineral springs, both hot and cold, are very abundant in Mexico, and some of the waters have been incorporated in the Mexican Pharmacopœia by M. Alfonso Herrera. The very common native name "Atotonilco" always indicates the proximity of warm mineral springs.

PHARMACEUTICAL EDUCATION IN THE STATES.

THERE is a certain degree of appropriateness in referring at present to pharmaceutical education in the United States. In a few weeks the celebration of the Jubilee of the oldest school of pharmacy in the United Kingdom will be solemnised, and it may help to restrain our enthusiasm then if we recollect that there are three older institutions in the world whereat the pharmaceutical sciences were taught in the English tongue before the School of Pharmacy was thought of. It was in 1821 that the Philadelphia College of Pharmacy was founded. New York City followed, eight years later, with a college; and in 1840 Maryland, in Baltimore, also began the work. It would not be profitable to indulge in historical reminiscence, for our object now is to sketch, in free outline, the manner in which young American pharmacists receive their education, and we take the opportunity of presenting an artist's drawing of the new buildings which the Philadelphia College of Pharmacy will occupy ere long.

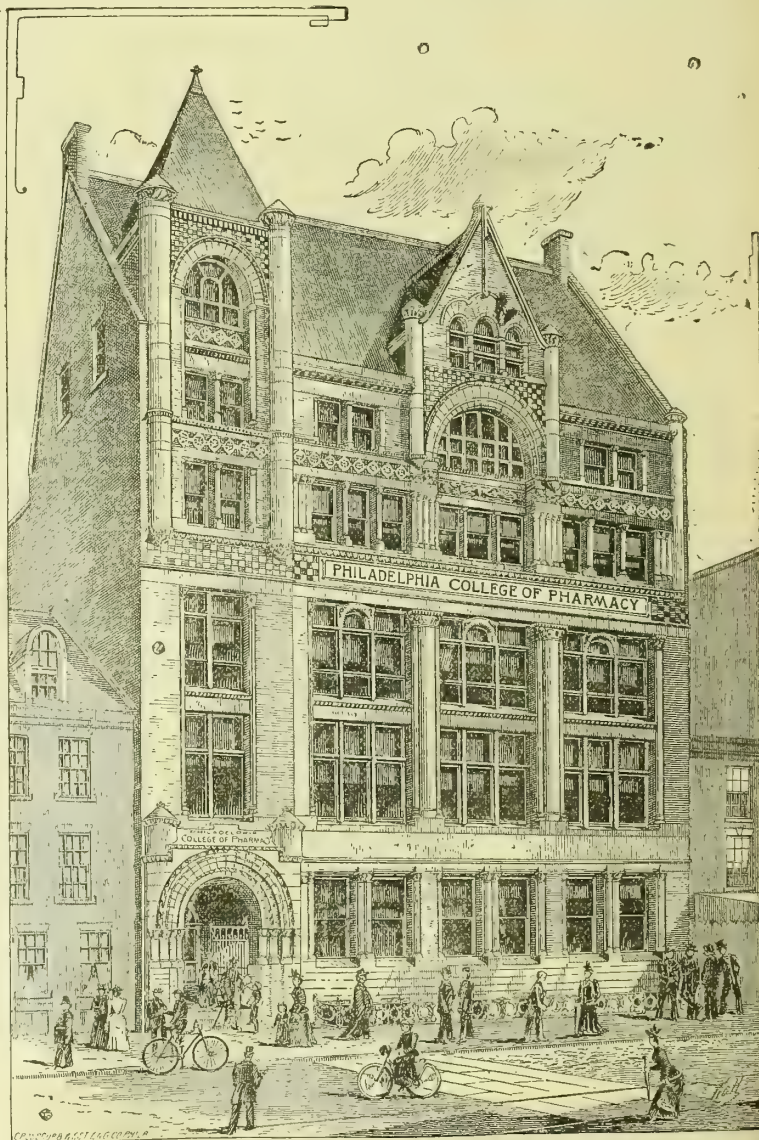
From its very small beginning, in 1821, this College has repeatedly found it necessary to enlarge its building, until this year the greatest improvement yet attempted will be completed. The illustration merely shows the front of the building, and constitutes the new part. The larger part of the structure, situated in the centre of the block, was erected in 1867 and 1880. As now completed, the building contains three large lecture-rooms, a chemical laboratory, a pharmaceutical laboratory, and several smaller quiz and private rooms, all situated in the older part. The new structure, six storeys in height, contains the library, museum, offices of the *American Journal of Pharmacy* and of the Alumni Association, committee-rooms, and several smaller rooms. It was also found necessary to make some internal improvements. The lecture-rooms have, therefore, been remodelled with opera chairs, and the laboratories enlarged so as to increase their capacity about one-half. The whole is lighted by electricity, and heated by steam.

Last year the capacity of the building was taxed to its utmost with 640 students, but the improvements of this year will admit of 800 students attending in two classes, and it will not be difficult to still further enlarge, as soon as there is the necessity for it.

The demand for pharmaceutical education has increased enormously in America during the past decade, due, in part, to the passage of State laws governing the practice of pharmacy. As a result, colleges have sprung up in every direction; but this has in no way affected the attendance at the Philadelphia College, for 40 per cent. of the students attending there come from other States or from foreign countries. Many who begin at a local college go to Philadelphia to complete their education, and so obtain a diploma from an institution that is known and recognised the world over.

In all but two of the States, Tennessee and Vermont there are either pharmacy or poison laws, and registration of pharmacists is all but universal, carrying with it experience in pharmacy for from two to five years, and examination thereafter. Although a curriculum does not appear to be compulsory there are, nevertheless, thirty-eight schools and

colleges of pharmacy in the States, one of them (Louisville) being exclusively for women, and another at Meharry, Tenn., for gentlemen of colour. Thirteen of the colleges are conducted by pharmaceutical associations, and other nine, which are departments of universities, are under the direction of State pharmaceutical associations. It is doubtless in consequence of this intimate connection that a very large majority of the teachers and professors are practising pharmacists, and this circumstance also determines the hours at which classes meet. Although evening and afternoon classes are by no means universal, some of the more important colleges do have lectures and laboratory practice then. Thus in the Philadelphia College—probably the best—



attended school of pharmacy in the world, seeing it had 640 students last year—lectures are given between 7.30 and 9.40 P.M. Albany, California, Denver, Howard, Kansas City, and St. Louis also have this peculiarity. The sessions as a rule begin in the first week of October and last twenty-six weeks on an average, but some are as short as ten weeks, and a few, in connection with universities, extend to the whole college year, thirty-six weeks. Two sessions generally constitute a complete course, and the consequence is that junior and senior classes exist side by side. They receive in the course of the week two lectures each in botany and

materia medica, chemistry and pharmacy, while the attention given to practical chemistry and pharmacy is one of the best features of American pharmaceutical education. They are also far before us there in tutorial work, which, under the guise of "quiz classes," conducted by the demonstrators, but sometimes by the professors, are an educative means of the highest order. Microscopy is also much more popular in American schools than it is with us, and in some colleges there are special teachers of this branch.

The cost of education appears to be exceedingly moderate, as the following examples show:—Cleveland, \$52; Denver (University), \$115; Louisville (women), three years, \$100; Massachusetts, \$140; Iowa (University), \$147; New York, \$160; Howard (University), three years, \$180; and Philadelphia, \$210. These are for two-year courses. That seems a long period in comparison with what is considered sufficient in this country, but it must be remembered that students as a rule are simultaneously engaged in business, and the time which they actually spend at the school comes very close to the British aggregate. Three hundred lectures and one hundred hours of laboratory work are the average in a curriculum, and that is commonly gone over in England during a three-months course.

There, then, are the main features of American pharmaceutical education. One feature can scarcely be overlooked, viz., the large number of "professors" connected with pharmacy in the States. Three dozen colleges provide us with 150; here in England we boast of three! The proper finish to a course of instruction in any of the colleges is to graduate, as the diplomas obtainable are recognised by the State Boards of Pharmacy, who are charged with registration. These Boards also examine, and if we may judge from the fact that the Philadelphia College from its foundation has had 11,000 students and only 3,565 graduates, the Boards would appear to get most of the work or the failures are exceptionally numerous. For an account of the examination of the New York State Pharmacy Board see THE CHEMIST AND DRUGGIST, October 18, 1890.

The following is a list of the various colleges and schools of pharmacy, with the addresses of the secretaries:—

Albany: Dr. A. B. Husted, 144 State Street, Albany, N. Y.
Atlanta: Dr. W. H. Inghram, 341 Marietta Street, Atlanta, Ga.

Brooklyn: Dr. R. G. Eccles, 191 Dean Street, Brooklyn, N. Y.

Buffalo: John R. Gray, Ph. G., Buffalo, N. Y.

California: E. W. Runyon, 53 Stevenson Street, San Francisco, Cal.

Chattanooga: H. Wise, Chattanooga, Tenn.

Chicago: 465-7 State Street, Chicago, Ill.

Cincinnati: W. Simmonson, at the Pharmacy College there.

Cleveland: J. H. Peck, 338 Superior Street, Cleveland, O.
Denver: Professor J. Kochan, P. O. Box 2,667, Denver, Col.

Detroit: Dr. E. C. Skinner, Corner St. Antoine and Mullett Streets, Detroit, Mich.

Howard University: C. B. Purvis, 1,118 Thirteenth Street, Washington, D. C.

Illinois: O. Oldberg, 40 Dearborn Street, Chicago.

Indiana (Normal School): A. E. Hiss, at the school, Valparaiso, Ind.

Indiana (Purdue University): A. L. Green, La Fayette, Ind.

Iowa: E. L. Boerner, University, Iowa City, Iowa.

Kansas City: J. G. Kiefer, 911-913e Tenth Street, Kansas City, Mo.

Kansas (University): Mr. R. K. Moody, Lawrence, Kas.

Lebanon (National Normal University): R. H. Holbrook, Lebanon, Ohio.

Louisville: F. C. Miller, Market and Clay Streets, Louisville, Ky.

Louisville (Women): J. P. Barnum, at the school, Louisville, Ky.

Maryland: J. W. Geiger, High and Pratt Streets, Baltimore, Md.

Massachusetts: C. C. Williams, at the college, Boston, Mass.

Michigan: Address, School of Pharmacy, Ann Arbor, Mich.

Minnesota (University): F. W. Wulling, Minneapolis, Minn.

Nashville (Central Tennessee College): Dr. G. W. Hubbard, Nashville, Tenn.

Nashville (Vanderbilt University): J. T. McGill, Vanderbilt University, Nashville, Tenn.

New Orleans (Tulane University): Dr. S. C. Chaillè, Dean, New Orleans, La.

New York City: J. N. Hegeman, 209-213e Twenty-third Street, New York City.

Ohio (Normal University): J. G. Park, Ada, Ohio.

Ohio (State University): Columbus, Ohio.

Oregon: H. D. Dietrich, Portland, Ore.

Philadelphia: T. S. Wiegand, 145 N. Tenth Street, Philadelphia, Pa.

Pittsburgh: J. A. Koch, Twelfth and Carson Streets, Pittsburgh, Pa.

St. Louis: J. M. Good, 2,348 Olive Street, St. Louis, Mo.

Scio: J. H. Beal, Scio, Ohio.

Washington: Dr. H. E. Kalusowski, 808 I. Street, N. W. Washington, D. C.

Wisconsin (University): Professor E. Kremers, Madison, Wis.

It would not be just to our compatriots in British North America to close this article without a reference to the work done there for the advancement of pharmaceutical education. The Ontario College of Pharmacy at Toronto has the distinction of being the first English college to be affiliated with a university, whereby it has secured for its pupils the privilege of a degree without materially adding to the curriculum or the stringency of the examination. The college was founded in 1882, and its Faculty are not averse to receive English pharmacists as candidates for its degree—Phm. B. For this the conditions are (1) matriculation (implies a preliminary examination); (2) a curriculum, part of which must be at the Ontario College; and (3) an examination in botany and microscopy, theory and practice of chemistry and toxicology; materia medica, including posology and pharmacognosy; theory and practice of pharmacy, including interpretation of prescriptions and dispensing. The college is an excellently equipped institution. Secretary, I. T. Lewis, St. James's Square, Gerrard Street, Toronto.

The Montreal College of Pharmacy (Secretary, Mr. E. Muir, 595 Lagachetière Street, Montreal) provides the education necessary for the Examining Board of the Province of Quebec. This College was founded in 1867, and the evening lectures are given in English and French.

Pharmacy degrees are granted by the following Universities in the United States, and the classes are open to English-trained students who can fulfil the necessary preliminary conditions as to education and service in pharmacy:—

PHAR. DOC., by Illinois (department of North-Western University, Evanston) and Maryland Schools.

PHAR. MASTER, by the Maryland, Michigan, Philadelphia, and Vanderbilt Schools.

PHAR. CHEM., by the Michigan and Scio Schools.

For particulars regarding these, we must refer those interested to the respective secretaries.

THE QUANTITY OF OPIUM used in the United States has largely increased during the past forty years, and the increase is out of proportion with the increase of the population. In 1854 the amount imported was about 72,000 lbs.; in 1880, 372,000 lbs.; in 1890, about 500,000 lbs. The legitimate demands of medicine would call for an increase in quantity commensurate with the increase in population, but see the contrast.

FAITH AND MATTEI.—It is not all "bunkum" about Mattei. Dr. G. M. Robertson, of the Morningside Asylum, tells in the *Lancet* of a lady who was suffering from cancer, and was in the last stage of cachectic exhaustion, when her husband was much impressed with Mr. Stead's article on Count Mattei's cancer-cure, and he determined to make a trial of it on his wife. With the first dose all the wracking torture that the woman suffered from disappeared, and she continued taking this remedy for the last fortnight of her life with total alleviation of pain. A similar fact is stated to have been observed by the committee of inquiry into Count Mattei's remedies.

Legal Reports.

A PATENT-MEDICINE AGENT'S BUSINESS.

At the Glasgow Justice of Peace Court, on September 15, James Wright, agent, 111 Union Street, was charged at the instance of the Inland Revenue authorities with having "contravened the 9th section of the Act 42 George III., chap. 56, as amended by the 6th section of the Act 27 and 28 Victoria, chap. 56, and the 8th section of the Act 38 Victoria, chap. 23, in that on August 12, 1892, in the premises at 111 Union Street, Glasgow, occupied by him, he vended to John Joseph Hurley, officer of Inland Revenue at Glasgow, a bottle containing 'Walker's toothache specific,' said specific being a medicine or medicament within the meaning of the said Acts, and liable to stamp-duty, without having taken out the licence required by the Act, whereby he was liable to a penalty of 20*l*." The prosecution was at the instance of Richard Edward Carnegie, officer of Inland Revenue, Glasgow. The Justices were ex-Preceptor Matheson (presiding) and Mr. Lewis Mitchell. Mr. George Gray was present as Assessor of Court.

Respondent, who pleaded not guilty, was defended by Mr. Alex. Brownlee, writer.

The first witness called was Mr. John Joseph Hurley, officer of Inland Revenue, who said that he went to the defendant's premises at 111 Union Street, on August 12. It was an agent's office, three stairs up. He knew Mr. Wright was an agent for "Walker's toothache specific," and wanted to know if he sold the medicine in his place. He bought a bottle from the boy, for which he paid 7½*d*. The defendant had not a licence for selling it. It was duly stamped with the Revenue stamp.

Cross-examined by Mr. Brownlee: How many stairs up is the office in Union Street?—I think it is three or four stairs up.

When you went into the place did you see a variety of samples of goods lying about—ironmongery, medicines, sewing-machines, and almost everything?—Yes; I know there was a variety of goods in the place.

When the office-boy sold you this, did he produce a sample-card with bottles of this stuff attached to it?—Yes.

Did he tell you his master was an agent for Mr. Walker, the proprietor of that medicine?—I knew he was an agent for the specific. I didn't ask him, and he didn't tell me.

Did you know if his master gave him consent to sell any of it?—I didn't ask him, and he didn't say. When he gave me the bottle I handed him a two-shilling piece, and he told me that Mr. Wright would be in immediately. However, he went out to get change, and when going down the stairs he met another gentleman, who seemed to have some responsibility in the place. He gave him the money, and he gave me the change. The defendant, he thought, was not the gentleman who came in.

Would you not think it would be fair to Mr. Wright if you were to go and make the purchase when he was in the office himself?—I went on three previous occasions, but never could get him in.

Did you ask the boy if his master sold this patent medicine?—I asked the boy if they sold "Walker's toothache specific." Witness next stated that defendant simply described himself on his sign as "agent."

Did you try to buy any other kind of patent medicines there?—No, I don't think so.

How did you come to know that he sold patent medicines?—He exhibited this medicine at an exhibition in Inverness, I think. At least, we got information to that effect.

Mr. Carnegie: He went there by my directions.

By the Court: Was there nothing to indicate to chance customers passing along the street that they could go up there and buy this medicine?—No, nothing. No indication whatever.

This closed the evidence for the prosecution.

For the defence the office-boy—a lad of 15, named George Lauder—was called. He said he had been with Mr. Wright for eight months. His duty was to keep the office open to customers. During the eight months he had been

there nobody ever came to ask him to sell a patent medicine before.

Did you ever sell any single article in your life before?—Not me; but the girl did.

Mr. Gray: Eh?

Witness (continuing) said that Mr. Wright told him he could sell some of the samples, but not any patent medicines. He knew that Mr. Wright acted as agent for Mr. Walker, and took the sample-card round to druggists to show it to them.

At this stage the sample-card was handed up to the Magistrates for examination. It had attached to it a dozen small phials, and bore that the contents of the bottles were prepared by James Walker, surgeon-dentist, Saltcoats; that they cured toothache instantly; and that the price of each phial was 7½*d*.

Witness stated that the cards were hung up by the druggists in their windows. He explained that when Mr. Wright was favoured with orders from customers those orders were forwarded to Mr. Walker, and he sent the medicines on to the customers direct. The card was in the place, he thought, when he went there first. "It was," he said, "in the place, I am sure, for some months past, and there has not been a single bottle sold of it, except this one that I sold to Mr. Hurley."

Mr. Brownlee: When the man came up what did he say to you?—He asked for a bottle, and never said who he was or anything, but just asked for it, and how much it was. I told him 7½*d*. I didn't know any other price but what was on the card.

And was that how you knew the price, seeing it marked on the card?—Yes.

Did Mr. Wright come in some time after you sold it?—Yes; and I told him that I had sold it. He told me that I had no right to sell it, and that I had done wrong.

By the Court: Did you ever see any bottles like this sold?—Not on retail. We send the orders on to Mr. Walker, who sends on the medicines direct to the customers.

This was all the evidence.

Mr. Brownlee then addressed the Court. He said that his client was merely the agent—the servant—of Mr. Walker, whose place of business was at a distance, for distributing these kinds of goods in Glasgow. He was the middleman—the servant, rather, of Mr. Walker, and distributed those goods to the druggists to sell them, and with whom, their Honours might well believe, he had no wish to enter into competition. By so doing he would simply spoil his own trade. Mr. Walker, the proprietor of this medicine, held a licence to sell the medicine, and so had the druggists who retailed it. Thereby the Revenue was protected in every way. The defendant was simply in the position of a commercial traveller, leaving his sample in a sample-room which he kept in Glasgow for his convenience. The boy had no authority, no permission from his master, to sell the bottle. There were brewers' travellers going all over the country with samples, and he had not heard it said that those gentlemen required licences. If defendant had set up a public shop for selling this medicine, employing, and knowingly employing, servants to sell it for him, then there would be a good case for the prosecution. But was he to be incriminated by the act of a careless employé?

After a short consultation with his brother Magistrate,

Ex-Preceptor Matheson said that, considering the circumstances of the case, the Court found the accused not guilty.

Mr. Carnegie, on behalf of the Inland Revenue authorities, intimated an appeal to a higher Court.

AN ARSENIC BLISTER.

At the Portsmouth Police Court, last week, William Burnett, veterinary surgeon, of St. James's Road, Southsea, was summoned by the Royal Society for the Prevention of Cruelty to Animals for cruelty to a mare.

Mr. Clark, solicitor, explained that the allegation was that the defendant applied a blister to the mare containing arsenic.

William Charles Evans, a dairyman, of Grosvenor Street, Southsea, said he went to the defendant and asked him for advice with reference to his mare, which was losing its hair. Defendant gave witness an ointment, and next morning the mare was found lying down in great anguish.

Mr. Feltham, solicitor, for the defence, said his client was not guilty of intentional cruelty. He did not apply the drug for the purpose of causing torture or pain; and if the animal had suffered, the defendant was in the position of a doctor who had been unfortunate enough to give an overdose of medicine.

The case was adjourned till October 5, in order that an analysis of the ointment might be made.

THE VETERINARY SURGEONS ACT.

At Liverpool, on Friday, September 16, Edward H. Walsh was summoned before the Justices, at the instance of the Royal College of Veterinary Surgeons, on a charge of unlawfully describing himself as qualified to practise a branch of veterinary surgery when he was not registered and held no certificate. Evidence was given that defendant's premises were described on a signboard as "Walsh's Veterinary Infirmary for Horses," and on a lamp "Walsh's Veterinary Infirmary." It was contended that there was no offence, as the defendant had not held himself out to be a veterinary surgeon. The Magistrates, however, considered the case proved, but being the first prosecution they imposed a fine of only 40s. and costs.

THE SALVINE TRADE-MARK—TOWNHEAD *v.* PULLEY.

A MOTION in this action came on Wednesday before Mr. Justice Barnes, sitting as Vacation Judge, in the High Court of Justice. The plaintiff sought to restrain the defendant and others from selling or advertising for sale a dentifrice under the name of "Salvine." The motion having been opened, Mr. Waggett, for the defendant, raised the preliminary objection that the plaintiff was not the registered owner of the trade-mark. The mark was registered by Dr. Alva. Counsel for the plaintiff said the trustee in Dr. Alva's bankruptcy had been made a co-plaintiff, and he submitted that this got over the difficulty of the assignment to the plaintiff not being registered. Mr. Waggett then submitted that "Salvine" was not a proper word under the statute for registration, and, on proper application, the mark would be expunged from the register. He had, he said, so good a case that the defendant would undertake to keep an account of all sales of "Salvine," or Dr. Alva's salvine, by him and his agents until the trial of the action. This course was eventually agreed to, and the motion stood over until the trial or further order, costs being costs in the action.

BANKRUPTCY REPORTS.

Re JONATHAN STEPHENS, of 114 George Street, Devonport, Chemist and Druggist.

On September 6, before Mr. Registrar C. V. Bridgman, at the Stonehouse Bankruptcy Court, Mr. J. Greenway stated that the accounts ordered to be filed were voluminous, and so far as he could see they had been very carefully prepared. The accounts comprised no less than 217 sheets, and he had not been able to give them the investigation they required. He therefore asked for an adjournment until September 30. Mr. Jackson, for the debtor, concurred, and the examination accordingly stood adjourned until the end of the month.

Re FRANK NORTHCOTT, 13 Rood Lane, E.C., Chemical Broker, &c. (trading as NORTHCOTT & SONS).

The first meeting of the creditors under this failure was held on Wednesday last at the London Bankruptcy Court, before Mr. E. Leadam Hough, Official Receiver.

The Chairman said that owing to delay in filing the statement of affairs he had not been able to have circulated the usual summary and observations upon the failure. The statement showed:—Assets: Cash at bank, 15*l.* 1*s.* 7*d.*; stock in trade, 1*l.*; office-furniture, 20*l.*; book-debts, good, bad, and doubtful, 63*l.* 1*s.* 11*d.*; total, 99*l.* 3*s.* 6*d.* There was a further sum of 15*l.* deposited with the debtor's solicitors against the cost of the petition. The other side of the accounts showed unsecured creditors, 840*l.* 18*s.* 6*d.*;

partly-secured creditors (holding security valued at nothing at all), 1,328*l.* 14*s.* 7*d.*; contingent liabilities (expected to rank), 451*l.* 4*s.* 6*d.*; total, 2,620*l.* 17*s.* 7*d.* The receiving order was made upon the petition of the debtor, who had also been adjudicated bankrupt. For some years prior to 1830 the debtor carried on business as a chemical broker at Rood Lane, in partnership with his father and brother, and after the death of the father, by himself and his brother, who under the partnership articles became entitled to the father's share subject to the payment to the widow of a capital sum of 1,500*l.*, and an annuity of 500*l.* until 1896. The annuity had not been paid since 1886, when the debtor and his brother made an arrangement with their trade creditors under which a composition of 1*s.* 9*d.* in the pound was paid on liabilities, amounting to between 3,000*l.* and 4,000*l.* The partnership was dissolved about June, 1890, since when the debtor had traded alone. The partnership liabilities now outstanding appeared to amount to 1,885*l.*, exclusive of the amount owing to the debtor's mother, who makes no claim. The debtor admits that he has been insolvent since 1887. The books of the business appeared to sufficiently disclose the business transactions and financial position of the debtor.

Messrs. Barlow & James, who represented the debtor, stated that their client was not prepared to submit any offer with a view to the avoidance of bankruptcy.

No resolutions were passed at the meeting, and the Chairman intimated that, acting as trustee, he would administer the estate in due course of bankruptcy. He regarded the prospects of a dividend as very poor.

The debtor was ordered to attend the Court on October 21 next, at noon, for the public examination.

Unsecured.

	£	s.	d.
Brunner, Mond & Co., Northwich, chemical manufacturers	152	19	0
Godfrey Hall, C., & Co., 89 Regent Street, W. ..	14	0	0
Imbert, B., & Co., Paris	59	6	0
Jacoby, J., Paris	271	6	0
Northcott, J. B., executors of, Manchester ..	285	10	0
Stimson, W. A., 9 Hanover Square, W. ..	23	17	0
Vivian, H. H., & Co. (Limited), Swansea ..	24	5	8

Fully Secured.

Economic Assurance Society, 6 New Bridge Street, Blackfriars	104	0	0
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Partly Secured.

Lawes, J. B., & Co., 23 Mincing Lane, E.C. (Security valued at <i>nil.</i>) ..	1,328	14	7
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Gazette.

PARTNERSHIPS DISSOLVED.

Crompton, Merrall, & Lucas, Bury, surgeons and apothecaries.
 Ellis & Parker, Cleckheaton, Yorkshire, manufacturing chemists.
 George Miller & Co., Glasgow, manufacturing chemists.
 Martin, J., & Martin, S. W., under the style of J. Martin & Sons, Chesterfield, veterinary surgeons.

SCOTCH SEQUESTRATION.

Dobbie, J., Leith, pavement and cement merchant, and under the firm of Dobbie, Sons, & Co., Elliot, near Arbroath, chemical manufacturers, September 27, at 3 Dowell's Rooms, Edinburgh.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Tuke, John Henry, Cambridge Street, Pimlico, surgeon.

ADJUDICATION.

Rogers, George P., late New Cross Road, S.E., and Amersham Vale, New Cross, surgeon.

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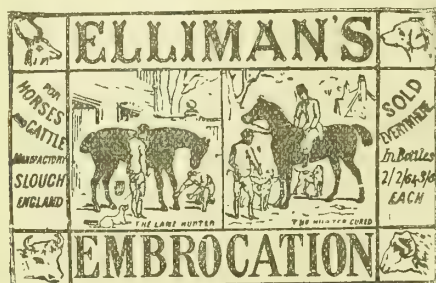
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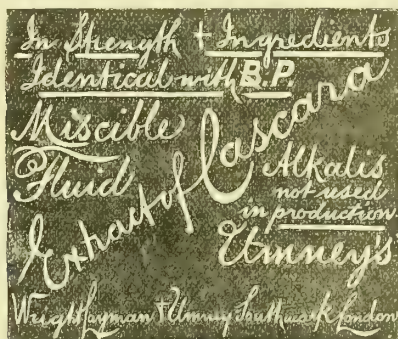


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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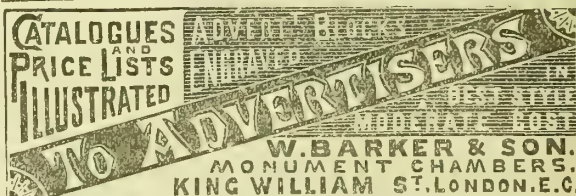
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Editorial Comments.

IRISH ELECTIONEERING TACTICS.

THE annual meeting of the Irish Pharmaceutical Society is appointed for Monday, October 3, at 7.30 p.m., and it is looked forward to this year with especial interest in consequence of the keenness with which the battle for seats on the Council has been contested between the two parties in the Society, the pharmaceutical chemist "members" and the druggist "associates." The Council consists of twenty-one members, and the associates have a legal right to seven of the seats, if they can capture them. The members, on the other hand, have the right to occupy the whole of the seats if they think fit to do so, and if they are numerically strong enough.

There is not much doubt that when the last Irish Pharmacy Act was drafted and passed through Parliament the idea of its promoters, and perhaps also of those members of Parliament who supported it, was that it would in some sort of way ensure the proportion of one third and two-thirds on the Council, which it allowed. To make that result more probable, a cumulative vote should have been provided, or at

least no voter should have been allowed to select more than fourteen representatives. Either of these methods would have given the minority a fair chance. Last year the "members" developed a voting-power at the poll more than double that of their colleague-rivals, and it was only by their grace that two druggist representatives were admitted to the Council. For the coming election, however, the "associates" have been working hard to make up leeway.

In accordance with the rotation-list, seven members of the Council retire, but are eligible for re-election; of these one (Mr. Gibson), is an associate druggist, and the other six, members. By the elections at the last Council-meeting, our correspondent estimates, the associates had succeeded in securing a majority, and they publicly boasted that they intended sweeping off the Council those members who had been particularly prominent in instituting prosecutions of druggists for compounding. Mr. Wells has the honour of being specially selected as an anticipated victim. In the contest for supremacy an unreported incident which occurred at the last Council should not go unrecorded. As was shown in our report a large number of druggists and a small number of pharmaceutical chemists were elected. These had been nominated at the August meeting. The rule concerning candidates for membership or associateship provides that candidates shall be proposed at one meeting and elected at the next, so that in the ordinary course of events candidates proposed at the September meeting would not be elected until the October meeting—that is, after the Council election would be over. Last year, however, at the request of a representative of the druggist party a special meeting of the Council was invoked to elect a dozen belated candidates—Mr. Wells, who was then filling the President's chair, immediately capping the druggist list with three dozen pharmaceutical candidates. This year Mr. Wells himself took the initiative. At the end of the Council-meeting he proposed a list of candidates for election. Mr. Gibson asked if those candidates would be elected in time to vote at the coming election. The Chairman said he thought not. Mr. Gibson then inquired if it were intended to call a special meeting to elect them, as if so he would propose a list of druggists himself. He thereupon took up a calendar or book and commenced writing out a list of names. Leaving him thus occupied the pharmaceutical members of the Council left in a body, so that when the list was handed in the only members present were Mr. Hayes (President) and Messrs. Boyd and Gibson. As seven is the number required to form a quorum, there could be no valid nomination. We understand that a special meeting was called for and held on Wednesday, September 20. Mr. Boyd, it was said, was prepared himself to pay the subscriptions of the candidates whose names he and Mr. Gibson were ready to submit. The last move of the pharmaceutical party has brought about practical equality in the voting-power of the rival parties.

THE REVIVAL OF THE SOUDAN GUM-TRADE.

The recent arrival of numerous consignments of Soudan acacia gum in Trieste, Liverpool, and London points to the reopening of what used to be the main source of our supply of gum arabic. It is almost exactly ten years ago since the regular flow of Soudan products, among which gum arabic and senna-leaves were, from a pharmaceutical point of view the most important, ceased to find its way to the European markets, though for some years subsequent to 1882 small consignments continued to trickle through the silent wastes of the desert by circuitous routes. Not until a considerable

time after the actual closing of the Soudan to foreign trade, the want of the gum, which had been the staple kind used in the drug-trade, began to make itself seriously felt. One of the reasons why the Soudan gums did not advance in price as rapidly as might have been expected was that the crops immediately preceding the breaking-off of the communications had been exceptionally plentiful, and that a very large stock had accumulated at Trieste and other ports. Another reason was that no one in the trade had the least idea that the isolation of the equatorial provinces of Egypt would last longer than one or two seasons at the most. Such a complete and prolonged cutting-off from the outer world of an immense tract of country, as we have witnessed in the case of the Soudan, is quite unprecedented in the history of modern commerce, and will probably never be repeated, while the growing tendency to introduce economic products in exotic countries where the conditions seem favourable to their successful cultivation, tends to diminish rapidly the discomforts that formerly resulted whenever an area of production became temporarily inaccessible. In the case of senna-leaves, for instance, the closing of the Soudan has been hardly noticed, as the supplies which we receive from Southern India have been quite sufficient to prevent any scarcity. The cessation of the Soudan gum-trade, too, called forth abundant supplies from many countries, including several which had never been suspected to be able to furnish the drug, while it stimulated the efforts of technical investigators to discover processes for the manufacture of gum substitutes, and for rendering soluble certain kinds of acacia of which the natural supply was known to be plentiful, but which were rendered practically worthless by their insolubility.

These efforts have been crowned with a not inconsiderable measure of success, and it is now generally admitted that artificial gums have superseded the natural product in many manufacturing processes. But it is by no means unlikely that the opening of the ordinary sources of supply may again drive the substitutes off the market, especially if the price of Soudan gums should once more fall to the level occupied just before the Egyptian campaign and the rise of the Mahdi.

This contingency is rendered still more probable by the fact that the Kordofan gum is admittedly the best for pharmaceutical and confectioners' use, that, in nominal times, it is obtainable in sufficient quantity to satisfy all requirements, and that it can be sold at prices which will favourably compare with those of its competitors.

The first effect of the internal troubles in the southern provinces of Egypt upon the gum market was a rise of "Turkey sorts" (*i.e.*, the natural gum from Kordofan, from which the white drop is selected) of about 5s. to 7s. 6d. per cwt. At that time, when 45s per cwt. was considered a fair price for "sorts," such a rise was serious enough. At the end of 1882, however, fresh supplies were received in Cairo, and it was not until the latter part of 1883 that speculators began to concern themselves seriously with the article, the result being a rise in value to the then exceptionally high point of 110s. per cwt. Although a momentary depression followed, a renewed and steady rise in prices set in again at the end of 1883. The extent to which it was warranted may be gathered from the fact that the arrivals of gum arabic in Trieste, which in 1880, with a nominal trade, amounted to 20,637 serons, declined to 10,383 serons in 1883, and to 5,983 serons in 1884. By the autumn of 1885 almost the last seron of old stock in the importers' hands had been cleared, and in February, 1886, only eight serons of genuine Soudan sorts, it is said, were left in Trieste. About that time 220s. per cwt. was paid for natural Kordofan gum in Liverpool, and a year afterwards the same kind of gum

actually realised 340s. per cwt. That was the highest figure of which we have a positive record, though it is said the business was done at still higher rates. In the beginning of 1887 the Soudan was officially proclaimed open to trade; but, although it was freely stated that immense stores of gum had been hoarded at various points of the country, in anticipation of the resumption of traffic, nothing worth speaking of was forthcoming. Matters remained in this condition until last July, when consignments of Soudan gums commenced to arrive in Liverpool, and by the latest accounts large shipments are on the way to various European ports. These shipments probably consist of gum arabic of the crop which was harvested in Kordofan in the beginning of this year, and there is every prospect that what is now on the way will be sufficient to keep the prices down to a point close to that they have now reached—viz., 75s. to 80s. per cwt., until next season's crop is ready for the market.

One effect of the resumption of the Soudan trade will probably be to depress still further the value of the heavy stock of East Indian, American, Australian, Niger, and Cape gums, which has accumulated in London and Liverpool. The finer Cape and Mogadore gums, and the gum from the Senegal district, which profited greatly by the absence of Kordofan acacia, will either have to come down in price very considerably, or withdraw from competition. The Bordeaux firms who control the Senegal gum which has served pharmacists well while their accustomed source of supply was blocked, have reaped a splendid harvest while they had a chance, and the clipping down of their profits to a reasonable margin will not be regretted. Exporters of East Indian gums will do well to moderate their shipments, so as to give their correspondents here an opportunity of working off the ten or twelve thousand bales that are lying in our warehouses. As for the Niger and Brazilian gums, if they do not become drugs of the past it is at any rate probable that they will soon recede to something like the position of pharmaceutical curiosities which they occupied only a few years ago.

THE NEW SESSION.

WITH the close of September holidaying comes to an end, and the winter's work of schools and societies begins. The alteration of the dates upon which the English Pharmaceutical Board of Examiners has been accustomed to meet has caused an alteration also in some of the training-schools, the session with them now beginning in August. But this only affects those who are eager to meet the examiners in October, and the latter month is likely to remain for scholastic, as for scientific purposes, the beginning of the session. At any rate, the School of Pharmacy, which is generally regarded as touching the high-water mark in pharmaceutical education, retains the old order of things, and it is not probable that it will ever depart from this. October 5, therefore, is fixed as the date of the opening of the session at Bloomsbury Square, and this year exceptional interest is attached to the occasion from its being the fiftieth anniversary of the opening of the School. It has a brilliant record to look back upon. Men have come out of the School who have stuck to pharmacy and done well for it, and many have been trained there too, even through scholarships, who have preferred to attach themselves to higher branches of science, and it is to the school's credit that the names of some of its pupils have illumined the annals of chemistry and medicine. The man which the occasion requires should be a sparkling one, and Mr. Carteighe, the singer of the day, as a student of the sixties, should do justice to his theme.

We shall not anticipate him. There is just one point which requires comment: it has been decided to meet on the occasion at 3 o'clock in the afternoon. We hope that that experiment will not be repeated throughout the winter. Afternoon meetings of a scientific nature are not at all popular, even in the ethereal precincts of Albemarle Street and Piccadilly. The hour of 3 would kill the pharmaceutical meetings for ever, and, in spite of the interregnum of lectures, we trust that the evening meetings will be resumed this winter with a good dash of the old enthusiasm and vigour. We sadly want another Redwood to manage them. Sheffield has the credit of being second in the field, the Chemical and Pharmaceutical Society there having secured Mr. W. G. Cross to open its session on October 13, but we hear that the Assistants' Association have the arrangements for the first part of the session complete, and after the kick-off on the Fifth they will be prepared to put a good team in the field. And what is being done out of London? That is what we wish secretaries of associations to tell us now. To assistants' associations, which at the present time constitute the bulk of co-operative effort in the progress of pharmacy, we would repeat the advice which we have given so often—that their efforts should have the primary object of improving themselves. As soon as they begin to compete with each other for a reportorial record, so soon do they neglect the first functions of their existence. We hope to see proof of personal effort in the winter's programmes; but let there be distinct evidence of educational aspirations, and a desire to foster sound business principles as well as abstract science.

COMMENTARY.

HOW CAN THIS BE BALANCED?—The twenty-fifth annual report of the Hospital for Epilepsy and Paralysis has inserted in it a crimson slip bearing these words:—"The balance at bank at the end of April, after allowing for the current accounts to date, would be only 65%." How can the committee of management reconcile this statement with the fact that the 60-page report is printed on hand-made paper, bound in all the elegance of parchment covers? In "a brief appeal" the committee state that the average annual receipts from all sources are 1,006*l.*, and the expenditure 2,026*l.*, showing a deficit of 1,020*l.* Yet, two pages before, the ordinary income are shown to have been 1,711*l.* 16*s.* 9*d.*, and the expenditure 1,839*l.* 5*s.* 8*d.*, but there was money enough in hand to invest 300*l.* in New Zealand Government Stock. These also are figures which do not balance happily.

FOR A CIRCULAR COMPETITION.—A Darlington chemist, who describes himself as A.P.S.G.B., issues an ingeniously-worded circular about his "Taraden bitters." This is the formula for them as he prints it:—

Barabet (kidney stimulant).
Hops (nervous stimulant).
Soffina (an alterative).
Popeltat (for constipation).
Picel (tonic bitter).
Gelut (digestive agent).
Opbet (dyspeptic tonic).
Taraden (liver stimulant).

Of each, two pennyworth.

Then follow therapeutic details concerning each of these ingredients. The names quoted appear to be invented to disguise pretty well known drugs. *Barabet* is *buchu* (*Barosma betulina*); *Soffina*, *sassafras* (*S. officinalis*); *Popeltat*, *podophyllum* (*P. peltatum*); *Picel*, *quassia*

(*Pieræna excelsa*); *Gelut*, gentian (*G. lutea*); *Ophet*, chiretta (*Ophelia chiretta*); and *taraden* is *Taraxacum dens leonis*. *Gelut*, we are told, "is a herb which grows on the snowy peaks of the Alps"; *soffina* is one of the products of that immense and fertile country, North America. Among its qualities it is declared to be "an excellent skin inhaler." The author of this circular assures his readers that he "is not a quack or an unknown person, who is seeking to gain money by unscrupulous means. He is an ardent student of drugs, and possesses the silver medal gained at the Edinburgh College of Chemistry and Pharmacy, after two complete examinations. He is a qualified chemist, by examination, and an Associate of the Pharmaceutical Society of Great Britain." If his compound does not do all that he claims for it it will not be for want of bitterness.

A MODERN BURNS.—They say in Scotland of a woman with a handsome dowry that she has "a good tocher." Can we say that of the gentleman who indites the following extraordinary advertisement, which we cut from the *Ayrshire Post*:—

THE DAY HAS COME.

Eager they run, as the crowd to see a fight. You'd be interested, where—certainly, when our immortal Burns had a hand in it. Do not give yourself the opportunity to regret that you are dying when you discover for the first time that you could have lived at least twenty years longer. Oh to think of it. But we give you credit for more sense. Consider what Burns said:—

Pity the sickly human race
That die before your very face,
Sundry disease, then bad complexion,
Pain, misery, and sad dejection.
But don't untimely leave this strife,
Time is saved by lengthening life,
Health and beauty first secured,
Comfort and happiness then insured.
As "Tocher's Drugs" are widely spread,
Cure you when you're half-way dead,
Like tooth extraction without shiver,
The moment out, is gone for ever.
And eager runs the ailing crowd,
When "Tocher's Drugs" resounds aloud,
"Tocher's Drugs" are standard sure,
All excellency, very pure,
Active as the electric spark,
Make matters bright when all is dark.

There's a hint for you and more. Tocher's Drugs are as Shakespeare says—"Pure as the unsullied lily." Tocher's Perfumes—"Sweet as the flowers." Tocher's Medicines for health and beauty.

ROBERT TOCHER, Ph. C., &c.,
10 High Street, Maybole.

LATIN PRESCRIPTIONS.—The *Globe*, which is good enough to assume a general oversight in regard to pharmaceutical affairs, defends the employment of Latin in prescriptions. The question arose in reference to the prescriptions in Latin which the College of Physicians had given for the prevention of cholera. A physician had attacked the form of the formulæ, and he, the *Globe* writer said, "should have been acquainted with at least a few of the reasons which have been given over and over again for maintaining a doubtless unpopular and apparently pedantic practice. No doubt, with particular reference to cholera, a moderately unlearned person, if attempting to make up a prescription for himself, might interpret 'Mist. Cretæ aromat.' as a drop of the 'Creta'—*Hibernice*, 'Cratur'—mixed to taste, instead of an uninteresting chalk mixture. But as a rule the moderately unlearned do not attempt to make up their own prescriptions; and it is just to prevent them from doing so that abbreviated Latin, of a professional quality, is deliberately employed. The principle of every man his own dispenser would not be very different from a general licence for the commission of suicide, at any rate, if not of manslaughter. There are persons who argue that if 10 drops will do them

good, 20 drops will do them twice as much good, and 30 drops three times. There are others who would regard cheapness as of more importance than quality in the purchase of materials. There are others who argue that what cured A of one disease will accordingly cure B of another—the belief in a panacea being by no means extinct—and will pass the prescription on. But it is impossible to enumerate the possible, or even the actual, vagaries of the human mind in relation to medicine. Physicians know them, and, quite apart from their own interests or from any sympathy with the apothecary, they have learned from experience how necessary it is to keep out of mischief those who have not education enough to realise the danger of a prescription not meant for a particular person, for a particular disease, at a particular moment, and under particular circumstances. The Latin for poison is distinctly preferable to the English for homicide."

BOTANIC OBSCURITIES.

RECORDS of smart replies by pupils in Board schools to questions put by their teachers have of late years become so general that the truth of many of them is doubted. Now that technical education is rampant and lectures to all classes are becoming common, we may expect to read some 'cute remarks on deep scientific subjects. As an illustration of what effect lectures have on some minds, a contributor sends us the following verbatim extracts from the note-books of some pupils of his who attended a course of lectures on economic botany, given during the present summer. The members of the class would have been thought to possess abilities somewhat above the average, but when the writer began to elaborate their rough notes their abilities seem to have been put sorely to the test.

On the subject of oak-galls one man wrote as follows:—"Galls are obtained by means of a puncture of an insect into the bark and deposits its eggs underneath. The sap all flows to this and covers the eggs. These eggs hatch and fly away in the shape of a fly. It is a very powerful astringent." The same man informed us that "beech-seeds contains an oil and is used for pecuniary [culinary] purposes."

Another man evidently got somewhat mixed on the subject of wax and water for candle-making, when he wrote as follows:—"Myricas. The wax is obtained from the fruits by emerging them in water which is used for candle-making."

It will, perhaps, be interesting to some botanists who have always associated the palms with tropical countries to know that "*Palmaceæ* is one of the most important natural orders in the United Kingdom." The association of the vegetable kingdom with the United Kingdom in this paragraph makes all the difference.

The following will be of especial interest to pharmacists:—"Gum arabic is obtained by making spontaneous excretions in the bark of *Acacia senegal*." "Chamomiles are used for fermentations for inlaying pain." "Arnica is used for a tincture for sprains, bruises, and chilblains." "Ammoniacum grows to a large size, and is reliable to the punctures of insects." "Calamus deposits a wax known as dragon-fly" [dragon's-blood]. "The astringency of *Areca Catechu* resides in the illuminations" [rumination]. Then came a few miscellaneous trifles, such as "maccaroni and spermacetti [vermicelli] is made from wheat-flour," that "Hosiers are mostly obtained from *Salix viminalis* and *S. vitellina*," and one man gives a detailed account of the "mode of

extricating the turpentine" from the trees of *Pinus australis*.

From these few extracts from unpublished notes of men who have yet their mark to make it will be clear that School Boards have not yet fulfilled their mission.

❖ REVIEWS ❖

AND

LITERARY NOTES.

Poisoning among the Natives of India.

In the new edition of Messrs. Gribble and Hehir's "Indian Medical Jurisprudence," just published in India, a case is cited of seventy men who were poisoned at one time while drinking in a native liquor-shop in Benares the intoxicating spirit distilled from the mhowra-flower. Forty-three of them were conveyed to the hospital and eighteen died outside. One of the servants in the shop, who absconded, confessed afterwards that he had put singhera into the pots in which the mhowra-flowers were steeped. In another instance a young man who had incurred the censure of his family by his dissipated life proceeded to poison them all. He purchased an ounce of aconite-root, which he pounded on a brick, and then put the powder into the vegetable broth for his brother's dinner. Four persons partook of the broth, and were seized with the usual symptoms. The brother died; two women of the family recovered. It is stated that the evidence of the civil surgeon proved that the death was occasioned by aconite, and the crime was brought home to the poisoner, who was brought to justice. Dr. Chevers gives a case from the North-Western Provinces *Police Gazette* of a young man of 21, who confessed that he had—so far as he could remember—poisoned twenty-seven persons. He was, it is added, a professional dhatura poisoner.

A New Course of Experimental Chemistry: Including the Principles of Qualitative and Quantitative Analysis, being a Systematic Series of Experiments and Problems for the Laboratory and Class-room. With Key. By John Castell-Evans, F.I.C. London: Thomas Murby. 8vo. "Course," 236 pp. Key, 204 pp. 6s.

WE have already expressed a favourable opinion of Mr. Evans's "Course" of experiments, and it is unnecessary that we should now say anything more about it except that it is issued along with a "Key and Companion," which is intended for the use of "the conscientious teacher and the earnest student." It contains good lecture-notes or lesson-outlines, explanations of all the experiments, and solutions of the problems. We should like to see pharmaceutical students taught chemistry on such principles as Mr. Evans sets forth. Even though they only had fifty selected experiments to work out, it would do them far more good ultimately than the wearisome identification of simple salts in solution. But, first, we must have more of "the conscientious teacher and earnest student" element in our calling.

Milk: A New System of Rapid Analysis. By J. Barker Smith L.R.C.P. Lond.

THIS is a pamphlet—a 1s. pamphlet—octavo-size, 24 pages, including title-page and preface and the blanks at the back thereof. It is "specially written for Medical Men, Veterinary Surgeons, Chemists, Sanitarians, Dairymen, and Householders." Mr. Smith is kind. He says that "the dairyman or householder may, by his new rapid process, ascertain in one minute, and from a teaspoonful of milk, the percentage of added water, percentage of albuminoids, and integrity of the sample of Milk, Cream, Buttermilk, and Whey." That is the first sentence of the preface in all its italic beauty, and, reading it with the first-quoted sentence, we conclude that the common herd which goes before dairymen and householders is unable to perform the one-minute trick. After

reading the pamphlet, and feeling the impact of the cold and boiling *normes* and the gentler kiss of the boiling and cold *subnormes* upon their cerebral hemispheres, we should not think they would try. Seriously, Mr. Smith takes the measure of permanganate of potash decolorised by a known volume of milk as his basis for calculating its total solids, except fat, and that, we say, is not good enough in the year 1892.

Manual of Urine-testing: Including the Physical Characters, Qualitative and Quantitative Examination of the Urine, together with the Clinical Information to be derived therefrom. Edited by John Scott, B.A. Belfast: W. Mullan & Sons. Pp. 25. 1s.

THIS is for the vest pocket. It is concise, neatly arranged, and contains the particulars and directions which are required in everyday urinalysis. The title sufficiently describes the scope of the "Manual," but, of course, the author has not allowed himself space to be critical.

A Lecture Course in Elementary Chemistry. By H. T. Lilley, M.A. London: 1892. Simpkin, Marshall, Hamilton, Kent & Co. 8vo. Pp. 150. 3s.

WE think the publication of this book is a mistake. Not that it lacks merit—indeed, it is well and carefully written and the author knows his subject, but his method is altogether wrong. He states that he has limited himself to "such ground as students are expected to cover before leaving school or entering upon a specialised course of instruction," and it is upon this basis that we must, of course, form our judgment. Now, the teacher of those who for the first time step on the threshold of science must ever keep in view the comparative weakness in reasoning-power of the juvenile mind, and its intense curiosity in regard to simple physical facts. The latter is the gate which naturally opens to the teacher, and the path thus exposed must be used to lead up to the higher one in which reason or intellectual force plays its part. On these lines such a course of chemistry as the average school-boy can take in during the last period of his school career must be very limited in extent, being chiefly directed to instruct him in regard to the properties of matter, and the more important chemical influences which determine change therein. Hence the gaseous elements and one or two of the metals suffice to provide the experiments that will attract the pupil, and the basis for the education in the principles of the science. Mr. Lilley misses this entirely. Instead of sticking closely to general principles, he goes right through the gaseous and more common metallic elements, even describing the preparation and properties of many metallic salts. This method fails because the majority of pupils have not the memory to take in the exceedingly large mass of material (much of it useless) thus presented to them. The author is, too, somewhat obscure occasionally, his language lacks the simplicity necessary for tyros, and he has not the knack of popularising—e.g., carbon dioxide is not once mentioned as carbonic-acid gas. He tells us that this gas does not support animal life because "it prevents the access of air to the lungs"! We have noted a number of misstatements such as this. The effort at condensation is probably accountable for some of the slips, but the facts remain that they are there, that the "course" is not an ideal one for beginners, and that it lacks many of the details which would have adapted it for senior students.

The Principal Starches Used as Food. By W. Griffiths Cirencester: 1892. Baily & Son. 8vo. Pp. 62. 5s.

THIS is a collection of admirably-executed photo-micrographs (twenty-five in all) of the principal starches. The pictures alone show the characteristic features of each starch, and scarcely need the pithy and interesting notes which accompany them. The collection will be of much use to those who require to determine adulteration of food-stuffs, but the book has distinct educational value. Pharmacists, especially, will appreciate this effort of one of their number.

OFFICIAL APPOINTMENTS IN PHARMACY.

NAVAL HOSPITAL DISPENSERSHIPS.

THERE are fourteen dispenserships in the naval hospitals at home and abroad. Candidates must be not more than 25 years of age, and must hold the Minor or Major certificate of the Pharmaceutical Society of Great Britain, and only Major men can have charge of stores, a duty which adds 1s. to 2s. to the daily pay. Candidates must satisfy the Civil Service Commissioners as to their physical fitness (fee 12s. 6d.). The rate of pay commences at 5s. per day, increasing to 5s. 6d. per day after five years' service, and thereafter 6d. per day every third year until the maximum of 10s. is reached. Quarters are provided, and 6d. per day for fuel and light. Dispensers at Malta and the Cape have 2s., Jamaica and Bermuda 3s., and Hongkong 4s. per day extra. Pensions are granted after 60 years of age, or after 10 years' service to those who are discharged as physically unfit. The rate is a sixth of the pay for 10 years' service, the maximum being two-thirds for 40 years' service. Sick-pay is also granted, as well as liberal holidays. Those who desire these appointments should make a written application to the Director-General of the Medical Department of the Navy, and, as vacancies occur, they will be ordered to attend at his office at the Admiralty, Avenue House, 21 Northumberland Avenue, W.C.

MEDICAL STAFF CORPS.

Dispensing in the army is done by members of the Medical Staff Corps, acting under the supervision of the medical officers. For full particulars regarding the corps see THE CHEMIST AND DRUGGIST, of July 30, page 158, and Aug. 20, page 274. Similar conditions now obtain in the Navy.

POOR LAW DISPENSERS

are appointed under powers granted by an order issued in 1871, which regulates the duties of district medical officers, dispensers, and relieving-officers. The qualifications necessary for appointment are the licence of the Apothecaries' Society of London, or registration under the Pharmacy Act of 1868, or, "some other authority of law in that behalf." This last phrase seems now to apply even to apothecaries' assistants; at least, the appointment of persons holding only this qualification is occasionally made.

Dispensers should rank with other officers so far "as salary, appointment, continuance in office, or suspension from duty are concerned"; but in one matter—that of salaries—this seems to have been departed from; while other officials—relieving officers and pay-clerks—may be and are appointed at salaries commencing at 120l. per annum, rising to 180l., and are sanctioned by the Local Government Board, dispensers, at whatever sum appointed, must be content at starting with not more than 120l. per annum, rising at the end of four years to 140l. Since Mr. Carteighe's assurance at the last annual meeting of the Pharmaceutical Society that "this matter was *then* a subject of correspondence" between the Local Government Board and the Pharmaceutical Society, Poor-law dispensers are looking hopefully forward to better times.

The election of dispensers lies in the hands of the guardians, subject to the approval of the Local Government Board. Guardians have also the regulation of the hours of attendance at the dispensary; each dispenser must devote his whole time to the service of the guardians. The appointment is generally outdoor, and, as a rule, no Sunday duty is required; the hours vary according to the needs or custom of the various districts. The duties, as scheduled by the General Order, are:—

1. To devote his whole time to the service of the guardians as a dispenser, and attend at the dispensary as the guardians may appoint.
2. To take charge of, and keep as carefully and safely as shall be in his power, all drugs, medicines, medical and surgical appliances, and medical stores provided by the guardians for use in the dispensary.
3. To compound and supply all medicines, and supply from the stores under his charge all medical and surgical appliances required by the medical officers for use in the discharge of the duties of their office.
4. To prepare and dispense skilfully and cautiously all prescriptions drawn up and ordered by the medical officers, and punctually to supply the medicines when prepared to the persons authorised to receive the

same, and, when so required by the prescriptions, to express in writing the proper directions to accompany them.

5. To keep an account in a book, to be supplied to him by the guardians, of the drugs, medicines, medical and surgical appliances, and medical stores, submitted to his charge, and, as nearly as may be, of those consumed or supplied to the paupers, and, from time to time, to lay the same before the visiting committee, and bring under the notice of the medical officers, or the visiting committee, the need for further supply of drugs, medicines, and medical and surgical appliances as and when such need may occur.

6. To assist the medical officers in keeping the alphabetical index of the pauper patients attended.

7. To file all prescriptions supplied to him by, or on account of, the paupers, or by the medical officers, and keep them in the dispensary for not less than twelve months after their date.

8. To prepare from time to time, as directed by the committee, an estimate of any medicines, drugs, medical and surgical appliances, and medical stores, which may be required, and a statement, as nearly as may be practicable, of the quantities thereof used and issued to the paupers, or to the medical officers, since the preceding estimate and statement, and an account of the quantities thereof remaining in store respectively, and submit the same to the committee for perusal; to balance the same quarterly, and to submit the same, made up to the last quarter-day prior to the audit, to the auditor of the district comprising the union or parish at that time.

These regulations apply also to dispensers in Poor-law infirmaries; but there the responsibility is divided with the Chief Medical Officer and the Master of the Workhouse, if attached to the infirmary. The dispenser's salary is practically the same as for the out-department; but he often acts also as hospital clerk, by keeping the diet-books, &c., when his salary is proportionately increased, while, again, in some instances the outdoor dispenser may also dispense for the indoor poor, his salary being increased.

Dispensers are entitled to a fortnight's holiday; in most cases the guardians provide a substitute, but at times they refuse to do so, when the dispenser must provide one at his own expense. In case of sickness the guardians must provide a substitute for a reasonable time, and while the guardians may suspend their dispenser they cannot dismiss him without the sanction of the Local Government Board.

DISPENSERS IN COUNTY LUNATIC ASYLUMS.

These appointments are practically similar to those of Poor-law dispensers, but are less numerous. Vacancies are generally advertised in the official journals, and dispensers are appointed by the Visiting Committee of the Asylums Board, who, as individuals, are not open to be canvassed.

The candidate, when appointed, must be able to assist the medical officers with the case-books, pathological work, urine testing, and, in some cases, photography.

PRISON DISPENSERSHIPS.

The appointment of compounders in Her Majesty's prisons is conferred on persons between 24 and 40, who hold the Minor and Major qualification. Salaries begin at 120l. and increase to 140l. per year, with uniform. Applications for full particulars regarding the appointments should be made to the governor of the nearest prison.

LEAVES FROM A RECIPE-BOOK.

Lemon Kali.

Pulv. sacch. albæ	℔. vij.
.. sodæ bicarb.	℥xxiv.
.. acid. tartaric.	℥xxvij.
.. pot. supertart.	℥iij.
Ol. limonis.. .. .	3v.

M.

Soluble Cayenne Pepper.

Digest 1 lb. of cayenne pepper in 1 pint of spt. vin. rect. at a gentle heat for two days; then put it into a percolating-apparatus, and displace the tincture; add to the tincture 1 lb. of common salt, rub them together in a mortar, and add sufficient annatto to give the mixture the proper colour. Then evaporate, and finally dry in a stove at about 120° F. When dried it should be rubbed through a coarse sieve.

Cachou Aromatisé.

Succ. Solazzi	3ij.
Aque	3ij.
Dissolve by the heat of a water-bath, and add—	
Pulv. catechu	gr. 462
Gum. acacie	gr. 231

Evaporate to the consistence of an extract, and then incorporate the following substance in a fine powder:—

Pulv. mastic.	5j.
„ cascarilla	5j.
„ carbo. ligni	5j.
„ iridis rad.	5j.

Reduce the mass to a proper consistence; remove it from the fire, and add—

Ol. menth. pip.	gtt. xxx.
Essent. ambergris	gtt. x.
„ moschi	gtt. x.

Mix, and divide into 1-grain pills.

Fumigating Fragrant Pastilles.

Cascarilla	3j.
Benzoin	3j.
Camphor	3j.
Nitre	5j.
Charcoal	3ij.
Ambergris	gr. x.
Musk	gr. x.
Mucilage of tragacanth	a sufficiency

Powder the ingredients, mix, and make into a stiff paste with the mucilage. Divide into cones, and dry.

Lavender-water.

(1)

Moschi	gr. x.
Sacch. lact.	3j.
Aq. bulient	3ij.
Ol. lavand.	3xiiss.
„ caryoph.	5ij.
„ bergam.	3vj.
Rad. iridis	3iss.
Spt. vin. rect.	3xiij.

Digest the musk and milk-sugar in the water for an hour; cool; add to the rest of the ingredients; macerate fourteen days, and filter.

(2)

Ol. lavand.	vj.
Spt. ether. nitr.	tb ij.
Ess. fabæ Tonkin.	tb j.
„ ambergris	j.
Spt. vin. rect.	Oxx.
Aq. mellise	Ox.

M.

(3)

Ol. lavand. Ang.	3ij.
„ „ exot.	3ij.
Ess. moschi	3j.
Ol. bergam.	3ss.
„ caryoph.	mxv.
Spt. ether. nit.	3ij.
„ vin. rect.	3xiv.
Aq. flor. aurant.	3ij.

M.

Anodyne Toothache-tincture.

Mastic	5iv.
Tannin	5ij.
Camphor	5iv.
Tincture of myrrh	5iv.
Chloroform	5iv.
Tincture of opium	5iv.
Rectified spirit	3ij.

Macerate for a week, and filter.

This makes a very good toothache anodyne, as well as a temporary stopping, and it has the advantage of being comparatively innocuous. Send it out in 5j. bottles, with some absorbent cotton, to retail at 6d.

Directions: Dry the hollow tooth by stuffing the hole with the cotton-wool. Remove the cotton, and immediately place in the hole a fresh piece of the cotton-wool, saturated with the tincture.

Essence of Turtle.

Essence of anchovy	5xij.
Eschalot wine	5xviiij.
Basil wine	3vj.
Mushroom ketchup	3ij.
Citric acid	5i.

Mix.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Luck, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," September 7, 1892.)

"LEMONADE," wording, and circle containing geometrical devices, on four-leaved label; for aerated waters. By Reynolds & Branson, 14 Commercial Street, Leeds. The essential particular is the device. 165,673.

"PLANTA BEATRICE"; for an ointment for the complexion. By L. Isidore, 4 Albany Street, Regent's Park, London. 164,795.

Coat of arms; for chemical substances used in medicine and pharmacy. By Kalle & Co., Castelerstrasse, Biebrich, Germany. 166,177.

(From the "Trade Marks-Journal," September 14, 1892.)

"CAMPBELL'S OINTMENT," signature, and other wording, on label; for ointment for human use. By J. A. Campbell, 64 Commerce Street, Glasgow. The essential particular is the signature. 164,588.

"THE HOUSEWIFE'S FRIEND" and sketch of steering-wheel, on label; for medicated soap. By Wm. Gossage & Sons, Widnes. 165,724.

Sketch of man in top boots and holding riding-whip; for medicinal preparations. By David Williams, trading as D. Williams & Co., 97 Madoc Street, Portmadoc. 165,448.

"BUFFALO," and landscape sketch with a buffalo in the foreground; for chemical substances used in medicine and pharmacy. By the Arracan Company (Limited), 57½ Old Broad Street, London. 165,723.

"HOUP LA"; for medicine for human use. By C. Ellisson, Aire Street, Knottingley, Yorkshire. 165,865.

Sketch of the Old Market Cross, Aberdeen; for mineral and aerated waters. By W. J. Palmer, Holburn Brewery, Aberdeen. The essential particular is the device. 163,858.

"MORRIS SWINTON, MANCHESTER," and letter R in circle; for mineral and aerated waters. By M. Morris and A. T. Morris, trading as Morris & Son, Jane Street, Swinton. 166,182.

(From the "Trade Marks Journal," September 22, 1892.)

"TARINE" and facsimile signature; for patent medicine for human use. By A. Bertelli & Co., 6 Via Monforte, Milano, Italy. 156,153.

"LAVARNA"; for patent medicine for human use. By E. West, 102 Judd Street, Euston Road, London. 166,489.

Device of man examining a boy's foot, and wording; for medicated and perfumed soap. By Isdale & McCallum, Caledonia Soap Works, Paisley. 166,394, 166,396.

"SPARTAN BRAND" and device of a Greek warrior with cloak and shield; for extract of beef. By R. R. Whitehead & D. C. McAuslane, trading as Whitehead & Co., 80 Narrow Street, Limehouse, London. 165,578.

Sketch of a bulldog and name of firm, on label; for mineral and aerated waters. By Read Bros., Highgate Road, Kentish Town. 166,188.

CAMPHOR-GROWING IN FORMOSA.

HOW TO KILL AN INDUSTRY.

IN the island of Formosa the camphor-tree is the predominant forest growth, and may be numbered by millions.

Abundance of Camphor. At present there is enough camphor in Formosa to supply all Christendom for a century. Yet, notwithstanding these facts, the output of the entire island in 1890 was only about 60 tons!

At one time the camphor trade was monopolised by the governor of Formosa and his official staff. The annual output ran as high as 250 and 300 tons, and netted the distinguished syndicate over \$100,000 a year. The profit can be easily appreciated when it is known that the poor peasant was paid 4 cents per lb. for the camphor, which was sold a week afterwards in Hong-Kong for anything between 25 and 35 cents. The monopoly was abolished in 1870 at the inter-

Choked by Taxation. vention of the Ministers of all the Great Powers at Peking. Foreign merchants, especially British and American, prepared to enter the trade on a large scale, but the authorities, with characteristic shrewdness, enacted forthwith a likin, or internal revenue tax, which completely frustrated all attempts to do business successfully.

(1) A tax was imposed upon every pot or boiler, no matter whether used full-time, half-time, or no time at all. This measure caused the camphor-makers to destroy one-half of their plant.

(2) A heavy "battery tax" (or an assessment for the building and maintaining forts in the district) was imposed upon the finished product. This was nominally about 3 cents per lb., but as levied came to twice that figure.

(3) The barrier imposts (or likin proper) were assessed at from 1 to 2 cents per lb. Sometimes a donkey-load of camphor would be obliged to pass six to a dozen barriers between the point of production and the market-place.

(4) An export duty was laid upon the camphor.

(5) A system of terrorisation was set on foot by the subordinate officials, which frightened nearly all the camphor-growers from selling to the foreign hong. Under these circumstances the trade languished, and the supply demanded by Europe and America was drawn from Japan and other countries.

In 1885-86 there was a change in the administration of Formosa, and a more progressive set of men came into office. They began their regime with promise of reform, of new laws for the extension and benefit of the trade, and of a more generous and equitable treatment of the foreign hong. The latter were delighted, and made contracts with the native merchants and farmers for large quantities, to be delivered at the place of production and to be brought down to the port under the protection of official permits.

Promises of Reform. The first consignment arrived promptly and cleared a very handsome profit. The merchants were delighted, but their pleasure was short-lived, inasmuch as the new governor, without a word of warning, re-established the old monopoly. Notwithstanding the contracts then pending between the foreign merchants and native dealers—contracts upon which large sums had been advanced—the internal revenue and Custom House officers seized all the camphor in the market or in transit, permits or no permits. The merchants appealed to the British and United States consular representative in Taiwan-foo, Hon. Pelham L. Warren, in consequence of whose exertions the monopoly was again abolished.

Before the opportunity thus created could be taken advantage of, the local Administration levied a special tax on camphor of 1 cent per lb., exclusive of the internal revenue and export duty. The tax was then raised to 2 cents. per lb. as the price of camphor rose in the Hong-Kong market, and as

The old Adam returns. this did not change the state of affairs, it was again raised, this time to 13 cents per lb. At the same time the camphor-growers were warned by threatening proclamations that they were required to pay this tax in advance upon all camphor produced; that any delinquency or mistake would meet with the severest punishment, but that the "camphor-farm" (a new form of the old Government monopoly) would pay 8 cents per lb. to any and all growers for their crop.

Up to the time of these last enactments the price of camphor had fluctuated locally from 4 cents to 8 cents per lb. It now rose with a jump to 21 cents. The net return to the buyer was about 5 cents on an average; the difference went to the "camphor-farm"—that is to say, about one-tenth part to the members of the official clique, and nine-tenths to the superior officials of Formosa.

This monstrous condition of affairs has remained unchanged since that date. The producers are afraid to deal

The Present Situation. with the foreign merchants lest they be fined and imprisoned for some technical violation of the law. The merchants are afraid of making

contracts which will cause litigation and loss at the hands of the internal revenue and the Customs. The trade has therefore been steadily falling off, and there is every possibility of an utter collapse of the camphor monopoly of Formosa.

The monopoly is singularly devoid of intelligence. The Chinese never dare to go into the interior, where the savages live, and where the finest camphor can be had at almost no expense; but they have passed a law prohibiting all intercourse or commerce with the aborigines, and even forbidding the tourist to enter the latter's territory. There is at present some prospect of a change. The old governor has just been removed, and it is quite probable that his coming successor will inaugurate a wiser policy.

A VANILLA PARASITE.

A FEW years ago, it appears, the Seychelles vanilla-planters were much perturbed by the appearance upon some of their plantations of a vanilla-disease which attacked the best pods on the vine, blackened them at the ends and in the centre, and, in a day or two, caused them to drop off and rot. The Seychelles authorities, believing the disease to be carried to their islands from Mauritius or the Réunion, prohibited the importation of vanilla-creeper from these islands, and applied to Kew gardens for assistance in combating the scourge. The Kew people asked for pods showing the disease in its various stages, but several seasons elapsed before they succeeded in obtaining any sufficiently well preserved to enable them to investigate the origin of the disease with any hope of success. The results of their examinations are embodied in a recent number of the *Kew Bulletin*. They show the disease to be caused by a microscopic fungus, *Calospora vanilla*. The attacked leaves, stems, and aerial roots sent to England from the Seychelles were all covered with fungi—some presenting the appearance of minute red or amber-coloured subterminal pustules upon the leaves, only just visible to the naked eye, and which were found to consist of masses of gonidia of the genus *Hainsea* of Saccardo and Ellis; others (present upon all the dying and dead leaves, along with portions of the stem) being pale-yellow waxy-looking, agglutinated masses of gonidia belonging to the form-genus *Cytispora*. The earliest form of the fungus is the *Hainsea* form, which attacks the living leaves, and by means of its spreading mycelium destroys those organs on which the plant depends for a portion of its food. The *Cytispora* and *Calospora* forms only appear when the leaf is already killed. Experiments made at Kew showed that when the *Hainsea* gonidia are washed off the leaves by rain and carried to the ground, they germinate and produce yeast-like colonies of cells by budding, but what these cells eventually give origin to is unknown. Living vanilla-leaves were infected at Kew with the *Hainsea* gonidia, but always without result, although tried in a variety of ways, both on the upper and under surface of the leaf, and by being placed in wounded parts, from which it is considered that the *Hainsea* cannot reproduce itself directly on the living vanilla-plant. The Kew authorities believe that if all fading and dead leaves were at once collected and burnt, the fungus pest would soon disappear, or be at least so reduced as to produce no appreciable damage.

FRIED SNOWBALLS is the diet which Mr. George J. Seabury says that druggists will come to who do not stop cutting.



Notice to Retail Buyers:—It should be remembered that the quotations in the section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., September 22.

London. The markets have been very quiet this week and there are few alterations to report. In chemicals, citric acid has been in strong demand, and the makers are gradually advancing the prices, while the second-hand are keeping quite close to the manufacturers. Camphor has been again raised by the English makers, the foreigners not following suit, though most of them are out of the market at present. The Scotch chloroform makers have advanced their price. Tartaric acid and cream of tartar are very dull, and if anything again a shade lower. The price of permanganate has come down to its normal condition. Quinine is inactive and a little easier. Salicin is quoted lower. In some quarters in crude drugs the principal excitement has been in crude camphor, in which a very large trade has been done, and now there is scarcely anything left on the spot, much higher prices being quoted. Ergot of rye has also advanced. Cinchona sold steadily at Tuesday's auctions. Ipecacuanha has sold privately at dearer rates, and we also hear of a sale at full prices of cascara sagrada. Persian opium is dearer, and more money is asked for chamomiles, while manna remains very high. Most importers of eucalyptus oil have put up the prices of their brands. The market for orris-root is wavering, and tending lower; star-anise and American oil of peppermint are easier, and the price of valerian-root is also coming down. In outside articles the principal changes are an advance in chillies, olive oil, cinnamon, and arsenic. Bleaching-powder and carbolic acid remain fairly steady; shellac has been irregular, but closes dearer; berzol and stick-lac are both lower.

Liverpool. Our Liverpool correspondent tells us that there have been several alterations in the castor-oil market since his last report. Copaiba remains firm, notwithstanding the arrivals that have taken place. Huanoco coca-leaves have been sold at low prices. Chlorate of potash keeps high. Turkey gum arabic in sorts is rather lower to buy. Guinea grains have improved, while Chilean honey sells at steady rates. African ginger is very firm and dear.

New York. Writing under date of September 12, our New York correspondent states that there is an active jobbing business going forward in the general line of drugs, while the cholera scare has given a pronounced run to Carbolic acid, Bleach, and some other disinfectants. Castor oil is steady at the recent advance. First hands have been cleared of Angostura and Pará Copaiba at firm prices. Central American is available at 32½c. to 33c. No business is reported in Tonquin beans, which are quoted at from \$2.25 to \$2.50 for Angostura, and at 40c. to 50c. for Pará. Vanillas are active in a jobbing way at \$3.7 as to quality. HGH Peppermint oil is being more inquired for, and there has been a slight reaction from the downward tendency of the market. Some 75 cases have been taken up on private terms. The principal holder is "bearing" the market by offering jobbing parcels at \$2.50, while in round lots \$2.60 has been declined, and it is even reported that \$2.65 would be

paid if a seller could be found. Bulk oil is held rather higher out of town than in town, though there is no great amount of business going forward. Domestic Pennyroyal is scarce, and prices vary as to holder, presumably on the score of quality, as high as \$2.75 being asked; but it is said that country holders are prepared to accept reduced figures. A parcel of 50 bales of Mexican Sarsaparilla has just come in, having been previously placed at 12c. It is claimed that none of this is available for outsiders, and that the nominal figure of 17c. to 18c. will be maintained. It is yet too soon to report on this; but 17c. is a high price, and sarsaparilla corners are notoriously prone to break down. Jalap is quiet but firm at 32½c. to 37c. Ginseng is rather weak at \$2.35 to \$3.40 as to quality. Senega is held firmly at 33c. in the West for prime goods (equal to 34½c. here); for spot goods 37c. is wanted here, and it is stated that this price has been paid for one 500-lb. lot. Quinine is gaining ground, and there have been sales of some 100,000 oz. at prices gradually advancing up to 18½c. to 19c. for foreign in large bulk. Domestic is still held at 20c. to 27c., and the near approximation of this price to that for the foreign has resulted in an increase in business in the home-made article.

Expenses on Java Cinchona.

In 1891 the average expenses on Java cinchona-bark sent for sale to Holland were estimated at 4s. 2d. per 100 kilos, for carriage from the plantation to the shipping port, and at 15s. 10d. per 100 kilos, for freight, insurance, brokerage, and sale expenses, the total being, therefore, exactly 20s. per 100 kilos., or 10s. per cwt. The total expense thus incurred on the 3,608,000 kilos. exported from the island in 1892 was 36,000l., and the planters are beginning to ask themselves whether it would not be worth the expense of starting a quinine-works in the island to save such a sum as that.

Discrepancy in Cinchona Analyses.

In our issue of September 3 we called attention to a parcel of 89 bales of Ledgeriana shavings from the Government plantations in Java, which was sold by auction in Amsterdam on August 25 at the parity of 11½d. to 12½d. per lb., and the published quinine-sulphate test of which was 12.5 per cent. Our Amsterdam correspondent now points out that this percentage was declared by the official analyst in Java, where the Government barks are tested, but that when re-analysed in Amsterdam the bark was found to contain only 9.8 per cent. of quinine sulphate. Hence the price paid at auction gave a unit of nearly 1½d. per lb., instead of one of less 1d. per lb., at which the official analysis declares the sale to have been effected. "There are sometimes," adds our correspondent, "big differences between the Java Government tests and those made independently in Amsterdam." The buyers evidently place most reliance upon the latter, which does not say much for the efficiency of the Java Government laboratory.

The Therapeutical Action of Ergot of Rye.

An important contribution to our knowledge of the therapeutical action of ergot has just been published in the *Proceedings of the Dorpat Pharmacological Institute* by Mr. A. Grünfeld, an assistant of Professor Kobert, of Dorpat. Mr. Grünfeld arrives at the same conclusions to which Professor Kobert himself was led some years ago, after giving the subject of the poisonous properties of ergot prolonged consideration, and which are in direct contradiction with the published experiences of many medical men. According to Grünfeld, the efficacy of ergot is strongest in the period immediately preceding the ripening of the rye; it decreases slightly (no matter whether the ergot is preserved whole or powdered) in July and August, and in a more pronounced manner in proportion as its age advances, until it disappears altogether by the time ergot is eight months old. According to Grünfeld, the therapeutic doses of ergot should be increased for every month of its age; thus, if to produce a given effect 15 grains of newly-harvested ergot suffices in July and August, 30 grains will be required to produce the same effect in September and October, 60 in November and December, 120 in January and February, and 160 in March and April, while in May and June the drug has become practically inert. Kobert, it may here be mentioned, has given it as his opinion that ergot

should be removed from the list of medicines in practical use during two or three months of the year.

Quinine Manufacture in Italy.

The two Italian quinine factories (in Milan and Genoa) produce together from 1,000,000 to 1,250,000 oz. of quinine-salts per annum, two-thirds of which are exported. So, at least, says a German official report on the trade of Italy.

ACID (CARBOLIC).—Liquid acid is coming down in price—95° to 98° may now be had at 1s. 8d. to 1s. 10d. per gallon. Crystals, however, have not changed, 6d. per lb. being the price for 39° to 40°, and 5d. for 24° to 35°. Ordinary dark kinds of liquid acid are almost unsaleable.

ACID (CITRIC).—The English makers now ask 1s. 6½d. per lb. for B.P. acid, but in second hands it is still possible to buy at 1s. 6d. per lb. Sales have been made at that figure. Juice is reported dearer—viz., 21l. to 21l. 10s., f.o.b. Messina.

ACID (TARTARIC) shows no life whatever. The English manufacturer of B.P. acid asks 12d. to 12½d.; second-hand English offers at 11½d.; foreign from 11½d. (perhaps 11d.) per lb. upwards.

ANISE.—China *Star-anise* is quite nominal on the spot at 110s. per cwt., but practically there is nothing offering. For arrival lower prices have been accepted—viz., from 82s. 6d. down to 76s. per cwt., c.i.f., for October-December shipment. *Russian* anise has advanced from 20s. to 25s. per cwt. for available lots, and is scarce at that figure.

ANTIMONY.—Crude Japanese slow of sale at 26s. on the spot. To arrive bids at 25s. are being solicited, but are not forthcoming.

ARSENIC has further advanced, and for best white powder on the spot 13l. 10s. per ton net must be paid, while the c.i.f. quotation is 13l. net.

BENZOL.—A slow market. Nineties are worth 1s. 7½d. to 1s. 8d.; fifties, 1s. 4d. per gallon.

BLEACHING-POWDER.—The market is not quite so firm as last week, and 10l. per ton would be accepted for prompt delivery, ex wharf, here in softwood casks. October delivery may be bought at 8l. 10s. to 9l., f.o.b. Liverpool or Tyne, and more distant delivery about 20s. below those figures. Plant-extensions are now in progress at some of the Tyneside works, which, when completed, will cause the possible output to be greatly increased. The present price of this chemical is said to represent a clear profit of over 4l. per ton to the manufacturers.

CAMPHOR (CRUDE).—Though it is very difficult to obtain precise details, there is little doubt that there has been quite a run on the article—the reason for this, it is said, being a telegram announcing that a typhoon had visited the island of Formosa, and effected great damage. It is said that 150s. per cwt. has been paid for Japan camphor on the spot, while the same quotation is made for China, very little of either being offering. The orders are principally from America, and the total business reported amounts to about 4,000 piculs, almost equally divided between China and Japan camphor. The *Bellona* has just arrived with a large cargo, but all of this has already been sold before arrival. The sales, so far as can be ascertained, comprise Japan at 140s. to 150s. landed terms (155s. being now asked, with few sellers), and at 130s. to 137s. 6d. per cwt. c.i.f. for arrival. *China* camphor has been sold at prices ranging up to 127s. 6d. c.i.f. to arrive, and 135s. c.i.f. is asked now. On the spot 160s. is the last quotation. This is what a circular from a China export house says, under date of August 18:—"Japan is nominally quoted at \$42, without stocks. Of Formosa camphor, the existing stock of 206 boxes, and another 550 boxes which have arrived, were sold during the last fortnight at prices ranging from \$39 to \$39½ per picul. Our market is now bare of stocks. Tendency firm."

CAMPHOR (REFINED).—On Monday the English refiners marked their camphor quotations another peg upwards—making bells 1s. 10d. per lb., and flowers and tablets in proportion, with an allowance of ½d. per lb. on half-ton lots.

The German agents have received no instructions as yet to alter their prices, but they say that they are not sellers at this moment, though they would be willing to submit bids of 1s. 6½d. still. For small French bells (German shape) the last quotation was 1s. 7d. per lb., but the agents are practically out of the market.

CANARY-SEED.—The market appears easier and dull. Somewhat considerable supplies have come in from Morocco, and at the spice auctions this week 67 bags fair Tangier seed had to be bought in at 75s.

CANTHARIDES.—*Russian* flies are reported dearer on the Continent. *China* cantharides are dearer, 1s. 5d. per lb. having been paid privately for fair quality.

CARDAMOMS.—Exports of cardamoms from Ceylon, between January 1 and August 29:—1892, 239,308 lbs.; 1891, 188,794 lbs.; 1890, 215,350 lbs.; 1889, 183,705 lbs.

CASCARA SAGRADA.—One broker reports that he has made a sale this week at 25s., and that his principals had thereupon raised the price of the remainder above that figure. There are, however, plenty of other parcels to be had at 25s.

CHAMOMILES.—The crop in Belgium is now harvested, and prices are tending rather higher; finest white flowers are quoted at from 67s. 6d. to 70s.; very dark and ordinary to fair at from 47s. 6d. to 56s. per cwt.

CINCHONA.—At Tues. lay's public auctions a fairly large assortment of bark was offered, the catalogues comprising the following totals:—

		Packages	Packages
Ceylon bark	983 of which	989 were sold	
East Indian bark	461 "	327 "	
Java bark	42 "	42 "	
West African bark	89 "	89 "	
South American bark	761 "	299 "	
	2,342	1,746	

The bark was generally of pretty good quality, and sold well with vigorous competition at a unit of fully 1½d. per lb., or just a shade above the last auction rates. About one-fourth of the East Indian bark was bought in at limits much above its present value, and some 350 bales of old Cuprea were taken out as usual. We believe that 98 bales of Cuprea bark were sold privately the other day at 3d. per lb.—the first sale of this kind of bark which has been made for a long time. The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam factories	162,935
Messrs. Howards & Sons	77,040
Agents for the Brunswick factory	68,294
" Frankfort-o/Main and Stuttgart works.. ..	27,310
" Auerbach factory	21,953
" American and Italian works.. ..	17,375
" Paris factory	1,680
Sundry druggists	18,870
Total quantity of bark sold	395,427
Bought in or withdrawn	52,810
Total quantity offered	448,237

It should be well understood that the quantity of bark bought gives little or no clue to the quinine represented by the purchases, as firms who buy little will sometimes bid for rich barks only, and *vice versa*. The following are the prices paid for sound bark:—

CEYLON CINCHONA.—*Original*—Red varieties: Ordinary thin woody chips, 1½d. to 1¾d.; fair to good bright quilly stem and branch chips, 2d. to 3½d.; chips and shavings mixed, 2d. to 3d. Yellow fair to good quilly chips, 3d. to 5d. Grey: Ordinary to fair quilly chips, 2d. to 3d.; fair shavings, 2½d.; fair to good quilly Hybrid stem and branch chips, 2½d. to 4½d., ditto shavings, 2½d. per lb. *Renewed*.—Red Varieties: A large quantity of fair to good bright strong quilly stem and branch chips, 2½d. to 3½d.; fine ditto, 4½d. to 5d.; ordinary thin twigs, 1½d. to 2d.; fair shavings, 2½d. per lb. Good yellow chips, 8d. per lb. Fair grey chips, 4d. to 5d. per lb.

EAST INDIAN CINCHONA.—*Original*.—Red Varieties: Fair irregular druggists' quill, 3½d.; mixed chips, 2½d. to 2¾d.;

fair bright quilly chips, $2\frac{1}{2}d.$ to $2\frac{3}{4}d.$ per lb. Grey varieties: common lean to good strong quilly stem and branch chips, $2d.$ to $5\frac{1}{2}d.$; fair to good chips and shavings mixed, $3\frac{1}{2}d.$ to $5d.$; good root, $4\frac{1}{2}d.$ to $5\frac{1}{2}d.$ per lb. Renewed red chips, $3\frac{1}{2}d.$; grey chips, fair, $4\frac{1}{2}d.$; good to fine strong quilly, $6\frac{1}{2}d.$ to $8\frac{1}{2}d.$; one lot of 10 bales of very fine quality, testing over 8 per cent. of quinine sulphate, $10\frac{1}{2}d.$ per lb. For a parcel of fine shavings a bid of $7\frac{1}{2}d.$ per lb. was refused, $10\frac{1}{2}d.$ per lb. being named as the price.

OTHER BARKS.—Java Ledger chips sold at $3d.$ to $3\frac{1}{2}d.$ per lb. For fair sound red African bark in quilly chips $3\frac{1}{2}d.$ per lb. was paid, and a parcel of South American *Calisaya* from the Bolivian plantations realised from $5d.$ to $6\frac{1}{2}d.$ for fair broken, and from $7d.$ to $8d.$ per lb. for good stout quill, damages bringing from $7d.$ down to $4\frac{1}{2}d.$ per lb. Exports of cinchona from Ceylon from January 1 to August 29, 1892, 4,171,955 lbs.; 1891, 3,429,621 lbs.; 1890, 5,295,896 lbs.; 1889, 6,194,962 lbs. The quantity of cinchona brought to Colombo by the Ceylon government railway from up country between January 1 and August 7 was 1013 tons in 1892, against 1,024 tons in 1891. The shipments from Java in the month of July of the last five years, were:—

—	1892	1891	1890	1889	1888
	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.	Amster- dam lbs.
Government plan- tations	10,162	60,930	12,487	34,827	11,021
Private planta- tions	258,932	1,103,173	373,025	270,510	162,930
Total ..	279,094	1,164,163	385,512	305,337	174,001

CHILLIES.—Zanzibar chillies have considerably advanced, and for good bright quality 65s. per cwt. is asked, a rise of fully 15s. At the auctions from 61s. to 69s. per cwt. was paid for fair to good bright *Sierra Leone*, *Capsicum* sold at 28s. 6d. for small red Madras, and 85s. per cwt. for fine picked Natal.

CHLORATE OF POTASH.—The Alkali Union's price is now 8d. per lb., f.o.b. Liverpool, but second-hand sellers, both at that port and here, are willing to take from $7\frac{1}{2}d.$ to $7\frac{3}{4}d.$ per lb., according to quantity.

CHLOROFORM.—The Scotch makers have advanced their prices to 1s. 4d. and 1s. 5d. per lb. respectively.

CINNAMON.—There has been more demand, with sales of 100 bales Ceylon, usual assortment, at $5\frac{1}{2}d.$ c.i.f. terms for September–October shipment. At auction 123 bags Ceylon chips were partly sold at $1\frac{1}{2}d.$ per lb.

COCA.—Two cases Darjeeling (E.I.) coca, small and partly broken thin leaves, of little flavour, were bought in at 1s. per lb., and one bale of good rather greyish thin and broken *Truxillo* leaves was bought in at 2s. 6d. per lb. at the last drug sales.

COPPER (SULPHATE).—The price for fair quality is 14l. 5s. on the spot, and 14l. 10s. in Liverpool.

CREAM OF TARTAR is flat. Best white French crystals may be had at 83s. to 83s. 6d. per cwt. now; powder at 84s. 6d. per cwt.

CUBBS.—From Amsterdam we hear that the market is declining through want of demand, though not because of heavy arrivals. It seems that buyers generally are but poorly stocked; but they are afraid to replenish their wants, through the fear of excessive production which they expect to take place in the near future. If the fear should prove unfounded, an improvement in prices may be expected. The recent arrivals amount to 187 bales of cultivated berries, 97 bales of mixed berries, 151 bales of stalks, and 22 bales of dust.

CUMIN-SEED.—Mogadore seed is offering at from 22s. to 25s. per cwt. Malta is selling slowly at 42s. 6d.

ERGOT OF RYE.—Further arrivals of new Spanish ergot have taken place this week. The market here is generally firm and tending higher; 2s. 6d. per lb. is said to have been

paid for fine *Belgian* on the spot. New crop Russian ergot has been offering this week at 2s. 3d. per lb., c.i.f. terms, but it is not certain that it could now be bought at the price. We hear that a newly-arrived parcel of exceptionally fine *Spanish* ergot is limited at 3s. per lb. The Hamburg exporters are said to be selling German ergot to France at the rate of 2s. 6 $\frac{1}{2}d.$ per lb.

GALLS.—China galls have been sold at 53s. 6d. per cwt. for good quality, which is slightly dearer. Plum-shaped galls are offered for arrival at 52s. per cwt., c.i.f. terms.

GAMBIER.—Easier. The spot value is 19s. per cwt., with a small stock.

GINGER.—Jamaica root was not offered at this week's auctions, and for *Cochin* there was no demand. For fair *African* 34s. 6d. was paid, while fair *Bengal* realised 30s. per cwt.

GLYCERINE.—There has been a fair amount of business lately, and the agents say that they are confident that prices have now touched bottom. Double-distilled German s.g. 1.260 is still to be had at 43s. per cwt.

GUM ARABIC.—Soudan sorts are still arriving with the result that prices are tending downwards. Fair pale sorts may now be had at 75s. per cwt.; very fine picked *Trieste* gum is offering at 18l. and pale grains at 8l. 15s.

GUM KINO.—Bright East Indian kino has sold privately at 110s. per cwt.

HONEY.—There has been a good demand for Jamaica honey lately, and some advance has been paid on the last drug-sale prices.

INDIARUBBER is very firm, with buyers of fine *Pará* on the spot at 2s. 9d., but no sellers under 2s. 9 $\frac{1}{2}d.$ per lb.

INDIGO.—East Indian is very firmly held here, and small quantities of *Kurpah* and *Bengal* dye have been made at very high prices. The crop news from Calcutta continues to point to a very considerable shortage in the output of the Behar, Lower Bengal, Benares, and the North-west Provinces.

IPECACUANHA.—A further advance has been paid since the last auctions; *Rio* root which there fetched 7s. 8d. per lb. has been resold at 8s. per lb., and for good stout root 8s. 3d. per lb. has been given. Good *Cartagena* is said to have been sold at 6s. 6d. per lb. The *Oil, Paint, and Drug Reporter* announcement that 400 packages were afloat on London (quoted by us last week) is thus explained:—A London shipper had an order for a small lot of ipecacuanha from an American buyer. He cabled out to him that his purchase of 400 lbs. of root was afloat. The American customer (not improbably with a desire to do what he could to depress the market) showed this announcement of "400 afloat" freely to his friends. Hence the story in the *Reporter* that 400 bales were afloat to London instead of 400 lbs. from there.

MANNA.—Importers are trying to buy back any old parcels of manna they can lay their hands on, and have sold old crop fair flake at 5s. 6d. per lb. on the spot. New flake is quoted at 5s. 5d. f.o.b. in 1-lb. tins, and 4s. 6d. per lb. f.o.b. in bulk.

MUSK.—It is stated that a fair amount of business has been done in fine first pile thin skin Tonquin pods at 73s. per oz.

OIL (COD-LIVER).—The parcel of Norwegian oil referred to in our last report consisted of barrels of the usual capacity, i.e., 24 gallons, not 40 gallons.

OILS (ESSENTIAL).—Star-anise is again lower, 5s. 11d. per lb. having been accepted on the spot. It may be had for arrival at 5s. 5d. per lb. c.i.f. terms. There has been a strong demand for *Eucalyptus* oil, and several importers have raised their prices by 3d. or 6d. per lb. Good quality Australian is now held for 2s. 6d. to 2s. 9d. per lb. American oil of *Peppermint* is lower, and may be had at 12s. 6d. per lb. on the spot, at which figure sales have been made. Business is also reported at 12s. per lb. London terms for September–October shipment, and there are further sellers at the figure. Spanish *Eucalyptus* oil (*Globulus*) has advanced to 3s. per lb. Spanish oil of *pennyroyal* (an article of recent introduction) is selling at 5s. 6d. per lb.

OIL (OLIVE).—Most holders of olive oil in London have advanced their quotations, and now ask from 32s. to 33s. for *Levantine*, 34s. 6d. to 35s. for *Tunisian*, and 35s. to 36s. per cwt. for *Spanish* and *Sicilian* oils. A far larger business than here, however, has been done in Liverpool, where prices have risen to 34s. 6d. for *Smyrna* and *Tunis*, 35s. to 36s. for *Candia*, 35s. to 35s. 6d. for *Messina*, 36s. for *Spanish*, and 32s. to 33s. 4½d. per cwt. for *Syrian* oil. The stock of olive oil of all descriptions in the public warehouses on August 31 was:—

		1892	1891	1890
In London	.. packages	1,567	1,213	1,619
In Liverpool	.. tuns	420	275	615

Reports from abroad are unanimously unfavourable. They may be epitomised thus:—Italy, unfavourable weather, estimates reduced to one-sixth of an average crop; Gioja crop believed a total failure; Messina, market rising. Greece, crop prospects uncertain, but fair; no old stock. Levant, the new crop in Candia will be small, while in Smyrna and the Grecian Archipelago the outlook is very poor. Tunis Morocco, and Spain: out of the market at present. Eating oils have advanced about 6d. to 7d. per gallon abroad, and about 3d. per gallon in England, 4s. 3d. to 6s. being now the price for common to fine in bulk.

OPIUM.—In *Turkey* opium there has been a fair amount of retail business during the week; up to 8s. per lb. has been paid for fine, and 7s. for good seconds. In *Persian* opium the advance still continues; 10s. 6d. per lb. is said to have been paid, and holders do not care to sell any more at that price. The orders have been all for shipment to China, and it is said that over 100 cases have been sent out this week, reducing our estimated stock of *Persian* opium to about 500 cases. In *Persia* the price is said to be still 1s. per lb. above the London parity. The arrivals in Smyrna from the beginning of the season to September 9 have been 2,471 cases, against 1,952 cases in 1891.

ORRIS.—Prices are still very unsettled. For selected new *Florentine* root 102s. per cwt., f.o.b. Leghorn, is asked, but buyers are holding off in anticipation of lower prices as the season proceeds. Good *Florentine* (not selected) is offering at 90s. to 95s. per cwt., c.i.f. terms.

PEPPER has been advancing in consequence of reports of a great falling-off in shipments from the East. At the auctions, however, there was not the slightest excitement. Good *white* Singapore sold steadily at 4½d. to 5d. per lb.; black Singapore was not offered. Some black *Aleppey* pepper fetched 3½d. per lb. To-day prices for delivery are higher.

PERMANGANATE OF POTASH.—The momentary scarcity is now over, and supplies are obtainable at the rate of 75s. for small and 80s. for large crystals (by 10 cwt. lots) from the combination agents. These gentlemen are sore with us for having stated that they were at one moment short of immediately available supplies, and have issued a private circular to about thirty of their friends protesting against flights of fancy on the part of a "Quixotic speculator or sanguine editor." They did not send us a circular themselves, but we have to thank a good many of the recipients for passing their copies on to us. As a proof that the agents were actually at one time short of stock, we were shown a memorandum written by them on August 27 in which they thanked a purchaser for his order, but adding they cannot at present execute it but will book it for delivery in about a fortnight from that day. It is also the singular comment upon the statement made to us by the combination agents that there has been no particular run on permanganate, that a secondhand dealer's stock-book shows that in the last six weeks he has sold for immediate delivery over 200 kgs, and this for the greater part at prices above those quoted by the agents.

QUICKSILVER remains very dull. The importers quote 6l. 7s. 6d.; second-hand holders ask 6l. 5s. 6d., but neither of them seem able to put through any business. A consignment of 85 flasks Borneo mercury has arrived per *Pak Ling* from Singapore.

QUININE.—At the close of last week there appeared some anxious sellers for October–December delivery, and business of second-hand German bulk in that position was done at 9½d. and afterwards at 9¼d. per oz., showing a lower value.

SHELLAC.—The delivery market opened with lower prices this week, there being sellers of TN orange at 82s. per cwt. for November and December shipment. Subsequently the tone improved a little, and 83s. was paid for November TN. Small sales of AC garnet at 74s. per cwt., cash terms, were also reported. At auction on Tuesday the large supply of 1,539 cases was offered, of which about one-half sold at a decline of 1s. per cwt. on garnet (of which 400 cases were offered) and orange. The following prices were paid: Fine orange, ASSL, ordinary reddish worked, 89s.; ditto in flinty block, 80s. to 81s.; second orange, good curly reddish to bright flat worked, 80s. to 81s.; good pale curly, partly blocky, unworked, 81s. to 82s.; bright curly to fair pale flat, 78s. to 80s.; garnet, unworked, partly cakey AC, 73s. to 75s.; button, unworked ordinary seconds, 82s. per cwt. The market closes firmer, with sales of 500 cases TN for October delivery at 83s. per cwt. To-day there are no sellers for TN for forward delivery below 84s., while there are buyers at 83s. 6d.

SODA CRYSTALS.—The London makers quote 67s. 6d., while for other makes the price here is 70s. landed terms, or 67s. 6d. ex ship. On the Tyne 60s. f.o.b. is wanted.

STICKLAC.—Good *Siam* lac, fairly free from wood, may be had at 70s. per cwt. At auction on Tuesday 132 cases fair *Siam* were bought in at 78s. per cwt. There have been rather heavy arrivals.

SULPHUR.—Steady at 6l. 15s. for roll, and 7l. 15s. for flowers, landed terms.

TURMERIC.—*Bengal* root of fair quantity has been sold privately at 20s. per cwt. *Madras* is firm, but with little business. Good bright *China* finger has sold privately at 17s. to 18s. per cwt.

VALERIAN.—Sales of good stout new *Belgian*-root are reported at 32s. to 32s. 6d. per cwt. for prompt shipment. The demand is good.

WAX (JAPAN).—Again lower, with sales of good pale squares at 36s. per cwt. on the spot.

THE LIVERPOOL MARKET.

BALSAM (COPAIBA).—Notwithstanding arrivals of *Maranham* holders are firm, and 1s. 9½d. to 1s. 10d. is asked for bright.

CHLORATE OF POTASH.—The United Alkali Company's price is now 8d., but some second-hand holders ask 7½d.

COCA-LEAVES.—The 22 bales greenish brown *Huanaco* recently offered at auction and bought in at 1s. 3d. per lb. They were afterwards sold at 10d.

GINGER.—*African* is in a very firm position, and 31s. to 31s. per cwt. is asked for really prime sound root.

GUINEA GRAINS.—The position of these has improved, and now 22s. 6d. is asked for clean bright seeds.

GUM (ACACIA).—Holders of genuine Soudan sorts show more disposition to meet buyers' views, and slightly lower prices have been paid for some parcels. Fine sorts, 75s. to 80s.; brown to yellowish, 65s. to 70s. asked.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night,

THE Dutch Government are buying new *Karahissar* opium at the parity of 7s. per lb., f.o.b. here; thus far 80 cases of this kind have been secured by this buyer. Other operators have bought 150 cases of manufacturing kinds at from 6s. 4d. to 6s. 7d. per lb., f.o.b., according to quality. Market active but prices 2d. easier as compared with the previous sales of *Karahissar*.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Irish Pharmaceutical Council Election.

SIR,—Kindly allow me to correct a slight error in the official report of the last Council meeting of the Pharmaceutical Society of Ireland. Speaking of the circular sent out by Messrs. H. Moore & Co. I did not mention my father's name at all, and I referred to travellers of wholesale houses generally, and used Messrs. Moore's name in reference to the circular only in reply to Mr. Boyd's question.

I am not opposed to having retail [we think Mr. Wells means "wholesale"] druggists on the Council, nor did I refer to such in my circular (which seems to give Mr. Gibson so much trouble), but to "those whose trade interests are quite opposed to the best interests of pharmacy."

Now, Sir, I think it would be well if the associate druggists would read the Council reports and judge for themselves who are their best friends, and not let sand be thrown in their eyes by those who are seeking to further their own interests at the expense of the *bona-fide* druggists. Since the passing of the Amendment Act the Law Committee (who are all pharmaceutical chemists) have done much to protect the registered druggist; they have sent out some hundreds of cautionary notices to grocers, ironmongers, and others who were selling poisons, causing them to give up doing so. What have the so-called representatives of the druggists on the Council done for them? They certainly have been successful in getting many placed on the Register who never had any claim to the title of druggist, and in this way have done much harm to the *bona-fide* druggist. Some of these wholesale men have recently been selling poisons to persons who are not on the Register. These persons, in some instances, when cautioned, have stated that they did not know the law. Let all the wholesale firms do what one firm in Dublin is doing—viz., not sell poisons to anyone whose name is not on the Register without first letting them know what the law is. By this means much of the illegal trade which is being carried on now would cease.

Let us have retail druggists on the Council—men who will carry out the law fairly to both parties, and who will not countenance dispensing by druggists; then, and only then, may we expect harmony on the Council.

I am, Sir, yours faithfully,

Dublin, Sept. 20.

W. F. WELLS, Jun.

SIR,—I see it announced in your journal that upwards of sixty associate druggists have been elected at last meeting of Council, the object being, as everyone knows, to turn out the six pharmaceutical chemists who retire this year and are eligible for re-election.

I have always taken up an impartial position between the pharmaceutical chemists and the druggists, as I believe their interests are identical, and that only by the combined and united action of both sections can those interests be effectually safeguarded. Therefore I claim permission to address my fellow-associates on the present crisis without prejudice to either section. I would like to ask of them a plain but important question—viz., On what grounds do they object to those six pharmaceutical chemists?

I have on different occasions been told by associate and registered druggists that certain members of Council are

opposed to the very existence of the druggist section, and that, should the associates ever have the power to do so those obnoxious councillors would be removed. After discussing the *pros* and *cons* of the question very thoroughly, my druggist friends have admitted their utter inability to sustain any charge of unfairness against those particular councillors, and have also admitted that their prejudices were engendered by the travellers of wholesale firms, who had a particular interest in the creation of registered druggists throughout the country.

As the bulk of the associates have very limited means of obtaining information on the subject—inasmuch as the proceedings of the Council committees (where much light on the subject might be gained) are not published—I think it is only right that this aspect of the question should be presented to them.

Some members of Council, connected with the wholesale drug trade, have been over-anxious to register as druggists traders throughout the country whose claims for registration were utterly groundless; and I would ask my druggist friends, is it not a fact, well known to many of them personally, that men were registered who are in every possible respect totally unfit to be entrusted with the sale of poisons to the public? When certain councillors opposed this reckless registration of untrustworthy men, they brought upon themselves the bitterest personal feeling of their colleagues—who were bent on filling the country with those men—and that feeling was very freely conveyed through the channels already mentioned to the registered druggists and there made to appear as the dislike and opposition of those particular chemist-councillors towards the druggists as a body.

This personal feeling is the motor-power of the present opposition to the outgoing chemist-councillors, and, before playing into the hands of their supposed friends, I would ask the associate druggists, in all earnestness, in what respect have those six councillors broken faith with them? Have they not opposed the unscrupulous creation of hucksters throughout the country while their supposed friends have supported it? And was not the judicious curtailment of the sale of poisons and the drug-trade generally the only safeguard for the public, the registered druggists, and the chemists? Any associate who will give these questions his careful consideration must admit that, not only is he unable to find fault with these outgoing councillors, but that he is in honour bound to vote for their return to office.

The associate druggist, as a rule, has some large and flourishing business which requires his constant attention, and, in fact, the drug department is very often the less important of the two, consequently he cannot spare time to make himself up in the minutiae of Council work, much less attend the Council meetings as a member; it is here his greatest difficulty lies. Should he reject the chemist as his representative on Council, he must seek for councillors from amongst those gentlemen connected with the wholesale trade having more time to spare than himself, and who in the past have shown themselves to be actuated by personal considerations, and utterly oblivious of his interests so long as they could bring "grist to their own mill." For the present the associate druggists' interests are safer in the hands of those chemists who have already shown themselves capable of discharging the high responsibility of councillors without prejudice to any section.

I have always upheld the principle of representation on Council for the registered druggist, as provided by the recent Pharmacy Act; but until that representation can be placed in the hands of men above suspicion, men who can be depended on to do what is right in the face of every personal consideration, and men chosen from the ranks of the associate druggists entirely and solely engaged in the retail trade of the country, and independent of the influence of wholesale dealers; until then, I maintain, it is the duty of every associate to uphold the present balance of power and vote for those outgoing chemist-councillors who in the past have fearlessly protected the interests of both sections of our society.

In asking the associate druggists of the country to give these few facts their earnest attention before filling up their voting-papers for the pending election, I believe I am discharging a duty which devolves upon me as an independent member of the Council, and I am convinced that the intel-

ligence and foresight of my fellow associates will at once assert themselves, and with no uncertain sound proclaim in favour of those Councillors who have faithfully and honestly discharged their duty.

I remain, Sir, your obedient servant.

Monaghan,
September 17.
M. R. WHITLA, M.C.P.S.I.

The Irish Examiner in Pharmacy.

SIR,—I beg to remind Mr. Ferrall that the question which I wish to have answered is—

"Did he, as Registrar of the Pharmaceutical Society of Ireland, accept an application for the post of examiner from Mr. T. W. Robinson, whilst that gentleman was still Vice-President of the Society, and therefore ineligible?"

Mr. Ferrall is strangely in error when he states that the election of Surgeon John Evans to the same position, five years ago, took place under precisely similar circumstances. A special meeting of the Council was held on July 22, 1887, for the express purpose of accepting the resignation of Dr. Evans. This left him free to compete for the examinership, to which he was elected at the following meeting in August.

I fear that not even the sanction of the Lord Lieutenant and the Privy Council will be sufficient to relieve Mr. Robinson's friends of their embarrassment. If Mr. Ferrall looks up his file of the *Dublin Gazette*, he will find that the approval of the Lord Lieutenant and Privy Council was given to the election of an examiner by the Society "pursuant to the said [Pharmacy] Act." Now, if the election was not held in pursuance of the regulations laid down by the Act, or adopted by the Society in conformity with the Act, I humbly submit that the approval is null, void, and of no avail. As the Castle people are, I believe, somewhat irritated at the tone of Mr. Hayes' recent letter, they might not be sorry to give the Society some trouble over the matter, if it were brought under their notice.

As regards Mr. Ferrall's suggestion that the appointment of Mr. Robinson has met with the approval of members generally, I have not noticed any enthusiasm amongst them with respect to it; but as I intend bringing the matter before the general meeting, both members and associates will have an opportunity for expressing their views on the appointment.

Yours sincerely,

19 North-East Street,
Dublin, Sept. 19.
JAMES C. MCWALTER.

Cholera-mixtures.

SIR,—It may interest Mr. Pickard, and possibly some others among your readers, to learn that from 1864 to 1867, pulv. aromat. B.P. meant simply aromatic confection without the chalk; in other words, a mixture of cinnamon, nutmeg, saffron, cloves, cardamoms, and sugar.

By the addition of one-third its weight of chalk it became pulvis cretæ aromaticus, or aromatic confection.

To the present generation this is perhaps a matter of merely antiquarian interest; but there are future possibilities in the recommendations of the Royal College of Physicians for the relief of diarrhoea which you publish this week.

A formula for "mist. cretæ aromat." exists in the Pharmacopœia of the London Ophthalmic Hospital, but, as far as I know, nowhere else.

At a time when our rulers aim at making the British Pharmacopœia the standard even in the mere buying and selling of drugs, one feels that a strict adherence to it in this collective prescribing by the Royal College of Physicians would have been at least seemly.

The direction of drop doses of three of the ingredients in the first mixture, in spite of all that has been said and written about the variability of this mode of measurement, is disappointingly retrograde. But, like the Irishman's progress of one step forward and two backward, the "drops" are atoned for by the startling novelty of the last but one of the ingredients.

Unless I am woefully out in my reckoning, this will be the first introduction of cerii et bismuthi salicylas to the notice of a good many dispensers.

And to find such a novelty in the public pronouncement of this venerable and hitherto conservative College impels the question, Is Saul, too, among the prophets?

Yours faithfully,

Market Square, Dover,
September 16.

J. F. BROWN.

SIR,—I see that you noticed, and rather praised, the emanation from the President of the Royal College of Physicians giving directions for the treatment of cholera. In that part of the circular which you did not print there are several suggestions which are more than frail. Among others, the patient is directed to take two teaspoonsful of castor oil in capsules; that means 8 to 10 capsules to be swallowed—a most repugnant operation to almost everyone—and, if swallowed, the stomach will have to try and digest so many cabs of glue (the empty capsules), or it is directed that the oil be taken in warm milk. The vendors of castor oil pride themselves (or should do so) on selling "cold-drawn castor oil," and the M.D.'s say, "Put it into *hot* milk," so as to rancify it and give the patient the gripes. A prescription composed of chalk, &c., is directed, with instructions that if it disagrees you are then to take a mixture of acid. sulph., causing a ginger-beer operation in the poor stomach. But to pass over the many other mistaken directions, we come to the damning clause, the last but one, which directs in plain English a solution of corrosive sublimate— $\frac{1}{2}$ oz. to 3 gallons of water—as a preferable disinfectant to any other. This is to be kept in stone jars or wooden tubs. Fancy an ordinary house having a tub with 3 gallons of this highly poisonous fluid open to anybody! It would be void of any smell, be slightly acidulated, and might and probably would be tasted, if not sipped, by those knowing no better. And the wooden tub soaked with a solution of corrosive sublimate would be a most dangerous household chattel. I have heard this day of the solution having been made up to the formula given by the President of the Royal College of Physicians.

I am, Sir, yours obediently,

EDWIN HAWKER.

59 Blessington Road, Blackheath, S.E.,
September 21.

SIR,—The question of the use of 'conf. aromat when pulv. aromat. is ordered in the Board of Health cholera-mixture as given in Squire's "Companion," was raised by me some few years ago, and the same antiquated name is still used—for what reason I cannot tell. The Pharmacopœia only recognises one pulv. aromat.—viz. pulv. cinnam. co. I have noted against pulv. cretæ aromaticus (conf. aromat.), as your reply to my former query, "The original pulv. aromat. sine cretæ." It seems to me very evident that in using conf. aromat. B.P. for pulv. aromat. in this recipe we are not even loyal to our ancestors. I cannot find anywhere else, in Squire, or in any other book, conf. aromat. ordered as pulv. aromat., and it is incomprehensible why this should be the exception. If we are to aim at precise nomenclature, then for our own integrity let pulv. aromat. be synonymous for pulv. cinnam. co., and that only, and conf. aromat. for pulv. cretæ aromat.

Milton, Sittingbourne.

Yours truly,

ARTHUR STOOKE.

Non-Cutting Arrangements.

SIR,—I have read with some interest the complaint of Mr. W. E. Gaddes respecting the action of the trade with regard to the "Curative Compound." I would ask him this question, "What is he doing to create a demand for the article?" He may rest assured that chemists will not care to stock it until there is some demand for it on the part of the public. I ordered $\frac{1}{2}$ doz. of each size some months since and have not been asked for a single bottle. The reason to my mind is evident: it has not been thoroughly advertised, as the trade were led to expect it would have been. I will venture to say that not one person in a hundred who are perfectly familiar with St. Jacobs oil, knows anything about the "Compound." Let Mr. G. pursue the same policy with this as with the St. Jacobs oil, and the demand will be created. Once this is done the trade will be compelled to stock it, and will not be able to object to the "agreement."

That this can be done, is proved by the experience of Messrs. Blondeau et Cie. and of Messrs. Elliman, whose articles are stocked by nearly every chemist in the kingdom. Let Mr. G. take a lesson from the above firms.

Yours truly,

COUNTRY CHEMIST. (118/25.)

The Holborn Drug-contract.

SIR,—In looking over this week's number of THE CHEMIST AND DRUGGIST, on page 421 under the heading of "Drug-contracts," we notice a paragraph in the report of the late tenders to the Holborn Union which is calculated to convey an erroneous impression as to what has actually taken place, so far as we have been concerned. We have taken the contract for the supply of drugs to this Union annually for the last four years, and we are able to assert that we have not had a single complaint as to the quality of the drugs supplied by us during that period. We unfortunately have not the pleasure of knowing a single member of the Board in question, and in this particular are not so fortunate as some of our opponents. In addition to this, the list submitted for discount by the Union is of a somewhat antiquated character, and we append the prices of some half-dozen of the leading articles contained in the schedule, by which it will be seen that it is "quite possible to supply the articles in question of the purest character" without losing by the transaction—viz., camphor, 2s. 6d. per lb.; cocain. mur., 32s. per oz.; cubeb powder, 6s. per lb.; extract belladonna, 10s. per lb.; morphia, 5s. 6d. per oz.; quinine, 2s. per oz.; liquid cascara, 3s. 4d. per lb.

We remain, Sir, yours obediently,
4 Jewry Street, London, BAISS BROS. & Co.
Sept. 17.

Defence of German Assistants.

SIR,—I see in your journal that one has a bad opinion of the German assistants. It may be possible that the facts of the letter of the continental pharmacist are often true; but he has been too severe. I will explain what German assistants usually do.

The German assistants are not salesmen, and they often do not understand, to talk with the people, because in Germany they never have time to talk very much when they sell anything.

A German chemist shop is quite another thing than an English or French shop. They are much bigger. In Germany we have in a town as large as Geneva only eight shops, and here we have fifty-two. Therefore, we always very much work, and, especially, very many prescriptions to make up. Usually are in a shop two or three assistants, and one has 100-120 or 150-200 prescriptions every day. We cannot have a dispenser and a salesman in a shop, because the salesman would not have enough work. Very often are waiting six to ten people in the shop, and when then a customer would come buy anything, then he must often wait, and afterwards we give it to him very quickly, only saying the price, and do not think of going to the door, or asking him if he wants anything else.

One can very often compare the German chemists' assistants with the employés of the Post Office. We still find in the old shops that the pharmacy is separated from the waiting-room by a wooden partition, with a sliding window in the middle, just like a ticket-office in the railway station; when there comes a customer, he knocks on the window, because it is not always open, especially in the winter, because the waiting-room is very cold, and in the shop is warm, and then they give the prescription; the chemist says when it is ready, and shuts the window.

A German apotheker is not only usually much bigger than an English or French shop, it is also quite another thing, because they are not druggist stores but only chemist shops. The German apotheker have nearly all enough to do with making up the prescriptions, and they have not necessary to sell such things, like the chemists of other nations, like feeding-bottles and sanitary towels, and water-closet paper; also they are not obliged to wrap up the medicaments so nicely, especially because they have not time; they wrap them very quickly in a tissue-paper, and that is sufficient for a medicament in Germany, for a patient will never be angry if his

medicine comes only wrapped in ordinary paper. Another thing is it if one goes in a parfumerie to buy some parfumes; then it is necessary that the parfumer makes a nice packet with strings and sealing-wax. If a German assistant will give another position to the bottles or the pots, then he makes because he has the custom to have the bottles and pots in an especial order. How severe the order in the German shops is can one see if one reads the orders of the Government inspectors. Every bottle must have the name burned in, and the narcotic remedies must be written in red, and kept in an especial room, and the poisons in black bottles with white letters. "Hydrargyra, alcooloida, arsenicalia," must be in a cupboard with double-locked doors. Phosphorus must be under water in a bottle, and this bottle under sand in an iron box, placed in a recess in the cellar with double-locked iron doors, &c.

That the German assistant knows better Latin than the other is natural, because his education is more difficult than of another one. He must be three years apprentice, then he has to make a difficult examen, then three years assistant, and then he must study two years in an university to make his apotheker examen.

If a German assistant goes to work in another country, and if he is not a good salesman, he will take very much care to become one, if he is well treated; but very often the proprietor is not kind to him, and laughs at his scruples and his exactitude, and then of course he is not pleased and things go on badly.

It is a fact that a German assistant can work in every country very soon; but it would be very difficult for a foreign chemist to work in Germany. I hope that I have not made too many mistakes in English, and since you English say "Fair play is a jewel," that you will read my letter with interest.

Yours very truly,

The Anglo-American Pharmacy, MAX WAGNER.
13 Rue des Allemands, Geneva,
September 13.

[We are obliged to Mr. Wagner for his interesting letter. In printing it we retain the few quaintnesses of expression, simply because we think the English of the letter is so excellent that it is quite unnecessary to touch it up, and only fair to Mr. Wagner to give his *ipsissima verba*.]

Seats for Assistants.

SIR,—Much correspondence has been published in the newspapers as to the desirability of allowing seats for assistants in shops, and I should like to know if any of your readers have introduced such an arrangement, and whether they find any attempt at malingering or want of courtesy on the part of assistants owing to the frequency of having to get up to attend to customers? We are all cognisant of the fact that there is a great amount of work in the way of putting up powders, pills, &c., which could be done quite well if the assistant was seated at a proper counter; but there are some of such an easy or indolent nature that if once they were allowed to sit, anyone else more willing—be it either errand-boy or porter—might take the counter-work, and, if neither was at hand, he would move so slowly as to gain an unenviable notoriety for the shop.

Yours,

REQUIES. (112/44.)

Medical Prescriptions.

SIR—May I be allowed to express my views on the subject, looked at from the pharmacist's standpoint, without any special reference to the legal aspect of the question or to the Irish Pharmacy Act in particular?

I should regard the order for Henry's magnesia and Hunyadi-water taken to the Dublin chemist's shop as a prescription, because it is accompanied with precise directions for use, and the name of the patient and the date of the prescription, as well as the initials of the prescriber, are given, all of which are very different to an order for a bottle of whisky.

When a medical man gives instructions for diet and stimulants it is usually on a separate paper, and the patient does not, as a rule, send this for perusal to the purveyors of eatables and drinkables, to be supplied with the necessary

articles. Let us return to the prescription. Supposing the patient came back to the doctor in a fortnight and asked for a slight modification to be made in the prescription, and the doctor altered it accordingly, by adding to the magnesia $\frac{1}{2}$ oz sodii bicarb. and $\frac{1}{2}$ j. p. zingib., or he might direct so much magnes. sulph. to be taken with each dose of Hunyadi-water.

In this case you would certainly have compounding, in addition to the copying of the prescription and labelling and dispensing the medicine which was done in the first instance. As to the query of making a proprietary article from a medical prescription, it takes it out of the category of prescriptions altogether, and classifies it as a recipe; and so long as recipes do not contain any scheduled poison they can in England be compounded by unqualified persons and sold as proprietary medicines.

My idea is that when a prescription is handed about from one person to another it becomes a recipe, and, with regard to copies of prescriptions, I always decline to give them when they contain strong poisons, unless the patient assures me that the original is lost and that the copy is intended solely for his or her personal use; and with regard to repetitions and copies generally medical men and pharmacists cannot be too precise.

Yours faithfully,

PH. CH. (113/5.)

SIR,—In your leader on the "Compounding of Medical Prescriptions," some curious points are raised, and doubts not allayed. What would be the position of the tradesman in Ireland who supplied "beef-steak and onions," ordered by a medical man in writing, and signed by him, with directions as to taking the same? After the specimen medical prescription given in your article, the above is equally rational, and its compounder equally liable.

Yours, &c.,

NEMO. (159/92.)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Should it be Colourless?

SIR,—The following prescription was presented at our establishment to be dispensed:—

Calcii chloridi	5ij.
Hydrogen peroxid. (10 vols.)	3j.
Liq. atropiæ sulph.	℥viiiij.
Syr. ferri phosph. co.	3ij.
Aq. chlorof. ad	3vj.

M. Ft. mist.

What ought the colour of the mixture to be? Will the hydrogen peroxid. bleach the syr. ferri phosph. co.? We sent it out a lake colour, but it had previously been dispensed and was colourless. We have since tried it with two samples (different wholesale houses) of syr. ferri phosph. co. and fresh hydrogen peroxid., and find it does not decolorise.

Yours truly,

H. W. B. (114/68.)

Zinc-chloride Injection.

SIR,—In dispensing the above I always send it out unfiltered, and without the addition of any acid.

Yours faithfully,

J. D. A. (111/56.)

SIR,—Regarding the zinc-chloride lotion, I have dispensed many a quart of it, and have always rubbed up the zinc chloride with the water, and sent out with a "shake." I have never heard any objection to that method. I should consider the addition of acid as quite unjustifiable.

Yours, &c.,

H. R. (114/24.)

SIR,—I have been accustomed to dispense large quantities of the above salt, but only in one case was I authorised to use hydrochloric acid as a solvent for the precipitate. In this prescription it was ordered to be used with a nasal spray.

I remain, Sir, yours truly,

London, September 14.

GEORGE ROE.

A Spanish Prescription.

SIR,—The prescription in your number of July 2, under the title of "Who can read it?" is:—

Extracto blando de quina	Grammes	6
Tintura canela .. .. .	.. .. .	10
Coñae viejo.. .. .	.. .. .	100
Mucilago de goma .. .. .	.. .. .	500
Perclorino de hierro .. .. .	.. .. .	30
Extract of cinchona	Grammes	6
Tincture of cinnamon .. .. .	.. .. .	10
Old brandy .. .. .	.. .. .	100
Mucilage of acacia .. .. .	.. .. .	500
Perchloride of iron .. .. .	.. .. .	30

Montevideo, August 19.

E. E. C.

As this prescription proved a puzzle to British dispensers, we reprint our facsimile of it:—

112/33. *A Student*.—You can only dispense the mixture clear by filtering out the deposited quinine, which, of course, would be wrong.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

113/13. *Acetum*.—There can be no legal objection to the announcement on your gate—"Veterinary medicines of every description."

113/35. *Perplexed*.—In an action under section 15 of the Pharmacy Act, the Judge has no power (in England) to reduce the penalty if the case is proved. The words you quote are from section 17.

112/32. *Vinegar*.—We cannot answer your question more definitely. As we do not know of a case in point, we can only give you inferences.

112/39. *J. E.*—Any seven of you can form yourselves into a limited liability company for the purpose you named.

Whether you have the right to assume the name of the old firm or not depends on circumstances, of which we know nothing. It may be a valuable title to which someone else has a claim. You can get particulars about registration at Somerset House; but you had better employ a solicitor to draw up the articles of association. The registered company may keep open shop as chemists, but sales of poison must be conducted by actually qualified persons.

114/13. *Elector*.—If you can satisfy the Court that you never ordered the goods, and never had them, you will, of course, not have to pay for them.

114/22. *Ichthyol*.—No one can be admitted to the modified examination who did not register his claim before December 31, 1869.

114/60. *Z*.—We should think the proprietor of a business who engages a *locum-tenens* is justified in requiring the latter to put up stock during his spare time in business hours.

117/20. *Menthol*.—An agreement with an assistant that he is not to be allowed to commence business within a certain (reasonable) area, and within a certain (reasonable) period of time, is enforceable.

117/16. *Doubtful* asks if there is any clause in the Pharmacy Act which enables medical practitioners to entrust unqualified men with the dispensing of poisons in their own surgeries, or gives them any indulgence in that direction which chemists do not enjoy. [Nothing contained in the first fifteen sections of the Pharmacy Act, 1868, is to affect any duly qualified medical practitioner. But it appears from the Glasgow cases that if he should keep an open shop an unqualified assistant who should sell a poison therein is himself liable for a penalty. He or a chemist may (at any rate, so far as the Pharmacy Act is concerned) employ unqualified assistants to compound poisons. It is the selling which the Pharmacy Act forbids.]

117/65. *W. C.* asks whether the fact that the Government grants a licence to sell stamped medicines of any kind to an unqualified person could not be pleaded in defence of an action brought by the Pharmaceutical Society against such a person for selling a stamped medicine containing poison? [It could be pleaded certainly; but we should think it would be of no avail. A licence to sell stamped medicines merely absolves the seller from the penalty incurred by selling without a licence. It is purely a fiscal regulation. The holder of a medicine-licence is subject to the provisions of the statute law like every other person; and to urge as a defence that the medicine-licence is a Government licence, which absolves the holder from observing the regulations for the sale of poisons, would probably operate as an aggravation of the temper of the Court.]

115/66. *A. J.*—The seller, for the purposes of labelling, &c., is the person or firm on whose behalf the sale is made.

118/37. *H. S. V.*—The bill would make the preparation liable to medicine-stamp duty.

118/3. *Perplexed*.—We cannot undertake to define exactly what is the personal supervision for sale of poison necessary to ensure the safety from fine as unqualified apprentice or assistant. Mr. Justice Hawkins carefully left that question vague. If you (qualified) take the order, and see the article put up and labelled, we do not think it would be criminal on the part of your apprentice to hand the parcel to a messenger and take the money for it. But that is only an unauthorised opinion. The prosecution must prove their case, certainly, but it is for you to prove your defence. The purchaser of the poison is not bound to say that he bought it for the purposes of prosecution.

117/22. *Comedy*.—You must take a separate licence for each "set of premises." This applies to every Excise licence except those granted to appraisers, auctioneers and hawkers.

120/9. *C. D.*—You can sell or export any patent medicine in Ireland without stamping it.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

1st of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

108/55. *E. V. Z.*—If the deer's heads have already been Attacked by Moths, the best plan is to saturate them with a spray of benzine. This they should get twice or three times a year, and have a piece of naphthalene inserted in each head to keep the moths away. The benzine kills the eggs.

108/73. *Smelling-bottle*.—An Iodised Oil, such as you ask for, is covered by a patent, of which an abstract appeared in THE CHEMIST AND DRUGGIST, December 29, 1888, page 895. It starts with oil, but comes out a solution of saponified oil and alkaline iodide. Try the following:—

Soft soap	3j.
Glycerine	5ij.
Ammonium iodide	3j.
Proof spirit to	3ij.

Mix, and filter if necessary.

108/12. *Subscriber*.—You will find the directions for fixing gold-paper labels on drawers and bottles in THE CHEMIST AND DRUGGIST, May 30, 1891, page 780. The paragraph is too long for repetition. The isinglass is necessary.

109/71. *Semper Idem*.—The particulars about naval dispenserships are given in this issue.

109/28. *A. J. N.*—(1) Four formulæ for teething-powders in last volume. The simplest and safest is in May 28, 1892, page 787. (2) Sachet-powder.—February 27, 1892, page 323, and many others during the past three years. (3) Aniseed Cordial:—

Oil of anise	5ij.
Rectified spirit	Ov.
Simple syrup	Oxj.

Dissolve the oil in the spirit, and add to the syrup. If cloudy, add ½ oz. of washed fuller's earth; shake well, and after an hour filter.

109/5. *Nunquam*.—Black printing-ink is made with linseed oil, turpentine, and lampblack. There is an art in making it, but competition keeps down the price, and it can be bought much cheaper than you can make it. You must please specify the colours you require. White Photographic Varnish:—

Elemi	3ss.
Mastic	3j.
Ether to	3vj.

Macerate until dissolved, and filter. With the filtrate mix a sufficiency of finely-levigated zinc-white.

111/1. *Idle Subscriber*.—(1) See our Cholera Notes of a fortnight ago. (2) No one just beginning to try will succeed in producing a Brunswick Black of superior quality. There is an art in varnish-making which none but adepts

know. The ingredients of the "black" are black pitch and hard gas-tar pitch; 3 parts of each of these and 8 parts of linseed oil are boiled together with 1 part each of litharge and red lead for some hours, and when the proper "point" is reached the product is thinned down with turpentine.

111/26. *W. F.*—Confectioners do not use colourless chlorodyne in making Chlorodyne Lozenges. It suffices to add proper proportions of the more important ingredients of chlorodyne, such as morphine, chloroform, and oil of peppermint.

112/68. *Mucilage* (Ontario).—(1) Cachous are silvered by means of silver-leaf. You may use a covered earthenware pot as a coater. For every two dozen of the cachous use a leaf of silver. The surface of the cachous must be just sticky—dull, not shining with moisture. (2) A strong wheaten-flour paste, with 20 grains of alum to each ounce of flour, is best for sticking samples of cloth on paper.

112/67. *Hepar Subscriber.*—A "Compound antiseptic Biliious and Liver Pill?" Yes; how would this do?—

Res. podophylli	gr. ½
Pulv. ipecac. co.	gr. ½
Ext. nucis vom.	gr. ½
Pil. rhei co.	gr. ½

Make a pill.

An adult may take one or two of these.

112/66. *X. Y. Z.*—Saline.—See our issue of May 21, 1892, page 754.

112/2. *Frank.*—Your "confidence and faith" in us does not allow you to go so far as to tell us what is the matter with you—why you want a tonic and what you mean by getting "the blood into good order." Candidly, are your habits what they should be? Do you feed properly and take a cold sponge down every morning? Young men should not need iron: open-air exercise, regular habits, and an active liver are the best hæmatinics. If you need medicine take a podophyllin pill now and then, and a few days of the following mixture when you are very seedy:—

Acid. nitro-mur. dil.	5ij.
Liquor. strychnine	5j.
Glycerini	3ss.
Aque ad	3viij.

M.

A tablespoonful in a glassful of water before food.

112/50. *Nemo.*—The salt is metaspulphite [or anhydrosulphite] of potash, and is readily obtainable in the market.

113/50. *J. M.*—There is no chemical test for sewer-gas. The nose will detect anything that chemicals would. When anyone is suspicious of drains being wrong the local sanitary authorities should be asked to try them by the smoke-test.

112/17. *Cupri Sulph.*—Curling-fluid for the Hair.—See THE CHEMIST AND DRUGGIST, April 25, 1891, page 606, and August 20 (current volume), page 286.

112/16. *T. H. North.*—White Rose Carbolic Tooth-powder.—See the formula in THE CHEMIST AND DRUGGIST, April 18, 1891, page 575. Omit the camphor and the carmine.

112/19. *Peacock.*—Squire's "Methods and Formulæ" (Churchill, 3s. 6d.) is a book which will suit you for micro-mounting.

113/4. *G. E.*—If you wish to make Coca-wine with sherry, you must first detannate the sherry by keeping a few shreds of gelatine or isinglass in it for ten days or so. Then

use 1 oz. of leaves to the pint; allow to macerate for a week, shaking now and then; strain, and set aside for a month before bottling. See also THE CHEMIST AND DRUGGIST, July 26, 1890, page 136.

113/34. *Midlands.*—See Brant's "Fats and Oils" (Sampson Low)—a somewhat expensive book—but information on lubricants is also given in Spons' "Encyclopædia." (See DIARY, 1892, page 323.)

113/32. *Lichen.*—Borax and Camphor for Hair-wash.—The proportions for the penny packets are ½ oz. of powdered camphor to 1 lb. of borax, with 10 drops or so of oil of rosemary. Mix well. Three drachms is sufficient for a packet. This quantity dissolves at once in a pint of water, leaving no undissolved camphor.

113/9. *Salix.*—We do not know the cold process for Preserving Fruit which you write about. A saturated aqueous solution of salicylic acid would, at least, be necessary. Probably acetic acid is used in the other instance. For bottling plums, damsons, and similar fruits, all that is necessary is to clean and dry them thoroughly, and pack in air-tight jars in an atmosphere of chloroform. The jars should be sterilised by heating in an oven, then put a layer of cotton-wool at the bottom, on this drop a few minims of chloroform, then place in the fruit, cover with cotton-wool, dropping a little more chloroform upon it, and make airtight.

113/18. *W. Waters.*—A solution of soda-ash (1 lb. to 2 gallons of water) is used for cleaning printers' type. Turpentine is used for fine engravings.

113/19. *Menthol.*—We are unable to give you practical advice about making a water-resisting Papier Maché ball. How would it do to saturate with collodion before compressing? When dry this would require a good coating or varnish.

113/24. *A. H. C.*—You will find a number of Formulæ for Chapped Hands in the last four volumes—viz., December 27, 1890, page 876; January 31, 1891, page 156; February 27, 1892, page 299; and April 16, 1892, page 568. We cannot possibly repeat these formulæ or undertake to copy them, but the numbers will be sent by post if the publisher can supply them, and you order them.

113/72. *Jean.*—The Self-inking Pad for rubber stamps is saturated with a glycerine solution of an aniline colour.

116/5. *Chemicus.*—The medicines named in the 1773 advertisement which you quote are all, we think, comprised in the old list (1748), quoted in Alpe's "Handy Book."

113/62. *F. P. W.*—See reply to "Ferrum" on September 10. For brass use nitric acid.

113/65. *Harry.*—Roup Pills for fowls. A good formula is quoted in THE CHEMIST AND DRUGGIST, January 24, 1891, p. 130.

114/9. *Wisberian.*—There is no immediate prospect of a New British Pharmacopœia. January 1, 1901, is the date that Prof. Atfield has in his eye, with an addendum to the present one probably in 1895.

114/15. *Aurantii.*—We have quoted the formula for Elixir Aurantii U.S.P. so often that we must refer you to the last occasion, August 15, 1891, p. 262.

114/30. *R. S. H.*—Liquid Starch Glaze, THE CHEMIST AND DRUGGIST, October 10, 1891, p. 563.

114/28. *Libri*.—A botany text-book, nineteen years old, is not good enough for anyone ambitious to pass the Major. You should get the Gaddes-Behrens mentioned last week.

113/68. *Nagol* asks us whether Thymol should be pronounced thigh-mol or time-ol. Neither; tie-mol is the recognised way.

112/14. *Shemus*.—(1) Eikonogen and hydroquinone-developer. See July 30, p. 169. (2) The following are the directions for mounting Ilford P.O. Paper:—Directly after squeegeeing take a piece of enamelled black paper, which has previously been trimmed to a size $\frac{1}{16}$ of an inch smaller all round than the print. Paste the white side of the paper and place it on the damp print as it rests on the plate. Squeegee well down, and leave to dry without heat. When perfectly dry the print falls off with the backing-paper attached. It can then be trimmed and mounted on card as usual. The black paper must be cut smaller than the print as no paste must be allowed to get over the edges of print whilst on the plate or it will become pasted to it. Do not pull or strip prints as it will spoil results. Prints that have been dried may be glazed if soaked in water for at least an hour before squeegeeing on plate.

114/24. *H. R.*—You do not tell us for what purpose the reducing agent is required.

114/4. *Assistant*.—(1) There is no means for restoring faded photographs. (2) Arsenical paste is used for destroying the nerve, or devitalising the pulp of teeth. See THE CHEMIST AND DRUGGIST, July 18, 1891, p. 89, for directions.

114/34. *Solubility*.—Soluble essence of lemon, THE CHEMIST AND DRUGGIST, May 21, 1892, p. 754. Soluble essence of ginger, August 20 (current volume), p. 275.

112/35. *Thymol*.—We should fix 2s. as the minimum charge for the ointment.

115/29. *Neuralgia*.—(1) To make a Water Filter place a little well-boiled tow in the stem of a funnel, over this a layer of small pebbles, half-an-inch or so deep, then a 1-inch layer of sand, and the same of coarsely-powdered animal charcoal, and lastly a piece of flannel, which is kept down by means of several smooth stones. (2) It depends upon the nature of neuralgia what "the best and most effective treatment" may be. Generally 12 grains of phenacetin or 8 grains of antipyrin relieves. By the way, we are not accustomed having questions pitched at us as if we were candidates for an examination. If that sort of thing were to become general we should close up the columns altogether. We take enough pains in answering questions to warrant querists' treating them as a favour—which they are. This remark applies to some besides yourself.

115/55. *Bichrom*.—Bichromate Battery Solution:—

	Oz.
Bichromate of potash	1
Sulphuric acid	2
Water to	10

Dissolve the bichromate in the water and add the acid. When cold make up to 10 oz.

114/68. *H. W. B.*—Oleum Empyreumaticum.—The empyreumatic oils are oils obtained by destructive distillation, such as tar oil, and oleum animalis, but the latter is more commonly known as ol. empyreumatic.

115/5. *Papier*.—It does not matter what the strength of the alkali bath is so long as it neutralises the residual acid in the paper. A pound of soda ash to 10 gallons of water would suit.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

112/44. What is the average weight of a peck of mushrooms?

118/63. Address of Julius Jeffries & Co., respirator manufacturers.

103/31. Formula for rennet-powder.

DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act making any of these arrangements binding upon dissenting creditors.

Stoveld & Co. (John Henry Stoveld, trading as), 20 Cannon Street and 13 Morning Street, Manchester, surgical-instrument dealer. Trustee, James A. Penny, 30 Dale Street, Manchester, paper manufacturer. Dated, September 9; filed, September 12. Unsecured liabilities, 195*l.* estimated net assets, 75*l.* The following are scheduled as creditors:—

	£	s.	d.
Bridgford & Sons, Manchester	16	10	0
Brown, J., Derby	10	13	6
McMillan, J., & Co., Manchester	19	6	7
Robinson & Son, Chesterfield	32	8	10
St. Dalmas, A. de, Leicester	12	0	9
Sutcliffe, W., Manchester	20	0	0

Steuart, David Vincent, The Albert Chemical-works, Ashton New Road, and Croft Street, Clayton, near Manchester, and North Leigh, Hilton Park, Prestwich, near Manchester, chemical manufacturer. Trustee: Joseph Affleck, 22 Tib Lane, Cross Street, Manchester (C.A.). Dated, September 13; filed, September 23. Unsecured liabilities, 4,508*l.* 3s. 6*d.*; estimated net assets, 598*l.* 1s. 8*d.*; creditors fully secured, 3,092*l.* The following are scheduled as creditors:—

	£	s.	d.
Allen, Wm., Manchester	83	13	10
Archer, T. L., Manchester	78	15	6
Ashton Gas Co., Ashton-under-Lyne	36	7	
Bailes & Hallsworth, Leeds	24	2	0
Barron, R., Manchester	31	0	0
Bird, Isaac, Manchester	121	5	3
Blacksage, Thos., Dukinfield	16	16	5
Blackshaw, John, Stockport	34	13	0
Bradford Colliery Co., Manchester	116	13	
Brixton Lime Co., Manchester	204	10	3
Broadbury & Hirsch, Liverpool	495	7	9
Burton & Co., Manchester	42	0	0
Cardwell, J. L., & Co., Manchester	27	1	8
Chambers, Bell & Chambers, Hull	13	10	10
Dukinfield Coal Co., Dukinfield	62	3	9
Dunn Bros., Manchester	233	0	0
Gratrix, S., jun., & Bro., Manchester	82	19	4
Horrocks, Thos., Manchester	37	1	7
Hyde Gas Co., Hyde	196	11	3
Johnson, Nephew, Manchester	39	17	3
Lancashire and Yorkshire Railway Co., Beswick	18	7	4
Lancaster, H., Liverpool	18	15	0
Lomax, Thos., Manchester	90	2	4
London and North-Western Railway Co., Manchester	19	1	6
Malcolm, Alfred, Manchester	57	6	10
Manchester Corporation, Manchester	61	6	3
Metcalfe, Thos., & Co., Manchester	73	2	11
Pope & Co., Clayton	10	0	2
Roberts, R., Liverpool	41	4	11
Rudkin, Samuel, Manchester	103	15	8
Stockport Corporation, Stockport	259	19	0
Sutton, James, Clayton	392	19	1
Topping Bros., Bradford	55	0	0
Trapp, C., Liverpool	14	0	7
Union Banking Co. (Limited), Manchester	400	0	0
Wallworth, W. H., Manchester	34	13	11
Widnes Foundry Co., Widnes	32	6	6
Wilson, Mrs. A. P., Bedford	700	0	0
Woolley, D., Manchester	45	0	0



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
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Summary.

THE Veterinary Surgeons Act is being enforced vigorously. We report three cases.

In reference to the Brompton mystery, we give some particulars of Dr. Heron's career.

MR. DAVID HOOPER, of Ootacamund, makes a useful contribution to the correspondence regarding insane nuts.

In our Correspondence section there is given an important hint as to how medicine-stamps should be affixed on boxes.

WE report a number of poisoning-cases, including one with weed-killer, which should catch the Pharmaceutical Council's eye.

THE first meeting of the shareholders of A. & F. Pears (Limited) reveals the fact that the business of the company is in a very satisfactory condition.

THE by-laws of Brighton have been found to be stringent enough to prevent the display of Mr. Beecham's advertisements on the sails of a boat near the beach.

TWO persons who are not chemists have been fined for selling milk of sulphur for precipitated sulphur—one at West Bromwich, the other at Wolverhampton.

MR. A. C. ABRAHAM, in a lengthy communication, discusses the history, mode of preparation, and characters and tests of ether from methylated and rectified spirits.

THE present condition of the Bankruptcy Law, as revealed by the recently-published report of the Inspector-General, furnishes the subject of some Editorial Comments.

PARTICULARS concerning the organisation of a pharmaceutical benevolent fund in Russia by means of a small

tax on every prescription dispensed are sent to us by a Russian correspondent.

SIR GEORGE BUCHANAN appears to have arrived at the opinion that water-analysis is to a large extent a failure, and Dr. John C. Thresh holds a closely similar view, but he reserves his strictures for analyses made by chemists.

IRISH pharmaceutical affairs occupy a good deal of space this week, in view of the Council election just at hand. We report the special meeting of the Council, at which there was a lively dispute between the pharmaceutical and the druggist section, and we print also the full correspondence which has taken place between the President and the Dublin Castle authorities respecting the ill-advised action of the latter in reducing penalties imposed under the Pharmacy Act without consulting the Council. The Lord Lieutenant's secretary writes very curtly, and, evidently unable to justify the action taken, contents himself with official replies saying nothing.

Winter Evening Amusements.

As this is the season when literary societies and the like make up their programmes for the winter, there is an opportunity for chemists striking in with "Scientific Mysteries," one of the most original and useful books of popular science. We want chemists to stock and sell the book. It is good for business in every way, and profitable. The book sells at 1s. net, and we charge 8s. 6d. a dozen, not less than a dozen being sent out. Handbills and showcards are supplied.

"The Pharmacy and Poison Laws of the United Kingdom."

2s. 6d.; post-free, 2s. 9d.

This book will be ready for delivery in October, and orders are invited. It will be found to give in historic form full details of all the statutes affecting pharmacy and the sale of poisons in Great Britain and Ireland, with particulars of the legal interpretations of various sections, surveys of the pharmacy laws of the principal colonies, and other related matter.

"Alpe's Handy Book of Medicine-stamp Duty."

2s. 6d.; post-free, 2s. 9d.

By means of a supplement bound up with the treatise the information in this important work is corrected to the latest date, so as to bring it into harmony with the present practice and procedure of the Board of Inland Revenue. Chemists having the original work can obtain a copy of the supplement from us for 3d. (post-free, 4d.).

THE CHEMISTS' AND DRUGGISTS' DIARY FOR 1893

is now being prepared. It will contain as a special feature a remarkable treatise on "Diseases and their Treatment," which has been written expressly for this work by a London physician. This will be found to be of great interest and of notable value, and it will render the 1893 DIARY one of the most popular of the long series. The author is one of the modern school of medical men, and in his advocacy of remedies is most eclectic. Advertisers will please

SEND IN THEIR INSTRUCTIONS

for the DIARY as promptly as possible. We make it a point to let our subscribers in all parts of the world have their copies of the DIARY in ample time to have it ready for use on New Year's Day. It is a very heavy work to produce, and to enable the printers and binders to do their work properly we must close for press on October 22. Our Australian copies (which form a very large consignment) will be despatched by the mail steamer

LEAVING LONDON ON NOVEMBER 4,

which could not be done if we kept open for press after October 22. As THE CHEMISTS' AND DRUGGISTS' DIARY is now so universally recognised as the chemist's desk-companion and reference-book, every firm having anything to sell to chemists should be represented in its pages.

English News.

Off with the Doctor's Zinc.

At Edgware Petty Sessions, on September 21, William Newman, dealer, of Bangor Street, Notting Hill; John Fitzgerald, of 58 Baldwin Street, City Road, St. Luke's; and William Warren, of 35 Bangor Street, Notting Hill, were convicted of stealing, from a pan in the laboratory yard of the Chestnuts, Sudbury, 28 lbs. of battery zinc, value 5s, the property of Dr. William Henry Perkin, F.R.S. The men walked up to the house in the broad daylight and carried the metal away in a sack. They were stopped by Dr. Perkin and his assistant. The Bench inflicted a fine of 1*l.* each, or in default fourteen days' imprisonment.

A Bottle of Strychnine in Cannon Street.

An inquest was held on September 23, at Deptford, respecting the death of Eliza Hutchinson, the wife of a bricklayer. She had killed herself with strychnine. Some curious evidence was given. The husband said that about five years ago he found a bottle labelled "Strychnine" by the side of Cannon Street Station, and took it home. He used some of it to poison a dog, but he declared he had since destroyed the bottle and the strychnine. His wife had said she could always get plenty of poison to settle the whole lot of them by signing her name. According to other evidence, she took some tea, and then said, "I've poisoned myself. I am dying. Where is my husband?" He said two spoonfuls would not hurt me." In reply to a juror, the husband denied that he ever told his wife two spoonfuls of poison would not hurt her. She had been very strange in her manner. The jury returned a verdict that deceased committed suicide by strychnine whilst mentally deranged.

Poisonous Fungi.

A baker named Howard, his wife, and daughter ate some fungi which they found on a marsh near Great Yarmouth, and which they believed to be mushrooms. Mrs. Howard and her daughter died, and the man has been very ill.

Weed-killer in a Ginger-beer Bottle.

At Wickham, a village near Portsmouth, a coachman named James Cane, aged 46, drank from a ginger-beer bottle a weed-killing poison containing arsenic, and died shortly afterwards. An inquest was held this week, at which a gardener stated that Cane had been drinking that morning. The cask of weed-killer was kept in a portion of the stable which was used as a workshop. Cane kept the key, and had sole control over the place. Deceased said he had drunk the stuff in mistake for ginger-beer. The poison was supplied by Arthur Start, ironmonger, Wickham. He got the poison through Joseph Bentley, Barrow-on-Humber, Hull, wholesale druggist. Only chemists were allowed to sell the poison, as it contained arsenic. The stuff was ordered on July 25, the order being in Miss Harvey's (Cane's employer) writing. Emma Cane, the wife of the deceased, gave corroborative evidence, and the inquest was adjourned.

A Chemist Killed by Accident.

Charles Rogers, described in the papers as a chemist, but not on the register, was found dying last week in a barn near Mansfield. He said he had fallen over a railway-bridge. He also said he had been living at Langwith, and that his father lived at Brampton, near Chesterfield. He died a few hours after he was found, from fracture of the skull.

Fatal Accident at Messrs. Newball & Mason's.

A lad, named George Edwin Clarke, 13 years of age, employed at the works of Messrs. Newball & Mason, manufacturing chemists, Nottingham, was killed last week through getting on some shafting. He appeared to have reached over the shafting to get some labels. According to the evidence given at the inquest it would have been easier for him, and quite safe, to have stooped under the shafting to get the labels. The deceased had been found before playing with the shafting, and had been warned. Mr. de Ville, manager

at the works and a partner in the firm, said that they had in the works an extract from the Factory Act. He believed there was a clause providing that mill-gearing should be fenced. This particular shaft had never been at any time fenced, except by the table in front of it. They would consider that a fence in compliance with the Act. It was a movable trestle-table. The late factory inspector, on going through the works some short time ago, made no remark or suggestion in reference to the shaft in question. A verdict of accidental death was returned.

Death from Prussic Acid.—A Doctor Censured.

Charles Bradshaw, a perfumer, 34 years of age, died at 67 Heaton Road, Peckham, last week, and circumstances suggested that he had taken prussic acid. Dr. John Steele, of Goose Green, East Dulwich, said his assistant (qualified) had been called to deceased, and both the assistant and himself detected a slight smell of prussic acid. He subsequently gave the widow a certificate to the effect that death was due to cerebral hæmorrhage. Having since made a *post mortem* examination of the body he found that the liver smelt strongly of oil of bitter almonds. There were besides 4 or 5 oz. of fluid in the stomach, which also smelt strongly of the same poison. Several jurymen commented on the doctor's conduct in giving a certificate under the circumstances, but he said he came to the conclusion it was a case of apoplexy. The Coroner (Mr. Wyatt) said he never knew a medical man to give a certificate in a case of this kind before. It was a very serious matter. Mr. Pheasey, general manager of the factory department at the Army and Navy Stores, stated that deceased had access to the oil of bitter almonds, and that after he left business on Monday morning a glass containing some of the poison was found on his counter. The jury returned a verdict of suicide whilst mentally deranged, and expressed their opinion that Dr. Steele had been guilty of a grave error of judgment in giving the certificate, and advised him to be more careful in the future.

How Not to Keep Poisons.

Alice Maud Russell, 6 Frederick Street, Caledonian Road, 30 years of age, kept in a cupboard a solution of Epsom salts. In another bottle in the same place she kept a bottle of spirits of salts for cleaning purposes. Intending to take some salts she took a draught from the wrong bottle. This was so far back as July 7. She was taken to the Great Northern Central Hospital, and after a long illness died last Saturday.

Drug-contracts.

The Darlington Union contract for October 1, 1892 to October 1, 1893, has been secured by Mr. John Snowden, chemist, Darlington.

Mr. W. R. Wheeler, chemist and druggist, of Chertsey, has again been selected to supply the Chertsey Union with drugs.

The Farnham Board of Guardians have accepted the following tenders from Mr. J. Griffith, chemist, Farnham:—Cod-liver oil, 4s. 6*d.* per gallon; cod-liver oil, retail, 7*d.* per lb.; crushed linseed, 6s. 6*d.* per cwt.; quinine (pure), 1*l.* per lb.

The tender of the present contractors, Messrs. Wilson & Botwood, Spital Street, Dartford, has been again accepted for the supply of cod-liver oil for a period of six months to the Dartford Union. Other tenders were made by Mr. J. Cann and Mr. E. Goff, of Dartford.

The following tenders have also been accepted:—Belper Union—Druggists' materials. Messrs. J. Richardson & Co. (Limited), Leicester, and Mr. W. J. Burkinshaw, Belper. Stoke Union—Drugs. Mr. J. W. Moore, Hanley, at 5½ per cent. off Messrs. Evans & Co.'s (Liverpool) list.

Messrs. Burgoyne, Burbidges, Cripps & Farries have secured a large contract for the supply of medicines from the India Office.

The London County Council Chemist's Department.

At the meeting of the London County Council on Tuesday, the Main Drainage Committee reported that they had received a report from the chemist stating that during the past summer the River Thames had been in a most satisfactory condition; that at

no time had it been possible to detect the slightest discoloration of the water by sewage-matters or black mud, and that the foreshores at all points had been clean. He further stated that the aëration of the water had shown a marked increase, the quantity of oxygen dissolved in the water being on one occasion (August 31) the maximum quantity possible. The chemist added that that satisfactory result, unassisted by any special atmospheric conditions, such as heavy spring rainfall, could be attributed to no other cause than the operations at the Council's sewage-precipitation works.

The same committee also recommended the engagement of Mr. J. W. H. Biggs in a temporary capacity as laboratory clerk at the Crossness outfall, at a salary of 3*l.* a week. This was agreed to.

The Chairman of the Council opened the following tenders for the erection of a house for the chemical assistant at Barking outfall:—Messrs. Norris & Lake, 1,614*l.*; Mr. E. Proctor, 1,675*l.*; and Messrs. J. Mowlem & Co., 1,989*l.* The tenders were referred to one of the committees.

Wine-licences

have been granted to Mr. Endle, chemist, Boscombe; to Mr. C. Carrington, of the firm of Carrington & Co., Stockport; to Mr. Clare, chemist, High Row, Darlington; to Mr. William Waller, of the firm of Messrs. Waller & Riley, chemists and druggists, Bradshaw Gate, Bolton; and to Mr. W. S. Howorth, chemist, 70 Herbert Road, Plumstead.

Mr. G. Cheverton, chemist, of Broadway, Tunbridge Wells, applied at the adjourned licensing sessions on Monday for a licence to sell medicated wines. The application was held over for a month, as a proper notice had not been served.

Liverpool Pharmaceutical Students' Society.

The Senate of the University College, Liverpool, have permitted the members of this Society to hold their meetings in the botanical laboratory of the University in future. Every facility will be given for the students to use the University specimens, and the Society's herbarium will be kept at the University.—Professor R. J. Harvey Gibson delivered the inaugural address on Thursday, September 29, at the University College, taking as his subject "Theoretical Science in its Practical Applications to Pharmacy."

Very Particular in North London.

That it is possible to be too fastidious was proved the other day at the North London Police Court, when a milkman was summoned for selling milk adulterated to the extent of 2½ per cent. of added water. Mr. Tomlin, inspector under the Food and Drugs Act to the Middlesex County Council, gave evidence as to the purchase, and produced a certificate from the analyst at Somerset House showing the adulteration stated. The defendant pleaded "Not Guilty," and complained of having been brought to the court on such a trivial matter. He said he defied any man to swear that he had watered the milk. A wet can or a wet morning might make all the difference stated. Mr. Mead, the magistrate, said he thought the adulteration of so inappreciable a quantity that he would not convict. Summons dismissed.

The Brompton Mystery.

Last Thursday evening London was startled by reports of the sudden death, at a Brompton boarding-house, of a beautiful young actress, who was living with a colonial surgeon home on leave. An inquest was held regarding the woman's death on Saturday, when it transpired that her stage-name was Ruby Russell, her real name being Marion Fanny Sharpe, her age 20 years, and that she had met the doctor, Alexander Woodburn-Heron, L.F.P.&S.Glas., L.S.A.Lond., and L.R.C.P.Edin., a surgeon of the Gambia colony on the West Coast of Africa, when he was in London in February last year, and had lived with him since as his wife. The medical evidence did not reveal the cause of Miss Sharpe's death; but Dr. Woodburn-Heron admitted in evidence that his wife had died from poisoning in Jamaica in 1881. When Dr. Danford Thomas adjourned Saturday's inquest he said that there must be an analysis of the stomach and its contents. The organs generally were healthy, and if poison were found in the body it could only have got there either because the deceased took it herself, or someone else ad-

ministered it to her. The case looked bad for Dr. Woodburn-Heron, in spite of the fact that he had lived on most affectionate terms with Miss Sharpe, and the tragic issue of the whole affair is now "the talk of the town." Immediately after the inquest, Dr. Woodburn-Heron shaved off his moustache, bought 30 grains of morphia, took a room in the Craven Hotel, and there on Sunday morning swallowed 18 grains of the morphia, but this being too slow in its action (for he left a written record of his feelings under the influence of the narcotic), he cut his throat before a mirror, and then lay down on the floor and made a deeper incision. The man who has thus deliberately taken his life was a son of a Scotch planter in Jamaica, and came to this country to study for the army; but he married young, and went to Glasgow to study medicine. After qualifying he took up residence at Manchester, Jamaica, where he became medical officer of health, and there his wife died on August 13, 1881, under such circumstances that an inquest was necessary. She was not a strong woman, and did not sleep well, so that she was in the habit of taking morphia, sometimes in very large doses. At the inquest, Dr. Heron said he had given his wife morphia for sleeplessness, and that on August 13, the dispenser who supplied the drug must have given prussic acid by mistake. Dr. Heron, however, failed to produce the bottle which had contained the poison, stating that he had thrown the bottle away. He said he gave the drug to his wife in the belief that it was the ordinary morphia, and she died a few hours afterwards. Mr. Bowrey, the analyst, said that he found in the body one-tenth of a grain of anhydrous prussic acid, equal to five minims of the acid of the British Pharmacopœia. He found no trace of morphia. Altogether he concluded there was a quarter or a third of a grain of pure prussic acid in the stomach and contents. Mr. Bowrey was sharply cross-examined by Dr. Heron, and then stated that prussic acid could be generated in the human stomach even after death, but to what extent was unknown. The dispenser who supplied the drug admitted that the bottles containing morphia and prussic acid were kept side by side, but they were differently labelled. The jury returned a verdict of death from natural causes, which verdict created much surprise, and soon afterwards Dr. Heron left Jamaica.

He appears then to have come to England and acted as an assistant at Brighton. In 1883-4 he was assistant to a Dr. Kennedy, who has an extensive practice in the East-end of London. He came with excellent credentials from Brighton, and told Dr. Kennedy he had been married, but that his wife had died in giving birth to her third child.

Towards the end of 1884 he obtained the appointment in the Colonial Medical Service and proceeded to Africa, where he had made an excellent practice for himself. He was about 35 years old. We understand that Dr. Arthur P. Luff, as a Government analyst, has been instructed to do the chemical work in connection with Miss Sharpe's death.

New Chemical-works on the Tyne.

The Northumberland Chemical Co. are about to start new works at Heworth Shore on the Tyne. For many years no new works of this kind have been established in the district, though many have been closed.

A & F. Pears (Limited).

The statutory meeting of this company was held at the Holborn Restaurant on Tuesday afternoon. Mr. T. J. Barratt, the chairman of the company, presided, and was supported by Mr. Andrew Pears, Mr. Frederick Gordon, and Mr. T. Byas (directors), Mr. R. W. Perks, M.P. (solicitor), and Mr. R. Winlo (secretary). The chairman explained that the meeting was only convened in order to comply with the Act of Parliament, but at the same time the directors were all present, and would be glad to answer any questions that might be put to them.

Mrs. E. L. Betty, of No. 1 Park Street, Gloucester Gate, Regent's Park, N.W.: I should like to know if it is right or proper, or if it is a fact, that persons buying more than 5*l.* worth of soap get any extra discount?

The Chairman: Are you in the trade, madam?

Mrs. Betty: Yes; I am a chemist's wife. We sell the soap at 3½*d.*, while a chemist lower down than us sells at 3*d.*

The Chairman: If any chemist in the world sells the soap at 3*d.* he loses money by it. We make no extra discount whether our customers take 5*l.* worth or 5,000*l.*

Mr Milner asked if the position of the company and the trade done since the company had been formed was as good as before.

The Chairman: I may at once state that the trade last year was the largest ever done, and a comparison of our figures up to the present time with those of the corresponding period proves that we have done still better. (Applause.)

Mr. H. W. Birks thought the directors would be consulting the interests of the shareholders if they held the meetings in the City of London. He spoke on behalf of the Stock Exchange, of which he was a member, and where shares in the company were largely held.

The Chairman: Mr. Birks, that matter shall be taken into consideration. I am very dubious, however, as to whether the Stock Exchange are really very large investors in the company.

Mr. Challen: It has been reported, with your knowledge or otherwise, that the directors are very largely selling their shares. I should like to know whether that is a fact or not.

The Chairman: I have observed that statement myself in some irresponsible papers, apparently touting for advertisements. It is not only entirely without foundation, but, as a matter of fact, at the present moment the directors are holding shares to the value of 100,000*l.* more than they did at the time of the conversion. (Hear, hear, and applause.)

Mr. Terry: Is it your intention to declare an interim dividend?

The Chairman: The profits of the concern belong to the company as from January 1 last, but we are not permitted to divide the profits accrued to June, as they go to capital or a reserve account of the company, and June to December being the first six months available for the distribution of a dividend, we shall declare for that period an interim dividend, which will be due on January 1, and will then be paid. It may interest you to know, as a large amount of stock is held by the vendors in deferred shares, that they have no doubt whatever of receiving their own 10 per cent. on those deferred shares. *A fortiori* the ordinary shareholders, among whom those vendors also count, have a much stronger likelihood of getting their 10 per cent. (Applause.)

Mr. Birks proposed a cordial vote of thanks to the chairman and directors, which was seconded by Mr. Challen and unanimously passed.

This terminated the proceedings.

Good Drugs in Camberwell.

At the fortnightly meeting of the Camberwell Vestry Dr. Frank Teed (public analyst) presented his quarterly report under the Sale of Food and Drugs Act. He had examined fifty samples of food and drugs submitted by the inspectors. He had not found a single drug adulterated, but the same could not be said in reference to articles of food. Cocoa, coffee, and mustard were in several cases found to be heavily adulterated with starch and chicory. There was still a considerable amount of adulteration being carried on in the parish, and it was highly necessary that the Act should be rigidly applied in order that the public should be protected.

Cheltenham Assistants Dine Together.

On the occasion of two of their fellow-assistants (Messrs. Coleman and Lyons) leaving the town, the chemists' assistants of Cheltenham dined together at the Star Hotel on Tuesday night. After dinner they had speech and song to brighten up things, Messrs. Arthur, Harrison, Skinner, and Smith doing good service in this respect, while Mr. Arthur did the right thing in toasting the guests, Mr. Coleman responding.

Is Linseed-meal a Medicine?

The district auditor of the Houghton-le-Spring Board of Guardians' accounts objects to pass an item for linseed-meal because the Board's medical officers, by the terms of their appointments, have to supply the patients with medicine, and he holds that linseed-meal is a medicine. For the settlement of the question the Guardians have decided to apply to the Local Government Board. The answer is awaited with much interest.

Homœopathic Congress.

The annual congress of homœopathic practitioners was held in the Queen's Hotel, Southport, on September 22. Dr.

Ramsbotham, of Leeds, presided, and in the course of his address, remarked that they were met under the shadow of a peculiarly heavy cloud. They missed the familiar presence of Dr. Drysdale, one of their oldest and most trusted leaders—a man whose acute intellect, varied knowledge, and clear judgment must have brought him to the front in whatever profession of life he had adopted. Having investigated homœopathy and satisfied himself as to its scientific truth and practical value, he speedily became recognised as one of its foremost advocates, and his life had since been one consistent endeavour to present the proofs he held in such a clear, calm, and scientific aspect as might best win for them that consideration by the members of his profession which he felt they deserved. Papers were read by Dr. Hantward, of Liverpool, Dr. Burford and Dr. Robertson, of London.

Analysts Differ.

Mr. Harry Taylor, of Thorness, was charged at Isle of Wight Police Court, on Saturday, with selling adulterated milk. Inspector McLaughlin said that on August 12 he purchased a pint of milk from defendant's assistant, and sent a sample to the analyst, whose certificate he handed in. The certificate stated that the sample contained 80 parts of milk and 10 parts of water. Defendant said he was not satisfied with the analysis of Mr. Otto Hohner, and consequently he sent the sample which the inspector gave him on the day of the alleged offence to Mr. Arthur Angell, the analyst for Hampshire, and received the certificate produced, which gave the constituent parts, and at the conclusion Mr. Angell said, "I am of opinion that this is a sample of genuine milk." Defendant was then sworn, and gave evidence, in the course of which he bore out the statement he had previously made. The Bench dismissed the case.

Chloral Poisoning.

A Dane, named Georgesen, superintendent for a firm of shippers, has died at Liverpool from the effects of chloral hydrate. At the inquest held on Saturday last, Richard Henry Aspinall, assistant chemist, 1 Lecece Street, said that about a month ago the deceased came to the shop and asked for some chloral, which witness's father served in his (witness's) presence. The deceased then showed them a jar which had previously contained chloral, and when questioned as to the effects of the poison he replied that he knew all about. He said he took 20 grains for a dose. On Monday, September 19, deceased came to their shop again, and got another ounce of chloral, which was supplied to him in a jar. He said it was for insomnia, and at the time he seemed quite right in his mind. The jar in which the chloral was put was labelled "Poison." Dr. Isaac Holmes said he concluded that deceased must have taken an overdose of chloral, which caused the heart's action to fail. The jury returned a verdict of death from misadventure.

Irish News.

Fires in Dublin.

The Hibernian Glass-bottle Works, Ringsend, Dublin, containing about 60 tons of molten glass, have been destroyed by a fire, the cause of which is unknown. The place was not insured.

A fire broke out on Sunday last at the seed-store of Messrs. Hogg & Robertson, Mary Street, Dublin, threatening the drug-establishment of Mr. Boyd on the one side, and the Apothecaries' Hall on the other.

Drug-contracts.

The Newry Board of Guardians have appointed Mr. William Collins contractor for the supply of medicines to the workhouse and the neighbouring districts.—Messrs. Harrington & Sons, chemists, Cork have been appointed drug and medicine contractors to the Bandon Board of Guardians.

Objected to Sequah.

Thomas Reville, charged last week at the Wexford Petty Sessions with disorderly conduct, pleaded he had been constantly annoyed by being called "Sequah." The police said the prisoner was naturally of a quiet disposition, but he

could not "stand" the name of "Sequah," which half maddened him. Fined 5s.

Dispensary Officers Combining.

A meeting of Irish dispensary officers has been held at Dublin to consider the advisability of organising a Dispensary Officers' Union. The matter has been warmly taken up.

Scotch News.

An Edinburgh Chemist's Estate.

In the Court of Session, Edinburgh, last week, Lord Low had before him an action brought by Mr. A. Y. Macfarlane, pharmaceutical chemist, formerly in business in Edinburgh, now residing at 188 Dalkeith Road, Edinburgh, and his wife, against the Rev. Dr. William Balfour, minister of Holyrood Free Church, Edinburgh, and another, the trustees under a trust disposition granted by Mr. Macfarlane in favour of them and others. The pursuers ask his Lordship to declare that Mr. Macfarlane is entitled to revoke the trust disposition on the ground that the property in trust was Mr. Macfarlane's only asset, the net rental averaging only 50%, which is insufficient for the maintenance of Mr. Macfarlane's wife and child. The pursuers hold that the disposition is revocable, because it exceeded a reasonable provision for Mr. Macfarlane's wife and child, and divested him of his entire estate. It is stated in defence that the pursuers' statements are insufficient to support the summons, and that the aliment claimed is excessive. Lord Low closed the record.

Glasgow Parish Medicines.

At the monthly meeting of the Barony Parochial Board, Glasgow, held on Tuesday, it was reported that during the past month 833 prescriptions had been dispensed to the outdoor poor in the parish, at a cost to the ratepayers of 55*l.* 5*s.* 11*d.*

The Phantom Horse.

James Muir, aged 19, has retired to a prison at Aberdeen for six months on the invitation of the Sheriff. He pleaded guilty to nine charges of theft which were preferred against him. Amongst others he entered the branch post-office in the shop of Mr. G. E. Broomhead, chemist, Fountainhall Road and stole 30*s.* in stamps. His general practice was to enter a place of business carrying a whip under his arm. Holding the door open he would give an order, which generally amounted to upwards of 1*l.* Looking out of the door he would exclaim "Woe there! Stand still!" as if he were in charge of a horse. On getting his first order he would give another, and while the shopkeeper was serving this he would become still more anxious about his fiery steed outside, calling, "Back there! Stand still, will you? She's off!" and then he would run off to capture the animal. Of course when the shopkeeper went after him to supply the second half of the order, customer, horse, and the first parcel had vanished into infinite space. In all this clever youth netted about 14*l.* in postage-stamps, goods and money.

Women Studying Medicine at Edinburgh.

The managers of the Edinburgh Royal Infirmary have now completed the arrangements for the clinical teaching of women in two special wards. The surgical part will be under the charge of Dr. Cotterill, and Dr. Bramwell will give instruction in the medical ward. The students will also have access to the gynecological ward, and will receive instruction there from Dr. Croom; while in the wards devoted to the treatment of the eye, the ear, and the throat the classes will be mixed—that is to say, the male and female students will receive instruction together.

With Skeleton Keys.

The premises of the Greenock Apothecaries' Aërated-water Company were broken into between Monday night and Tuesday morning, and 40*l.* stolen from a desk in the office.

The Glasgow Alum and Ammonia Co.

Lord Stormonth Darling, sitting in Edinburgh as Lord Ordinary on the Bills, has granted an application by the liquidators of this company to sanction, amongst other things, the remuneration of the liquidators at 725*l.* (as fixed by the committee of creditors), and the payment of a first and final dividend to the creditors.

French Pharmaceutical News.

(From our Paris Correspondent.)

A MERITED REWARD.—The well-known analytical chemist M. Paul Girard, of Paris Municipal Laboratory, has just received from the Minister of the Interior a medal such as is generally awarded for saving life. This honour has been conferred on M. Girard in recognition of his hazardous duty in opening explosive engines brought to the laboratory for examination, and for his services in connection with the researches which followed the explosions of dynamite in Paris last spring.

POISONING IN A PRISON.—The supposed epidemic caused by poisoning with belladonna at the Beauvais prison, referred to in this column last week, has not been explained yet, and the pharmacist remains under arrest. Dr. Lesage, who so nearly lost his life last week while trying to discover the cause of the malady among the prisoners, is now quite well again. He had remarked that one of the characteristics of the illness was dilatation of the pupils of the eyes, such as would be caused by belladonna-poisoning.

CAPRINE VACCINE.—A M. Baudard, "médecin et pharmacien," of Gannat, in the Department of the Allier, has written a pamphlet advocating the use of the vaccine of the goat in preference to that of the calf. According to this author, the "vaccine caprine" is not subject to contamination by the bacilli of syphilis, tuberculosis, and similar diseases. On the contrary, he claims that it kills all germs of such disease inherited by children. In many agricultural and cattle-breeding Departments of France, he says, a goat is kept in every stable as a prophylactic against epidemic disease among horses and cattle, and he advocates the adoption of a similar measure in the Paris children hospitals.

DISCUSSION ON CHOLERA AT THE ACADEMY OF MEDICINE.—At the last meeting of the French Academy of Medicine, M. Peter gave a detailed account of some of the cholera-cases treated at the Necker Hospital. In the course of his address he pronounced an opinion that choleraic diarrhoea, *cholera nostras*, and Asiatic cholera were only various degrees of the same complaint. Among the various remedies employed he mentioned the application of ice to the spine as having an excellent effect in relieving the cramps from which cholera-patients suffer so terribly. Dr. Brouardel expressed an opinion that the epidemic spread from Russia to Hamburg, and thence to America, was a different complaint from the cholera prevalent in France, although analogous to it. In this country, he said, means had been found of destroying the germs directly they appeared, and thus preventing the spread of the epidemic.

MR. STANHOPE, the *New York Herald's* inoculated correspondent, continues to be the hero of the hour in Paris. The reports of his experiences are not pleasant reading, and they take the form more of sensational American journalism than of details given with a serious desire to benefit humanity. His journey from Paris gave him plenty of scope for "copy." He finds that salad as an article of food is prohibited by police regulations in Hamburg, while his experience at a *café* in the evening is as follows: "'Waiter, cup of coffee. 'Yes, sir; excuse me a moment I must go and take my cholera-drops first.' All the waiters had formed in a row and opened their mouths as the proprietor came along and phisicked them." Mr. Stanhope states that he has done all he possibly can to contravene the rules of the hospital, such as eating in the cholera-ward and placing his fingers in his mouth after handling a cholera-patient. His most terrible experience was that of sleeping in a bed from which a dead cholera-patient had just been removed, and with two other

men lying ill with the disease on either side of him. He sums up as follows his various tests. He has drunk of the faucet-water which comes from the Elbe, and which is the cause of all the illness in Hamburg. He has also drunk water from the Elbe, taken from the river itself at a point just outside the waterworks which supply the town. He adds, however, that he ate by stealth, so as in no way to give a bad example to the other nurses. Mr. Stanhope left the hospital last Sunday, and after passing three days' quarantine is apparently bent on trying to invent some other procedure by which he can take cholera.

Indian News.

KEMP & CO. (LIMITED) PAY 13 PER CENT. DIVIDEND.—The eleventh ordinary general meeting of the shareholders in Kemp & Co. (Limited) was held at the office of the company, 6 Armenian Lane, Fort, Bombay, on September 6, under the presidency of Dr. Blaney, the Chairman of the Board. The report for the year ending June 30, 1892, showed that the debts and liabilities, amounting to 64,426r. 6a., had been liquidated, and the balance of profit-and-loss account stood at 66 729r. 13a. 9p. The reserve fund amounted to 1,49,600r. 8a. 8p., and a sum of 6 640r. 8a. 9p. was proposed to be added to the amount. The Chairman, in presenting the report for approval, said that it embraced the operations of the company for over a very exceptional year. The unprecedented condition of exchange, together with the increase of competition, have made the management of the business more than usually onerous, yet they were able to recommend a dividend of 13 per cent. on the paid-up capital of the company, or 22r. 12a. per share, and to carry the sum of 6,640r. to the reserve fund, which was the backbone of the company. The reputation of the company had never been better, and the amount of business transacted had exceeded that of any previous year. The report was unanimously adopted. Messrs. Harkisondas Narotumdas and Rustomji N. B. Jijiboy were elected directors for the ensuing year, and it was agreed that a bonus of 3,700r. be distributed amongst the employees of the company at the discretion of the general manager.

DRUGGISTS' SHOPS IN CALCUTTA.—There are in Calcutta no fewer than 756 drug-stores. These (says the *Indian Medical Record*) may be graded into three classes. The first includes large and old-established European houses, and a few immensely wealthy but little-known Indian import businesses. The second embraces numerous second-rate recently-established chemists' shops, which do little more than general dispensing work. The third class includes hundreds of petty retail chemists' shops dealing in patent medicines and cheap drugs. In the first class there are about ten houses, and in the second about a hundred, the balance belonging to the third class. Some streets are literally crowded with this latter class of petty store. In College Street alone there are 113 drug-shops. The great emporium of Calcutta, its Royal Exchange, so to speak, Chaudney Chowk, has not a few of these places, and it is simply surprising to witness the daily sales of drugs and patent medicines in this veritable beehive of trade. Here you may buy an ounce of steel drops, bottled, labelled, and all for 4p., and here Beecham's pills can be obtained for 40 per cent. less than the price charged in an English place of business. Of course quality is not a point to be studied with these sellers. In one of these shops alone in Chaudney Chowk we have heard of a day's sales amounting to over 300r. In Burra Bazaar the enormous work done by the wholesale drug-dealers is simply astounding. In one of these places the daily turnover often mounts up to 5,000r. and 6,000r., and here any single drug is imported by the hundredweight. It is a sad reflection upon the Government of this country that absolute ignorance of the properties, uses, and doses of drugs reigns supreme in these strongholds of the drug-trade. It is also a serious blot upon the municipal administration of the Metropolis that in spite of an official apology for a genuine Pharmacy Act which compels the presence of qualified dispensers in all chemists' shops, these houses defy all legal enactments, simply for want of proper

municipal inspection and restraint. People in the great manufacturing trades in Great Britain (adds our contemporary) can hardly imagine the enormous and lucrative business in drugs, chemicals, and patent medicines that is carried on through the vast Indian peninsula. Men retire yearly with princely fortunes who but a few years before were almost penniless. Palatial drug-shops form part of the street frontage of every thoroughfare, even to the smallest by-lanes of the rapidly-developing centres of the population. During the year 1891 the value of the import trade in drugs that passed through the Calcutta Custom House was estimated at 64 lacs of rupees; while that on patent medicines ran so high as 96 lacs of rupees.

Foreign and Colonial News.

AUSTRALIAN MEDICAL CONGRESS.—On Monday the Earl of Jersey, Governor of New South Wales, formally opened at Sydney a congress of colonial medical practitioners, at which 550 delegates from all parts of Australia were present.

U.S. TRADE-MARKS.—The following were registered at Washington on September 13:—"Arkwright" on the figure of an ark, for medicines, by Arkwright Medicine Co., St. Louis, Mo.; "Twin Luxuries," for dentifrice, by Florence Manufacturing Co., Northampton, Mass.; "Catholicon," and a picture, for natural mineral waters, by John Schnuettgen, Rapid City, S.D.

DR. KNEIPP'S GOUT REMEDY.—One of the favourite gout-remedies of Herr Kneipp, the Parish Priest in Wörishofen, Bavaria, whose water-cure attracts visitors from all parts of the world, is a substance which he calls "Malefice-oil" (Maleficeol). According to the *Rundschau* this remedy consists of 1 part of croton oil in 6 parts of sweet-almond oil. Herr Kneipp sells all his specialities through an apotheker in Würzburg.

SULPHUR-MINING IN SICILY.—There are 63 sulphur-mines in the Catania district of Sicily, but only 34 of these are at present at work. Nine of the mines have been worked since the last century, the oldest of all dating from the year 1700. At Catania there are 13 mills for refining and grinding sulphur, employing an aggregate of 526 workmen. The grinding of sulphur takes place from November to May, the refining all the year round.

CHEMICAL EXAMINATION OF IMPORTS INTO AUSTRIA.—A chemical laboratory has just been opened at the chief Customs office in Vienna, for the purpose of testing imported goods, in order to ensure payment of duty under the proper category of the tariff. The examination of the materials will be entrusted to a selected number of the ordinary Custom House officers, who have been trained for several months at one of the schools of chemistry to fit them for their new work.

CAUGHT.—Hugh Ward, a New York druggist, who owns two pharmacies there, is under arrest on a charge of employing an unqualified assistant. The young man seems to have been very ignorant, and this came to the ears of the newspapers and the police, with the result that bogus prescriptions, containing fatal doses of poisons, were presented to him. These he dispensed without hesitation or comment, and now his master is in trouble. Mr. Ward has pleaded not guilty, and is out on bail.

ACCIDENT IN A PHILADELPHIA CHEMIST'S SHOP.—A terrible explosion occurred recently in the pharmaceutical establishment of Coroner's Physician Mattern, 2,602 German Town Avenue, Philadelphia. An assistant was compounding a prescription which called for the use of phosphorus and manganese, and mixing these ingredients in a mortar, when an explosion occurred, severely injuring the assistant and wrecking the shop. The mortar was apparently blown into atoms; only half the pestle could be recovered, and the marble slab of the table was utterly smashed. The sound of the explosion was heard squares away.

LIBELLING A MEDICAL MAN.—The editor of the Berlin *Local Anzeiger* and his assistant have been sentenced to 300m. fine each and the payment of the costs of advertising

the sentence in three prominent journals for a libel upon Dr. Lenhartz, of the University of Berlin. The *Local Anzeiger* accused the doctor of having conducted therapeutical experiments with dangerous poisons upon his hospital patients, without their consent or knowledge, a specific charge being that he endeavoured, by these means, to ascertain the antidotic action of atropine upon morphia. The ground for the charge was an alleged admission of these facts in a text-book written by Dr. Lenhartz, but at the trial the charge broke down completely, and the doctor proved that the passage in his work was merely a quotation relating to some other physician's experiments.

ESSENTIAL OILS IN RÉUNION.—The French colony of Réunion, an island in the Indian Sea, has of late years become one of the principal sources of production of essential oil of geranium. Among the largest distillers in the island are M. Fournier, the Comte de Kervéguen, and the Duc de Trévisé, who are all large landed proprietors and owners of sugar and vanilla plantations. Other firms in the business are Messrs. B. Arnoux & Co., Motais & Co., J. Leyritz, and J. Payet, all of St. Pierre. When geranium oil was first sent over from Réunion it realised from 80f. to 90f. the kilo. in Europe, where the quality was much appreciated, but the value has now fallen, as a result of over-production, to 40f. per kilo. Oil of vétivert is also produced in the island. It is more difficult to distil than geranium, and the demand for it is very much smaller, but nevertheless there are three or four good brands that have become well established in commerce. Ylang-ylang is not much grown, which is regrettable, as there is always a good demand for this oil, and the quality of that produced in Réunion is considered excellent. On the other hand, patchouly has not been a success.

THE GERMAN CHEMICAL INDUSTRY.—The annual report of the directors of the Vereinigte Chemische Fabriken, at Leopoldshall, states that business in the branch of industry to which the works belong has been unfavourable during the last financial year, and towards the close of the year a stronger reverse-current than has been known for a long period set in. The production of the works included 32,679 tons of chlorate of potash, against 34,733 tons in 1890-91; 3,878 tons of Glauber salts, against 4,092 tons; and 5,265 tons of hydrochloric acid, against 5,338 tons in the previous year. The output of carnallite, which averaged, in normal conditions, 5,000 tons a day, had to be reduced to 4,500 tons at the end of the year, and now amounts to 4,000 tons only. The completion of the electrolytic process for manufacturing caustic potash and chlorate of potash has taken up more time than the management had anticipated. The production of hydrochloric acid has been momentarily suspended because it has become unprofitable. The net profit for the year is 421,955m., against 363,253m. in 1890-91, allowing of the payment of a dividend of 3 per cent. on ordinary shares. For 1890-91 the dividend was 2½ per cent.

DEVELOPING THE RESOURCES OF THE INDIAN FORESTS.—The Government of India have accepted a proposal submitted to them by Dr. Ribbentrop, Inspector-General of Forests, to publish a series of notes on the produce of Indian forests, and have invited all their forest officers to co-operate in the work. The object of the publications will be to make known to the public generally "the many undeveloped and in some instances even undiscovered treasures in the shape of tanning materials, oils, resins, dyes, fibres, &c." still hidden in the Indian forests. The notes are to contain information on the present methods of collection and preparation of economic forest produce, and if possible, proposals for the improvement in such methods, together with the most accurate estimates procurable of the quantity available of any forest produce under notice, and of the cost of bringing it to market, as well as an indication of the most effective and economical method of collecting it or preparing it for commercial use. Information will also be given as regards the permanency of the supply and the feasibility of securing such permanency, or even an increase of the supply by special protection or other measures.

MERCURY IN MEXICO.—Mercury has special interest in the Mexican mining industry, because of its employment in the treatment of silver ore, and the Republic yearly consumes over 700 tons of the metal, of which hardly half are produced in the country, the rest coming from California and Spain.

However, there are in Mexico important mercury deposits, the most interesting of which are those of Huitzuco and Concepcion, in the State of Guerrero, and of Guadalcázar, in the State of San Luis Potosí. Those of Concepcion promise much, and, when worked properly, may prove to be the richest of all. Various companies are working the Huitzuco mines, the principal one being developed under the direction of Mr. Manuel Romero Rubio. The mineral is found in gypsum, which exists in pockets, fissures, and crevices, where the cinnabar is found mixed with clay that yields from 3 to 4 per cent. of quicksilver. The veins which embrace as the dominant ore the Livingstonita (*sulfo antimoniaro de mercurio*) yield from 7 to 8 per cent. The process used to obtain the quicksilver is the same as that used in Almadén, but an American patent furnace is now being built, such as is used in California. The mines of the afore-mentioned company produce annually about 350 tons of mercury. Mr. Romero Rubio claims to produce all the quicksilver that is needed in the Republic. It is believed that the Huitzuco is only a part of an extensive zone of that mineral district.

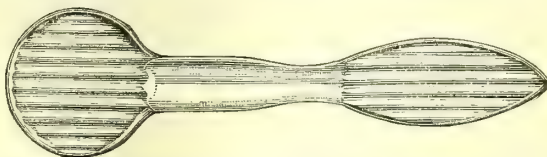
Notes of Nobelies.

NEW PAPAIN PREPARATIONS.

FOR the steady-growing favour in which papain is regarded by the medical profession in this country the unabated efforts of Mr. B. Kühn, agent for Dr. Finkler & Co., are mainly responsible; and the faith which Mr. Kühn has in this vegetable digestive ferment is shown by the care which he bestows on medicinal papain compounds. For some time there has been an acid glycerine of papain, and now we have before us liquors of papain and bismuth, of papain and iridin, and of papain and cascara sagrada, all of which are elegant pharmaceutical products, the uses of which the names sufficiently indicate. We are inclined to regard papain as being only in its infancy; not that it will ever displace pepsin, but because there are millions in the world, especially in the Orient, whose religious tenets exclude the use of any animal produce whatever as food or medicine. Pepsin porci is particularly obnoxious to Mohammedans, and with them it is conceivable that such preparations as these of Mr. Kühn's may be distinctly acceptable. In this light the future of papain may be a great one. Mr. Kühn has small sample-boxes, which he is willing to supply to chemists who stock the Finkler goods, and who would distribute them amongst physicians. Each box contains a sample of papain, papain tablets, pil. papain, papain lozenges, and an amber paper-knife.

TEAT-CLEANER.

A VERY simple but useful little appliance is the teat-cleaner introduced by Messrs. M. Bailey & Co., Buckingham Road, Kingsland. It is a short glass rod with a spade-shaped



corrugated blade which can be readily inserted into the teat, then, by rubbing the teat with the finger and thumb over the corrugations of the blade, secretions are readily removed.

"IGNITES ONLY ON THE BOX."—A German chemist says that this is not true of eighteen different makes (Swedish and German) of safety matches which he has examined.

Pharmaceutical Society of Ireland.

SPECIAL MEETING OF COUNCIL.

A SPECIAL meeting of the Council of this Society was held on September 21. The meeting had been convened by a summons setting out the names and addresses of eleven gentlemen proposed for election as members of the Pharmaceutical Society and three for election as associate druggists. A supplemental notice setting out the names of forty-two gentlemen proposed to be elected as associate druggists had also been issued. Of these twelve were proposed by Mr. Boyd, and seconded by Mr. Gibson, and their addresses were given with the names; and thirty were proposed by Mr. Gibson, and seconded by Mr. Boyd, but their addresses were omitted.

There were present at the special meeting Mr. William Hayes (President), in the chair, and the Vice-President (Mr. Beggs), Messrs. W. F. Wells, Grindley, Charles Evans, Downes, Dr. Burnes, Boyd, Merrin, Hodgson, and Professor Titchborne.

The PRESIDENT said the election of members was the only business to be transacted.

Mr. WELLS moved that the following gentlemen be elected members of the Society:—

Boyers, Henry, L.P.S.I., 20 Knox's Street, Sligo.
Calvert, Joseph, L.P.S.I., Market Street, Lurgan.
Edgar, Thomas Hamilton L.P.S.I., The Medical Hall, Abbeyleix.
Foley, Patrick Doyle, L.P.S.I., The Medical Hall, Main Street, Killarney.
Forrest, James, L.P.S.I., Fermoy.
Green, Thomas, L.P.S.I., 9 Cornmarket, Belfast.
Johnston, Roden L.P.S.I., Downpatrick.
Murray, Edward Peter, L.P.S.I., Clones, Co. Monaghan.
O'Sullivan, John James, L.P.S.I., 4 The Mall, Waterford.
Parke, John Pringle, L.P.S.I., care of T. H. Edgar, chemist, Abbeyleix.
Shanks, John Bailey, L.P.S.I., High Street, Hollywood, Co. Down.

The VICE-PRESIDENT seconded the motion, which was unanimously agreed to.

Mr. WELLS moved that Mr. Arthur Digby Devenish, 32 Upper Baggot Street, Dublin, be elected an associate druggist.

Mr. GRINDLEY seconded the motion, which was passed unanimously.

Mr. HODGSON moved that Messrs. William I. Faris and William Greenfield, both of 121 Capel Street, Dublin, be elected associate druggists.

Mr. BOYD seconded the motion, which was unanimously agreed to.

The VICE-PRESIDENT submitted that the business of the day was now concluded. He was rather surprised when he received the supplemental notice only two days ago. The members should have received it four clear days before the meeting; and, further, as far as his memory served him, there was not a quorum of members present when the names on the supplemental list were handed in. There were only three gentlemen present—namely, the President, Mr. Boyd, and Mr. Gibson. Certainly there were not seven members present. Therefore, these names were not legally on the agenda paper. He should also draw attention to the fact that the names set out on the supplemental notice as proposed by Mr. Gibson and seconded by Mr. Boyd had no addresses. The Act distinctly prescribed that the addresses as well as the names should be inserted on the summonses. Before proceeding further he would ask the Registrar, Had these gentlemen paid their subscriptions?

Mr. FERRALL: Those who are proposed by Mr. Boyd have all paid, but none of those who are proposed by Mr. Gibson have paid.

The PRESIDENT: It is right for me to explain why this supplemental notice was sent out. When I was requested to summon the special meeting for the election of the gentlemen named in the first agenda-paper I understood that the names handed to me by Mr. Boyd could not legally be put on the agenda-paper. It was necessary that those gentlemen should be proposed and seconded at a meeting of the Council; but the list was not read out by Mr. Boyd or Mr. Gibson, but was handed in to me, and I was not conscious at the time that we had not a quorum. My attention

was not drawn to the fact. The Council seemed to have broken up whilst I was signing some cheques, and I received the paper without making any remark on it. As to the names proposed by Mr. Gibson, when they were handed to me I handed them back, requesting that the addresses should be put to them. An appeal was made to the Registrar, who said he would add the addresses. However, we have nothing to do with these names now, as none of the gentlemen have paid their fees. We have only to do with the names proposed by Mr. Boyd. I was not aware that these names were handed in contrary to the rule of the Society, which requires that it should be done with a full quorum but so it was.

Mr. BOYD: May I ask you to read the rule?

Mr. GRINDLEY read regulation 3 from the Calendar, viz:—

No business shall be transacted at any meeting of the Council unless seven members be present.

Mr. WELLS said that merely handing in a piece of paper was not a sufficient proposal of names. A great deal more hung upon this than the mere election of associates. He did not think that their worthy Treasurer or the President would like to sign a cheque when only three members were present. He (Mr. Wells) was informed that the President had declared that the business was over, and he got up and left the room, after having proposed his own names, and several other members came down stairs after him, so that only three or four were left sitting in the room. Mr. Palgrave, Clerk of the House of Commons, laid down in his book that—

Meetings subject to rules prescribing that no business shall be transacted unless a quorum be present require for the validity of their transactions the fulfilment of that condition.

And in another part of the book he said that—

No business can be transacted unless a quorum be present.

He had heard it remarked that it was necessary for someone to draw attention to the fact of a quorum not being present. He did not know where they got that rule. He knew that it was usual in the House of Commons for a member to ask was there a quorum present, or to have the House counted, and they would see the same thing in the Corporation of this city; but it was not and never had been necessary at that Council. He had many a time heard the Chairman say, "Don't go, or there will be no quorum." Therefore, he objected to those names being entertained that day. On the last day he left the room having to go to Dalkey, and not knowing that anyone else was going to leave. It was no concocted business as some seemed to think. He left as Mr. Boyd and Mr. Gibson sat down to write the names. If members had men to propose they should bring the names written out. It turned out now that Mr. Gibson's names were a bogus collection, for he had not paid the money for any of them.

The PRESIDENT: I regret, gentlemen, that Mr. Gibson should have acted in the way suggested by Mr. Wells; but I am sorry to say that there is too much foundation for it. They were put forward rather as a preventive measure.

Mr. BOYD: It may save trouble if I say that, as those gentlemen have not paid, it is better to withdraw their names.

The PRESIDENT: Oh, they are not before us at all.

Mr. WELLS: I merely draw a conclusion from the facts. I was told that Mr. Gibson sat down and took a printed book out of his pocket.

Mr. BOYD: Mr. Gibson had the list written out before he came here—I can vouch for that.

The PRESIDENT: In any case I think the suggestion Mr. Wells has made is not unnatural, considering that not one of the gentlemen referred to has paid his subscription. The matter was mentioned to me by a member of the Druggists' Association, who remarked that if it was true that Mr. Gibson had put forward these names as bogus members, it was a very serious matter, and he for one would require an explanation from anyone representing the druggists on this Council. With regard to my sending out the supplemental list, it is due to you to state the reason why I did so. I did not include in the first summons the names given to me by Mr. Boyd and Mr. Gibson, because I found that it would not

be in accordance with our rules to do so, and I thought—though I regretted to find that it was so—that I would be wrong in including them. However, on Saturday morning I received from a clerk of Messrs. William Findlater & Co. this document, which I shall now read.

Mr. BOYD: Before you read it I would ask whether, as these names appear on the agenda-paper, it is not proper for us to elect them or reject them? The fact that their names appear on the agenda-paper is surely sufficient evidence that they are eligible.

The PRESIDENT: Mr. Boyd, I will allow you to speak afterwards; at present I am in possession. As I said, I did not think I ought to include those names in the agenda-paper, but, on receipt of this letter from Mr. Boyd demanding that I should send out a supplemental notice, I thought it would save trouble to have the matter brought before you to-day, in order that you should decide whether—

Mr. BOYD: I respectfully submit that the question as to whether these gentlemen are eligible for election is one to be decided by the President, and not by the majority of those present.

The VICE-PRESIDENT: Point out any part of our Act giving authority for the issue of a supplemental list.

Mr. WELLS: And only three days before our meeting.

Mr. MERRIN: I think the President should be allowed to finish.

The PRESIDENT then read the following:—

91 Bride Street, Dublin.

SIR,—I have received a letter from the Registrar of the Pharmaceutical Society of Ireland, dated 15th September instant, in which it is stated that the President of the Pharmaceutical Society of Ireland has now ruled the nominations made by me out of order, on the ground that there were but three members present when I proposed them. Now, I hereby require the Registrar of the Society, within twenty-four hours from the time of the service of this notice, to issue and transmit in the usual manner, to the members of the Society, a supplemental notice of the special Council-meeting for the 21st instant, setting forth the names of the persons duly proposed by me, and seconded, at the meeting held on the 7th instant. I have been advised that the Society is acting illegally in suppressing the said names, and that their nomination was valid and complete, notwithstanding the departure from the meeting, for an obvious purpose, of certain members of the Council, after I had been requested by one of them to write down the names which I had previously proposed.

Moreover, the President himself subsequently accepted the nomination made by me, and acted properly in so doing, and he cannot now withdraw his action in the matter. In the event of your neglect or refusal to comply with the terms of this notice, I shall institute such proceedings to obtain relief as I may be advised, and I will hold the President and all proper parties responsible for all costs, expenses, and damages occasioned by the suppression of my nominations, and will make use of this notice against them in any such proceedings.

Dated 16th September, 1892.

SAMUEL P. BOYD.

To William Hayes, Esq., President, &c.,
Arthur J. Ferrall, Esq., Registrar.

I received the document between 11 and 12 o'clock on Saturday, and it was, therefore, impossible for any notice to be sent out in legal time—viz., four clear days before this meeting.

Mr. GRINDLEY: Sunday doesn't count.

Mr. WELLS: It does.

The PRESIDENT: I thought it best, nevertheless, to issue the supplemental agenda. I am not afraid that any penalties could be extorted from us, but it is possible for anyone to give a great deal of trouble and annoyance in courts of law. Therefore, I thought it the wisest course to let you decide whether these names should be accepted or not. My own opinion is that the whole thing is irregular from beginning to end so far as this supplemental list is concerned, but that we can make matters right and legal by rejecting the names.

Mr. WELLS said he did not think the Council would be compelled to do anything that they thought wrong, even by threats of the Queen's Bench; but he would raise another point. He asked the President to call the special meeting for the purpose of electing the gentlemen whom he (Mr. Wells) had proposed. The President did so, and he (Mr. Wells) maintained that if he had put Mr. Boyd's names into the agenda for that meeting he would have been acting illegally. Mr. Boyd and Mr. Gibson were asked, "Did they ask for a special meeting to elect their men?" and they said they did not.

The VICE-PRESIDENT: I maintain that Mr. Boyd did not propose any names at the Council. If they were proposed, it was done after the meeting had broken up. I call on the Registrar to say, Did Mr. Boyd hand in any names—did he propose them by word of mouth?

Mr. FERRALL: I did not hear him propose anything. I saw him hand in a list when there were only three members present, all told.

Mr. WELLS: Will Mr. Boyd state that he read out the names at all?

Mr. MERRIN: Mr. Boyd, in his letter, throws a slur on the members of the Council when he says that they left "for obvious reasons." I left the Council-table here firmly under the belief that the business had concluded.

Mr. EVANS and Mr. DOWNES both said they were under the same impression.

Dr. BURNES: The only question that can arise in my mind in reference to this election is whether there was possibly a tacit understanding, while there was a quorum, that Mr. Boyd was writing names to be proposed. If so, you would be bound by that understanding to a great extent.

Mr. BOYD: Hear, hear.

Mr. WELLS: There was no understanding. Nobody said there was going to be a special meeting.

Mr. BOYD: I have a distinct recollection of everything that passed. Mr. Wells had nominated certain gentlemen whose names appear in the agenda-paper to-day. I took this book out of my pocket, and said, "I have some to nominate." Mr. Wells then, or Mr. Grindley—I am not quite sure which—immediately said, "Wouldn't it be well to write them down, Mr. Boyd?" I said, "Very well; I will write the names down as a matter of form, though, according to the regulations, it is not necessary for a member of the Council to write them at all."

Mr. WELLS: Oh, question!

The PRESIDENT: I would not receive names read out, without having them on a proposal-paper.

Mr. BOYD: Let me refer you to page 97 of the Calendar:—

A candidate for election as an associate druggist shall, at a meeting of the Council, be proposed and seconded by members of the Council, or in writing by members of the Pharmaceutical Society or associate druggists, provided such letter be forwarded to the Registrar of the Pharmaceutical Society not later than ten days prior to the meeting of the Council at which such name is proposed.

Now, my understanding of that is that any member or associate of the Society has power to nominate for membership, if he gives written notice; but that a member of the Council has power to nominate any person as a member or associate, verbally, at a meeting of the Council, and I think I am right.

Mr. WELLS: You are not.

The PRESIDENT: It is not possible that names could be read out, and accepted as all right, without being written on paper and handed in.

Mr. WELLS: How could the President put his initials to a document that didn't exist? It is necessary that every document here should be put into a rough minute-book; and the President puts his initials to the document before he puts it out of his hand.

Mr. BOYD: I don't see what other meaning you can take out of the regulation except that which I have given it. However, I was proceeding to say what took place. I took this book out of my pocket, and had got as far as "Charles H. Wright," when I stopped to write down the names. I wrote down a number, and it never occurred to me that whilst I was doing so those gentlemen were walking out of the room behind my back. I don't like to say it, but I can't help thinking that there was a deliberate—

Mr. WELLS: They were facing you.

Mr. BOYD: I handed the names to Mr. Hayes when I had written them down. He said, "There are a great many names here, and it would be a great pity to lose the nominations." I think he said the loss would be 50%.

The PRESIDENT: That was before the meeting broke up, and it was Mr. Hodgson who said it.

Mr. BOYD: I now come to the question of the quorum. Mr. Wells says the Speaker of the House of Commons draws attention to the fact if a quorum be not present. I know the rules of the House of Commons as well as he does, and frequently the business of the House is carried on—once a

meeting is constituted, and forty members are present—without any quorum. My contention is that once a quorum, the meeting has power to carry on its business no matter who chooses to leave. It seems an extraordinary contention that our business is to be absolutely stopped because some gentlemen want to go away to a train. My experience of other board meetings—and I am sure Mr. Hodgson will bear me out—is that once the meeting is constituted, whether a quorum remains or not, it continues to do its business until it is concluded.

The VICE-PRESIDENT: My experience is that unless a quorum be present the business cannot proceed. I have been often detained for the business of making a quorum.

Mr. BOYD: My contention is that the business of the Council had not concluded when I proceeded to write down the names; Mr. Hayes, the President, had not left the chair, and he accepted those names, and therefore they ought to have appeared in the first agenda-paper. The fact of them not appearing in it does not invalidate their right to appear in the second agenda-paper, no matter when it was issued, for, as far as I can ascertain from the regulations, the only thing required to be in the hands of the members four days before a special meeting of the Council, or any meeting of it, is the notice that such a meeting is to take place.

Mr. WELLS: Read rule 5.

Mr. BOYD read the rule, as follows:—

In every summons for a meeting of the Council the Registrar shall insert a programme of the business to be transacted, and the business shall be taken up in the order in which it appears on the programme.

The first rule says the summons for a meeting shall be sent through the post to the registered address of each member four clear days before the time of meeting. That simply means that notice of the meeting shall be in the hands of those asked to come to it four days before the meeting. I contend that if these gentlemen are not allowed to be put forward for election to-day it will reflect extremely badly on this Council. As a member of the Council, I have a regard for its dignity. (Laughter.) Well, if I am to be laughed at I shall sit down.

The PRESIDENT: Let Mr. Boyd be heard.

Mr. BOYD: I maintain that I have a regard for the dignity of this Council as much as any man in it, and I say that if the majority of the Council are going to exercise their power tyrannically by refusing to accept the nominations of these gentlemen for election, it will reflect extremely badly on the Council. I do not hesitate to say that if the matter were brought before an independent tribunal they would very seriously consider whether an election based on such preliminaries—if I may so call them—should not be declared entirely invalid. I say that with the greatest respect for the Chair—

Mr. WELLS: Well, test the question.

Mr. BOYD: I ask the President to consider very carefully before he decides that these gentlemen are not eligible for election. Mr. Wells says that this special meeting of the Council was summoned for a specific purpose. That specific purpose, I say, is the election of members and associates, independent of whether the members and associates were nominated by the persons who called the special meeting or not.

Mr. WELLS: Why didn't you ask for the special meeting?

Mr. BOYD: My reply is that I consider that a special meeting for the special object of electing either associates or members before an election is a scandalous proceeding. But where it has been done by one side I consider that I have a right to it.

Mr. WELLS: It was your own side that started it.

Mr. MERRIN: It was done by the druggists' party last year.

Mr. BOYD: I don't care who started it. I disapproved of it.

Mr. WELLS narrated what occurred last year, to show that it was not the pharmaceutical chemists who started it. This year, the precedent having been started, he thought he was justified in taking advantage of it.

Mr. GRINDLEY maintained there was not a legal quorum present when Mr. Boyd made his nominations.

Mr. HODGSON, in reply to the President's invitation, said he left the last Council-meeting under the impression that the business was completed.

Mr. BOYD: I beg your pardon, Mr. Hodgson; you were there when I handed in those names.

Mr. HODGSON: Not when you handed them in.

Mr. BOYD: My recollection is that Mr. Hodgson was talking when I handed in the names.

The PRESIDENT: My recollection is that when you handed me the names Mr. Hodgson was present, but when I gave them back to you to have the addresses—

Mr. BOYD: I beg your pardon. My names always had the addresses to them. Don't confuse them with Mr. Gibson's. I submit that the supplemental agenda-paper is a legal and legitimate one, and that the President must put the names contained in it *seriatim* to the meeting for election or rejection.

Mr. WELLS: I maintain that when the Registrar speaks of the agenda-paper it means the paper that we got in due form. I say that this addition to it came out with only three days' notice. I asked you for a specific purpose to call a meeting. Mr. Boyd did not ask for it.

Mr. BOYD: The specific purpose was the election of members or associates.

Mr. WELLS: It was not, with every respect. The specific purpose was to elect the gentlemen I proposed.

Mr. BOYD: Surely that would be monstrous—that one gentleman was to have the power to summon a meeting for his purposes, and that another gentleman in the same position was not to have the same rights.

The PRESIDENT: I would not have summoned a meeting as requested by Mr. Wells and excluded the other names if those other names had been legally proposed. I put to you to-day the question, Were those names received with a quorum present?

Mr. WELLS: As Chairman you are quite competent to rule the point, and I think you ought. You know there was no quorum present.

The PRESIDENT: I say there was not a quorum present, and therefore, according to the regulations of the Society, these names could not legally have been put on the first agenda-paper.

Mr. BOYD: Had the business of the meeting concluded or not when I handed in the names?

The PRESIDENT: The business had concluded.

Mr. BOYD: But you received the names.

The PRESIDENT: It did not then occur to me that this course was not legal.

Mr. BOYD: The meeting had not concluded. Nobody drew attention to the fact that there was no quorum, and Mr. Hayes did not say that the business was concluded. If Mr. Hayes had said that the business was concluded while he saw me in the process of writing down names it would have been a discourtesy of which he would not have been guilty. Secondly, if he made the statement that the business of the meeting was concluded, I should have heard it, but I did not hear it. I say the only business the President has to perform to-day is to put the names for election or rejection.

Mr. WELLS: Mr. President, on a point of order—

Mr. BOYD: Mr. President, if I am to be interrupted by a Jack-in-the-box every time I rise—

Mr. WELLS: You have, Mr. President, already ruled that the meeting was closed. Mr. Boyd said he knows more than any of us about parliamentary usage, and, therefore, he ought to leave the ruling to the chair.

One or two members said Mr. Boyd ought to withdraw the expression he had just used.

Mr. BOYD: Well, I withdraw it with the utmost goodwill. I used it because every time that I rose to speak Mr. Wells rose.

Mr. WELLS: Every member has a right to rise to a point of order.

Mr. BOYD: I wish you would rise once for all, and be done with it.

The PRESIDENT then formally ruled that the names on the supplemental paper could not legally be put to the meeting for election.

Mr. BOYD: Before we separate, you will kindly take me as protesting against your ruling.

The PRESIDENT: You must recollect, Mr. Boyd, that you said you did not wish the matter to go to a vote of the Council, but that I should rule on it.

Mr. BOYD: I wished you to rule that the appearance of

those names in the second agenda-paper was sufficient evidence that they were eligible to be put to the meeting.

The attention of the President was then called by Mr. Boyd to the name of Mr. Joseph O'Neill as having been regularly in a former day's nomination-list, and as being now eligible for election as an associate druggist. Mr. O'Neill was therefore elected, and the Council adjourned.

Legal Reports.

MILK OF SULPHUR FOR PRECIPITATED SULPHUR.

On Thursday, September 22, at West Bromwich Borough Police Court, John Vincent Webster, described as a chemist, and proprietor of the Supply Stores, High Street, West Bromwich, was summoned at the instance of Mr. J. E. Morris, inspector under the Food and Drugs Act for Staffordshire, for selling, on August 23, a certain drug, known as precipitated sulphur, alleged to be adulterated. Mr. J. Clark defended. Harrold von Tromp proved visiting defendant's shop on August 23, and asking to be supplied with 2 oz. of precipitated sulphur. He received the article, for which he paid 2d. He handed it over to the county analyst on the following day. Mr. Jones, county analyst, stated that the sample contained, besides sulphur, 46 per cent. of sulphate of lime. Mr. Morris: Would that preparation be recognised by the British Pharmacopœia? Witness: No. Mr. Clark: What would be the value of it? Witness: I never give evidence as to value. Witness however added that he supposed it would be about half the price of the pure article. It was undesirable that a person should take a large quantity of sulphate of lime. The mixture used by the defendant was not recognised by authority. Mr. Clark pressed the witness as to whether the mixture had not been recognised previously, but he asserted that the British Pharmacopœia had never recognised that preparation. Mr. Clark: Do you know that precipitated sulphur is now taken to be equal to milk of sulphur by some people? Witness: Precipitated sulphur is preferable to milk of sulphur. In reply to further questions, Mr. Jones said if customers asked for precipitated sulphur they should get it without sulphate of lime mixed with it. Milk of sulphur was about 29s. 6d. per cwt. and the pure preparation was 55s. per cwt. But being pressed by Mr. Clark with regard to the sale of milk of sulphur, Mr. Jones asserted that there was no such thing as milk of sulphur, as the authority of the trade did not recognise it. It was not mentioned in the British Pharmacopœia. Mr. Clark: But it is still sold, and it is not a prohibited article. Mr. Jones replied that chicory was not prohibited. Sulphate of lime was not a prohibited article, but he did not know that it was largely sold. A chemist might sell it if he stated distinctly what it was. Mr. Clark, on behalf of defendant, admitted the adulteration, but said Mr. Webster had been unfortunate in the matter. He purchased the article in question from Mr. Eggo, of Birmingham, in July last, and it was invoiced to him as sulphur precipitat. It was taken from one of the parcels as it was received by the defendant, and there was an entire absence of any element of fraud upon the part of his client. It was quite true that defendant might have taken more care in the sale of the article, and should have applied some rough test to prove that it was a genuine article. It was stated that the article sold by defendant could be purchased for 5d. per lb., but defendant said it was 8d. per lb., and the difference between that and the retail price, 1s. 4d. per lb., was the usual profit. Mr. Clark contended that the mixture was recognised formerly in the trade. Precipitated sulphur, was an article seldom called for, but milk of sulphur, though not recognised by the British Pharmacopœia, was sold in large quantities. He submitted that only a technical offence had been committed, and that there was no intent to defraud. Defendant was fined 3l. 3s. 6d., including costs.

On September 23, at the Wolverhampton Police Court, before Mr. N. C. A. Neville, Stipendiary, Joseph Hanson, herbalist, of Oakeswell Road, Wednesbury, was charged with selling a drug which was not of the nature and quality asked for. Mr. Morris stated that this was the first case of its

kind he had had. On August 9, William Grassham, assistant inspector, visited the defendant's shop and asked for 2 oz. of precipitated sulphur. He was served with an article by the defendant's wife, and after paying 1½d. told her that he had bought it to be analysed by the public analyst. The defendant then came into the shop and stated that his wife had served the article in ignorance. On the article being analysed it was found to contain 46·4 per cent. of sulphate of lime. Defendant's wife said her husband had bad health, and could not leave the house. He was not a chemist, and did not profess to be one. Mr. Neville said a person who was not a chemist ought not to sell drugs. He imposed a fine of 40s. and costs.

BURSTING OF AN ACETIC-ACID CASK.

IN the City of London Court on Friday, before Mr. E. B. Tattershall (Deputy Registrar), Messrs. Hugh Wallace & Co., chemical-merchants, of Botolph House, E.C., sought to recover the sum of 4l. 0s. 4d. the balance due for two half-hogsheads of acetic acid which they had supplied to the order of Mr. C. S. Moore, of 96 Backchurch Lane, Whitechapel, in August, 1890. Mr. Druce appeared for the plaintiffs, and Mr. Cresswell for the defendant.

The defence was that the acetic acid was not according to the order, and that although a part of the quantity ordered had been used, the remainder was now lying at the defendant's place of business at the plaintiffs' disposal. A counterclaim for 6l. 10s. was also raised.

Mr. Druce said it was ridiculous for the defendant to accept the acetic acid and now that he was pressed for payment say that the plaintiffs could have the rest back.

Mr. Bruce, one of the plaintiffs' travellers, spoke to the defendant having promised payment; while Ullerthorne, a warehouseman, deposed to the casks going away in good condition.

Mr. Moore, the defendant, said he did not order the quantity of acetic acid which the plaintiff sent him. It was true he took the goods in, but that was done under a misconception. When the acid was presented at his premises he refused to take it in, but the carman persuaded him to do so and to sign for the goods, on condition that later in the day, when he had delivered some of his other goods, he would return and take the goods back. The carman was heavily laden and did not want to take the acid with him all day. If that had not been stipulated he would never have consented to the acid being delivered. Unfortunately, the carman did not come back for the acid. He used one half-hogshead, but after the other had been in his place for three days it suddenly burst, much to his consternation. His floor was much damaged, and some goods lying about were spoiled. The leaden water-pipes were eaten into by the acetic acid, and this, with the other parts damaged, he had had to make good. Consequently he set up a counterclaim for 6l. 10s.

The defendant's boy and another witness were called, but in the end the Deputy Registrar said he must be bound by the documents which had been produced before him. The receipt for the acetic acid had been put in, and although the defendant set up the bursting of the cask three days after delivery, he said nothing about it on the several occasions since when he had made payments on account. He must find for the plaintiffs on the claim, and he could not entertain the defendant's counterclaim. In his opinion it was an insult to anyone's judgment to expect them to sustain a counterclaim under such circumstances. It was an after-thought.

ADVERTISING ON A MAP.

At the Rhyl County Court, on September 23, twenty-eight tradesmen of Rhyl were summoned by a printer named Jackson, acting for Brookes & Co., Leicester, for payment of various amounts for advertisements inserted on a sheet described as a "business street-map of Rhyl." Mr. G. R. Lawrence and Mr. T. M. Davies, chemists, were among the defendants. His Honour Judge Horatio Lloyd heard the case. Mr. Sprigge, of Leicester, appeared for the plaintiff, and Mr. Gamlen for the defendants. In opening the first case, Mr. Sprigge produced the map, which was largely coloured green. "Which is Rhyl?" asked the Judge, amid much laughter. Mr. Sprigge explained that the whole of it

was Rhyl, the streets appearing on the green background and the advertisers' shops being coloured red. His Honour said he thought the greater part was meant for green fields. Mr. Sprigge admitted there were one or two errors in the map, but he maintained that the map as it was fairly and substantially fulfilled the contract. The "one or two errors" were then largely multiplied by the defendants. The Parade and Pier Hotel, which had been done away with nearly twenty years ago, was figured; Mr. Lawrence's pharmacy was placed on the wrong side of the street; and at a spot where another chemist was carrying on business, and other blunders were pointed out. "It is a burlesque map of Rhyl," said the Judge. "What can be worse than to indicate an advertiser's shop where there is another chemist?" Mr. Sprigge on this expression of opinion withdrew all the complaints, and his Honour granted costs.

THE VETERINARY SURGEONS ACT.

THE legal authorities of the Royal College of Veterinary Surgeons are enforcing their Act. We recently reported a case at Liverpool where an unqualified person was fined 40s. and costs for describing his establishment as a "veterinary infirmary for horses."

There was, on September 13, a case at Bristol in which the defendant had put up a signboard containing the words, "Alf. Martin, Veterinary Practitioner. Cattle treated for all kinds of diseases." The Magistrates, considering he had offended in ignorance, fined the defendant 1*l.* and costs.

On Monday last, Thomas Hill, farrier, of Hemyock, was fined 30s. by the Culmpton Magistrates for adding the initials V.S. to his name.

On Wednesday, at the Lambeth Police Court, Mr. P. W. Biles, of 5 Elliott Road, North Brixton, was summoned for having described himself as a "veterinary farrier" and for having used billheads headed "veterinary" and "farrier." Mr. Biron fined the defendant, who said he acted in ignorance, 10*l.* and 3*l.* 10s. costs.

THE BRIGHTON BY-LAWS *v.* BEECHAM'S ADVERTISEMENTS.

AT the Brighton Police Court on Tuesday, a boat-owner named Mayers was summoned for exposing an advertising placard on the unenclosed sea-beach, contrary to the provisions of the by-laws. It appeared that the sails of defendant's boat bore the following advertisement: "The World's Remedy. Try Beecham's Pills. Worth a guinea a box." The offence was admitted, but it was contended, on behalf of the defendant, that it was not a nuisance within the meaning of the Act. The object of the by-laws (said defendant's solicitor) was to prevent a nuisance on the beach such as was caused by the pedlars, showmen, and such, to the visitors of the town. A man was entitled to make what use he pleased of his own boat so long as it was not a nuisance to anybody. In this case it was not contended that a nuisance had been committed to anyone. Mr. Banbury said that the intention was that the beach should be enjoyed by the inhabitants and visitors of Brighton, and things which would lessen that enjoyment should be stopped, and probably visitors coming down for health and pleasure would find these advertisements a nuisance. He had no doubt that this was one of the things intended to be stopped as a nuisance on the beach. He thought this was a breach of the by-law, but it was a very trivial case; but it might become a nuisance if it became a general custom. On the defendant agreeing to pay the costs of the summons and remove the nuisance the case was withdrawn.

BANKRUPTCY REPORT.

Re A. G. E. MARTIN (trading as G. E. MARTIN & Co.), 14 Fenchurch Street, E.C., Importer of Essential Oils.

This debtor attended at the London Bankruptcy Court on Tuesday last, before Mr. Registrar Brougham, and applied to pass his public examination, upon accounts showing gross liabilities 2,074*l.* (unsecured, 1,570*l.*); and assets 3*l.*

In reply to Mr. Hough, the Official Receiver, he stated that

he had been in business as a manufacturer of essential oils up to last May. At first he was in partnership with another person, who withdrew from the firm on the understanding that he was to be paid 400*l.* later by witness. The legal agreement was drawn up, but witness undertook the liability because the partner had provided the capital lost on the joint trading. Later, witness was joined by another gentleman, with whom he traded until June, 1891. That partner then retired, and witness had since traded alone.

The examination was ordered to be concluded.

Trade Notes.

THE BERKEFELD FILTER COMPANY have been awarded a commemorative diploma of honour with gold medal for excellence of exhibit at the Isle of Man Exhibition recently held at Douglas.

MESSRS. BURROUGHS, WELLCOME & Co. have added still another tabloid to their sugar-coated series—viz., one containing 3 grains of Bonjean's ergotin. This ergotin is, we are informed, standardised, as far as it is possible to standardise a preparation of a drug having the complexity of ergot, and the form in which it is exhibited should commend it to prescribers.

TRADE MARKS IN PARAGUAY.—Mr. J. Seymour Salaman, manager of the Trade mark Registration Offices, sends us details of a new and, as he considers, an admirable trademark law in Paraguay. It is a combination, he says, of a Registration Act with some provisions similar to our Merchandise Marks Act of 1837. Persons interested can no doubt obtain particulars from Mr. Salaman.

MESSRS. JOHN DAVIS & Co. (LIMITED), of the Old Kent Road, send us a specimen of their familiar toilet almanac for 1893, for distribution by chemists. It is a useful compilation, excellently produced. The cover has a quaint representation of the zodiacal signs in gilt and colours, and the chemist has the choice of an article on "Nervousness" or a price-list of proprietary articles in the body of the book.

Personalities.

MR. JOHN FRASER, of Kemp & Co. (Limited), Bombay, is home on a visit just now.

MR. J. L. HARTRIDGE, of Blondeau et Cie., is at present in New York on a business visit.

A BIOGRAPHY of the late Sir Morell Mackenzie, M.D., is to be written by the Rev. H. R. Haws.

THE American papers record the safe arrival in New York of Professor L. E. Sayre, who put in an appearance at the Pharmaceutical Conference in Edinburgh.

MR. FREDERICK DAVIS, the pharmacy and science teacher of Newington Causeway, has had the misfortune to be bitten in the foot by a collie, and the wound is proving rather troublesome.

THE Introductory Sessional Address to the students at St. Mary's Hospital Medical School will be given on Monday next, October 3, at 4 P.M., by Arthur P. Luff, Esq., M.D., B.Sc., the physician in charge of the out-patients of the hospital.

Business Changes.

THE business carried on by the late Mr. John Evans, at Biggleswade, has been disposed of to Mr. Robinson.

MR. RICHARD TWEMLOW, chemist and dentist, Manchester, has disposed of his Ducie Street branch business to Mr. H. B. Pare, chemist, Church Bank, Bolton, in order to devote himself more to the dental department at his principal establishment, 91 Upper Brook Street, Manchester.



The following applications for Patents have been registered at the Patent office.

Aërated-water Apparatus.—12,146.—June 30, 1892.—E. S. Chavasse. Machinery for syringing aërated liquids and for filling internally-stoppered bottles with the same. —13,187.—July 19, 1892.—C. Samson, G. Bowen, and J. Samson. Driving machines for bottling and syringing artificial mineral and aërated beverages.

Aërated-water Machinery.—9,597.—May 20, 1892.—J. W. Galloway. Apparatus for filling and syringing artificial mineral and aërated beverages.

Ammonia—13,686.—July 27, 1892.—E. De Cuyper. Collection of ammonia and ammoniacal salts from gaseous and liquid mixtures.

Antiseptics.—13,291.—July 20, 1892.—J. W. Johnson.

Bottle-brush.—13,203.—July 19, 1892.—E. Böhm.

Bottle-stoppers.—13,197.—July 19, 1892.—F. W. Fletcher. Stoppers or caps of bottles containing medicinal or other liquids.

Bottles—13,386.—July 22, 1892.—J. E. Buchanan and W. C. Penn. Sediment separating bottle.

Boxes.—14,063.—August 4, 1892.—W. Burton. Burton's safety pot or box for the putting up and storing of pharmaceutical, toilet, and other preparations.

Camphor, Artificial.—13,400.—July 22, 1892.—T. S. Lemon.

Cattle Food.—13,695.—July 27, 1892.—J., J. and Emile van Mullem.

Chemicals.—13,203.—July 19, 1892.—W. Maltster. Sulphate of ammonia.—13,822.—July 29, 1892.—H. W. Wallis. Chlorine.—14,161.—August 5, 1892.—O. Imray. Dioxynaphtoë-mono-sulpho acid and its salts.

Cholera, &c, Cure—13,922.—July 30, 1892.—M. Rendell. Medicinal compound for the cure of cholera, dysentery, and similar ailments.

Dental Mallet.—13,606.—July 26, 1892.—E. Lewthwaite.

Filters.—11,816.—June 24, 1892.—B. M. Santurio.—12,196.—June 30, 1892.—F. Vanicek and G. Mosovsky.—12,272.—July 2, 1892.—A. Southwell.—12,622.—July 8, 1892.—J. Hampton.—13,376.—July 21, 1892.—S. A. Johnson.—13,631.—July 26, 1892.—G. Ochs. Particularly applicable for gaseous beverages.—13,927.—August 2, 1892.—W. Marriott.

Inhaler.—14,165.—August 5, 1892.—A. Gorhan, E. Kleiner, and W. Bokmayer. Apparatus for inhaling air saturated with moisture or any suitable medicine.

Medicinal Remedy.—13,277.—July 20, 1892.—A. Roth and A. Roth. Preparation for the alleviation and cure of open wounds, cuts, sores, burns, scalds, and the like.

Medicine.—10,306.—May 31, 1892.—E. G. Brewer.

Oxygen.—10,745.—June 7, 1892.—The Manchester Oxygen (Brin's Patent) Company (Limited) and W. M. Jackson.

SPECIFICATIONS PUBLISHED.

Copies of the following may be obtained from the Patent Office, Southampton Buildings, Chancery Lane, E.C., for the prices mentioned, and 1d. extra for postage if required. Where a price is not given, the specification is published under the new regulation at 8d., post free.

1891.

4,820. Beilby. Cyanides.

8,692. Lyte. Caustic alkali and chlorine.

9,929. Arnold. Syringes.

10,516. Jordan. Cleansing-compound.

10,555. Oppenheimer. Medicinal capsules.

10,667. Fanta. Producing oxygen.

11,320. Glass-lined Syphon Company (Limited) and Nicole Aërated-water syphons, &c.

11,381. Smith. Syringes.

11,437. Rylands & Cuthbut. Boxes for aërated waters, &c.

11,470. Bell. Chlorine.

11,522. Dalglish & Williams. Beverage.

11,523. Cleary. Charging syphon used in filling bottles.

11,833. Willcox. Pharmaceutical compounds.

12,512. Haslam. Filters. 6d.

12,729. Haseloff. Palatable kola-nut powder.

12,802. Barker. Liniment. 4d.

12,813. Crossley. Ferro-ferric and ferric oxides.

12,895. Gutensohn. Producing litharge from metallic lead.

13,139. McMurray. Disinfecting, &c. compounds.

13,424. Wells. Extracting ammonia.

13,540. Pitman. Tooth-brushes. 6d.

13,555. Fowler. Dispensing liquids. 8d.

13,693. Lembach & ors. Quinoline derivative. 4d.

14,048. Murray and Harrison. Bottle-stopper. 8d.

14,224. Ernert. Preparing phenylestersalicylic acid from salicylic acid. 4d.

14,609. Sayer. Filters.

14,816. Hilt. Bottle-washing machines.

15,136. Eichstädt. Caustic alkali, &c. 6d.

15,249. Lake. Ammonia and gas. 8d.

15,287. Hugues. Distilling fatty acids, &c.

15,481. Williams. Aëration of liquids.

15,795. Sherman. Pessaries. 6d.

16,347. Sample. Bottles, flasks, &c.

16,428. Breidenbach. Securing capsules upon scent-bottles.

16,512. Chatfield. Nitric acid.

17,159. Ritchie. Syphon-cask for aërated liquors, &c. 6d.

17,493. Bang. Anti-pyretic chinoline derivative. 6d.

17,654. Hellström. Extracting fatty particles from emulsions. 6d.

18,078. Kingzett. Inhaling-appliances. 6d.

18,243. Whitten. Infants' feeding-bottles. 6d.

18,305. Geraut. Seltzogenes. 8d.

18,324. Brunner & Zanner. Nitrate of ammonia. 4d.

18,406. Rands & Mennell. Holding bottles containing poisons. 6d.

18,417. Bonwick. Aërated-liquid bottles. 6d.

18,434. Morss & Bourne. Sulphur candles. 6d.

18,527. Boulton. Pocket inhalers. 8d.

18,599. Edwards. Medicine powder packets. 6d.

18,619. Fereday, F. F. & M. A. Ointment.

18,881. Cundy. Medicine. 6d.

19,093. Nichols. Administering medicines, &c. by inhalation.

19,215. Kessler. Concentrating sulphuric acid. 8d.

19,287. Geraut. Syphons for aërated liquids. 8d.

19,382. Bigot & Schreiter. Sodium borates. 4d.

19,815. Elworthy. Aërating liquids, &c. 6d.

20,060. Kellner. Hydrogen and chlorine. 11d.

20,270. Crosby. Sanitary toilet appliance. 6d.

20,395. Robertson. Sheep-dip.

20,713. Kellner. Chlorine, &c.

21,182. Cannell. Bunion-pad. 6d.

21,631. Dodd. Infants' food.

21,632. Dodd. Infants' food.

22,250. Panchaud & Temple. Dispensing aërated liquids.

22,320. La Société A. R. Pechiney & Cie. Chlorine. 4d.

22,505. Scott. Aërated beverage.

22,679. Higgins. Mucilages, &c. 4d.

22,682. Higgins. Mucilages, &c. 6d.

22,685. Higgins. Mucilages, &c. 6d.

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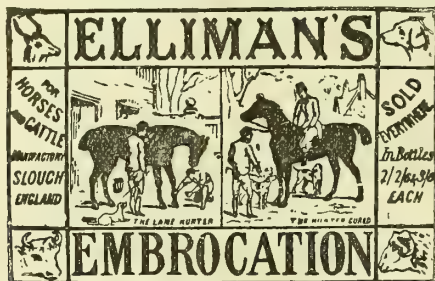
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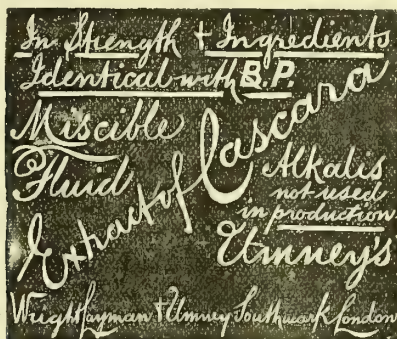


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Editorial Comments.

BANKRUPTCY LAW.

THE report of the year's proceedings under the Bankruptcy Acts of 1883 and 1890, drawn up by Mr. John Smith, the Inspector-General in Bankruptcy, and submitted to the Board of Trade, is a document of the highest importance,

from both commercial and sociological points of view. The principles of bankruptcy law embodied in the statutes referred to were in essence the reverse of those which had prevailed for many years previously. The Act of 1869 left debtors and creditors to settle affairs pretty much as they liked among themselves. The result was that fraudulent debtors and professional estate-wreckers got things almost their own way, and legitimate creditors with better business to attend to were found to be increasingly indisposed to waste time in the hopeless and unprofitable scramble for the remains of insolvent properties. The distinctive feature of the Bankruptcy Act of 1883 is, as the Inspector-General says in his report, "that it treats the conduct of a debtor as a matter of public concern, which may not be condoned either by the private friendship or personal interest of his creditors." It is not, it may be admitted, the business of the State to lend its machinery to careless creditors for the purpose of collecting their debts for them. But the State rightly regards it to be its duty to do what can be done to keep the stream of commerce unpolluted. It is on this principle only that the rigid administration of bankruptcy proceedings inaugurated by the Act of 1883, and still further developed by that of 1890, is justified.

These Bankruptcy Acts have always been the object of attack, especially from some sections of the legal profession, and the reports are generally somewhat militant in tone. This year Mr. Calcraft, the Board of Trade official who has charge of the bankruptcy business, replies to what appears to be an unfair criticism emanating from a committee appointed by the Incorporated Law Society. These lawyers allege, it appears, that the Bankruptcy Department is a financial failure, costing the taxpayers over 37,000*l.* per annum. Mr. Calcraft asserts, and seems to prove, that, interpreting the figures correctly, the Department has never cost the taxpayer a penny. The balance in favour of the taxpayer is obtained by calculating the interest that would have accrued from stock transferred to the National Debt Commissioners and cancelled in 1869. This, however, was similarly calculated under the 1869 Act; excluding that the average deficiencies under the two Acts have been 51,690*l.* under the old Act, and 27,223*l.* under the Act of 1883.

The cost to the nation is a matter of trifling concern, however; the more important question is whether the present Act works effectively in the prevention of preventable bankruptcies and the punishment of commercial fraud. That traders whose career is shady, and whose transactions have been, to say the least, irregular, dislike the modern system of searching investigation does not need demonstration. If statistics prove anything, the benefit to creditors resulting from the later Act is equally evident. Under the 1869 Act the number of bankruptcies varied from 5,002 to 13,132 per annum. Under the new Act the annual totals ranged from 4,011 to 4,839. During the past four years deeds of arrangement have also been registered. These have declined regularly from 3,495 in 1888 to 3,008 in 1892. Taking a general survey of all the years from 1870 to 1891, and allowing a net average of 33 per cent. as the cost of realisation, it appears that under the 1869 Act the net annual loss to creditors in bankruptcy averaged over 15,000,000*l.*, while under the 1883 Act it has never reached 10,000,000*l.* This loss, compared with the total income assessed for income-tax—namely, 587,000,000*l.*—may be said to be not exorbitant. If compared with the amount assessed under Schedule D only (306,000,000*l.*), we have the result that bad debts ought not on the average to bear a greater proportion than that of 1*l.* to every 30*l.* of the profits realised in business.

Bankruptcies and deeds of arrangement together were

rather more numerous in 1891 than in 1890, when the number was lower than it had ever been. They increased from 7,108 to 7,224. The Inspector-General remarks:—"Such fluctuations are a necessary incidence of bankruptcy statistics, which must always be distinguished by a certain ebb and flow in the tide of insolvency. I do not think, however, that there is any ground for supposing that the present increase is otherwise than temporary. It would have been strange if the depression which has attacked so many branches of industry had not been reflected in the bankruptcy returns. And, looking to the causes, character, and extent of that depression, there appears to be some reason for congratulation that the statistics do not exhibit a still larger increase in insolvency." He refers to the "Baring Crisis," the South American collapse, and other causes, which it is practically beyond the sphere of bankruptcy legislation to control or modify, as accounting for the increase. "But their influence is temporary, and although in the present case that influence may not yet have entirely exhausted itself (for the failures of the early part of the present year show a still further increase), there does not appear to be any reason for expecting any large development in this direction." He thinks the Act of 1890, introducing greater stringency into bankruptcy administration, "has already produced a salutary effect in checking irregular business habits and unhealthy trading speculation." Among other matters dealt with by the Inspector-General in his report there is an important section dealing with the Married Women's Property Act in relation to bankruptcy. This is worthy of careful attention. A married woman can only be made bankrupt if she carries on a trade separately from her husband. She can have a separate estate, and may enable her husband to live in the highest style, but if she and he manage matters skilfully, they can get all they want at the expense of their creditors, and without much risk of getting due punishment under any bankruptcy proceedings. The Liverpool Official Receiver, for instance, tells of a bankrupt without a penny whose wife is abundantly supplied with wealth, much of which, the Receiver suggests, has been abstracted from his business and transferred to his wife. But as such bankrupts keep no books, and for this offence can only be punished by having their discharges withheld, it is almost impossible to establish such charges against them.

THE COLLEGE AND THE CHOLERA.

THE Royal College of Physicians is getting little thanks for its disinterested action in regard to the cholera. Asked by the Medical Department of the Local Government Board to formulate instructions which would assist in the prevention and treatment of cholera, the College, according to precedent, did so. It is quite in accordance with precedent also that the instructions should be met with criticism, and the *Lancet* is true to its record in leading the way. "The function of a College of Physicians," says our contemporary, "is to qualify men to treat disease and then to throw the responsibility for its treatment upon them—not to supply chemists and medical men with ready-made prescriptions." Our contemporary is somewhat in a fog about the functions of the College, which, after all, was applied to as the oldest medical body in England, and one which, more than any other, has had the ancient privilege of supplying ready-made prescriptions to chemists and medical men in the form of a national Pharmacopœia. There is little to complain of about the prescriptions, which, says the *Lancet* writer, "are as good as general prescriptions for individual cases could be,

and fairly represent present therapeutic views as to the best measures to be taken for the prevention of cholera in cases of diarrhoea. We even admire the ingenuity with which the advocates of rival methods of treatment are conciliated, and with which the general indications of experience and common sense are respected. It is refreshing to see the ancient College alive to the virtues of coto, which has as yet no place in our Pharmacopœia, and which, it may safely be assumed, is still an unknown drug to many chemists, and even to many Fellows of the College." We cannot assume anything of the kind. Tincture of coto is well on the way to the British Pharmacopœia, as a formula for it has been devised by the Pharmaceutical Conference. Even THE CHEMIST AND DRUGGIST critics have not been very happy in their comments. Mr. Brown complains of the College introducing bismuthi et cerii salicylas for the first time to a good many dispensers, but there is a double salt of that name which has been recommended for diarrhoea and similar affections; and it strikes us that 1-drachm and 2-drachm flexible capsules of castor oil are not very hard to swallow.

But it has always been the same when the Government authorities have given advice in cholera matters. In the cholera epidemics of 1848, 1853-54, and 1866 the Board of Health were very roundly condemned for the advice which they gave, especially for prescribing preparations containing opium. And now, when we look back all these years and compare the advice given then with what holds good now, it is surprising how much of the old we still have with us, and, therefore, how *apropos* it was. This circumstance should be considered by the critical. It was in the last epidemic (1866) that the well-known Board of Health diarrhoea-mixture was proposed, and how well it has served its day! The prescription was a modification of one which Sir John Fisher, at one time Chief Surgeon to the Metropolitan Police, sent to the *Times* of August 3, 1866, and as it has some bearing upon the "pulv. aromat." question now being discussed in our columns we quote it:—

Conf. aromat.	3vj.
Tr. opii	3j.
Tr. catechu	3ij.
Spt. ammon. arom.	3j.
Æther. chloric.	3ij.
Aq. menthae pip.	3xiiij.

Misce.

Three tablespoonfuls every three or four hours until diarrhoea ceases.

Few will deny that the publication of well-matured advice at the time of public panic arising from threatened epidemics of any kind is generally beneficial, but the time appears to have come when old precedents should be set aside, and the whole question of advice reconsidered by the central authorities. Publicity is so rapidly and universally given now-a-days to information on all subjects that it may be for the public good to consider if the method of distributing the advice can be remodelled. For example, it might advantageously be agreed that general advice should continue to be given through the public press, but that specific instructions should be published only through journals representing medicine and pharmacy, or through the bodies charged with the control of these callings—viz., the Medical and Pharmaceutical Councils. It may also be considered whether what has been done during the cholera scares, and last winter during the influenza epidemic, may not with advantage be done when any zymotic disease is unusually prevalent—as scarlet fever is in London now, for example. We recognise the fact that before much can be done in this direction the Government Medical Department must be made a more important one than it is. The increased interest in sanitation, and the necessity now imposed upon householders to notify infectious diseases, appear to demand that the central

medical authority should be sufficiently powerful to cope with any extraordinary work, such as a cholera epidemic would appear to imply; and it may also be desirable to give the Department the power of initiation, the lack of which has hitherto compelled it to seek the advice of the College of Physicians.

IS WATER-ANALYSIS A FAILURE?

THE *British Medical Journal* publishes the evidence which Sir George Buchanan, late principal medical officer of the Local Government Board, gave before the Royal Commission on Metropolitan Water-supply. Sir George has no faith in water-analysis. Three years ago three specimens of the same water, taken at the same time and at the same place, were sent to Mr. Pattinson, Mr. Stock, and Dr. Dupré. Mr. Pattinson described the water as being "very free from organic contamination, and quite suitable for Crinking purposes," whereas Mr. Stock described it as "not satisfactory as drinking-water," and he said: "I consider the ammonia to be evidence of recent sewage-pollution. I take this item in connection with the microscopical examination, which is of sufficiently suggestive character," and he did not consider the water to be a safe water-supply. Dr. Dupré arrived at a somewhat similar conclusion. The water was, even as in its ordinary physical characters, considered and described by one analyst to be "colourless and nearly clear," and by another to be "faint green and slightly milky." That discrepancy Sir George Buchanan considered to be evidence of a difference of observation and interpretation. He knew of no tests which he could apply or advise which would determine whether there were organisms in drinking-water deleterious to human life or health. He could, of course, investigate organisms present microscopically, or have determined albuminoid ammonia, nitrates, &c., chemically, and deduce inferences therefrom as to the water having received impurity; but that the water contained any impurity injurious to health such examination was, he confessed, unable to determine. Nor could any analysis whatever of any sample of water give him any information as to the hurtfulness of the organisms. It was absolutely necessary that they should make a study of the source of water-supplies, and cut off contamination, rather than trust to analyses. That is Sir George Buchanan's opinion; and as he is regarded as one of the most important authorities in hygienic matters, the opinion will doubtless carry great weight. What he says is to a large extent true. As conducted, water-analysis is often of little value, but it is possible by the latest methods of research to determine with considerable accuracy the nature of micro-organisms present in a water.

Dr. John C. Thresh, the Medical Officer of Health for Chelmsford, has, in a paper communicated to the Sanitary Institute, shown remarkable agreement with the opinion of Sir George Buchanan in regard to water-analysis. Dr. Thresh deprecates the unfortunate circumstance that the public imagine that any man who can make such a water-analysis is competent to speak with authority as to its quality and suitability for domestic purposes, and to give an opinion as to whether it has produced or is likely to produce disease. It is still more unfortunate that chemists themselves labour under this misapprehension. Dr. Thresh believes that the only person competent to give such an opinion is a person who has had a medical training, and who has made the subject a special study. From that he argues that the Medical Officer of Health ought to be the person; but then, the M.O.H. at present is required to have only a very slight acquaintance with water-analysis. Dr. Thresh would have this remedied, and he sketched in his paper what he conceived to be the

points to which greatest attention should be paid, and, like Sir George Buchanan, he specially emphasised the necessity of supplementing the chemical, microscopical, and bacteriological examination by a thorough investigation of the source of the water, and of the possibility of its being contaminated. He says that to condemn one water because it yields a little more albuminoid ammonia than another, or because it contains a few more organisms than another, when we know nothing of the nature of the substance yielding the ammonia and nothing of the character of the organisms, is obviously so illogical as to be absurd, and yet this is what is almost invariably done.

It would seem, therefore, that we are face to face with the question, "Is water-analysis a failure?" It has been so exclusively the province of chemical analysts to pronounce judgment upon domestic waters, and they generally have given so little attention to the large issues attached to analysis, and so very much to sets of standard figures for chlorine, nitrogen, hardness, and so on, that the attack from the medical-health side is not unexpected. There has been more wrangling over water-analyses than over anything else in chemistry—and for what? Some figure in the second or third place of decimals, probably, and in regard to what this NH_3 or that NH_3 implies, when a visit to the source of the water and an inspection of the sewage trickling into it might settle everything. That is what Sir George Buchanan and Dr. Thresh advocate. They have begun a stupendous task, and they need good backing if they are to oust the men of figures and fancy, and replace them with those who have a deep-souled respect for public health and the ability to attack chemical subjects in the true sanitary spirit.

COMMENTARY.

A RUSSIAN BENEVOLENT FUND.—In a recent issue we stated that the Russians inaugurated a sort of pension fund, based on a *pro rata* tax on prescriptions. We are now in a position to give fuller details of this scheme. At a conference of the pharmacists of all Russia, held in 1889, it was suggested that a pension fund should be established to benefit all pharmacists throughout the empire. The meeting went so far as to make out a general outline for the projected fund (the income to be derived from contributions not only of employes, but of the masters also), by which it was arranged to take $\frac{1}{4}$ kopeck on each prescription dispensed. A special committee was formed, with Mr. V. K. Ferrein (whose large "apteka" in Moscow we have before had occasion to describe) as President, the headquarters of which would be in Moscow. A plan was worked out for the general fund, and notices sent round to all the Pharmaceutical Associations in the empire, asking for suggestions. These are now sending in their ideas of the system, and, in accordance with the views of the profession throughout the land, changes will no doubt have to be made in the original plan. Once the Associations are agreed on the form of the scheme, the project will be placed before the Government authorities for their sanction. A scheme, such as this, of allowing a small (being but about one-half) percentage on each article dispensed, whilst but a small loss to the chemist, will, we think, be readily agreed to for the ultimate gain. There is reason to hope that this system, placed, as it is, on so sound a basis, will prove successful, and be of great assistance to those who, by ill-health or the vicissitudes incumbent on the pharmaceutical calling, are thrown upon its help.

CHEMISTS AND WINE-LICENCES.—We have reported a considerable number of licences to chemists to sell wines at

the late Brewster Sessions, and we have probably not heard of half of those that have been granted. It must be remembered that those named are all new vendors of wines the former sellers get their licences renewed without publicity. It is evident that chemists are gradually, but not too precipitately, preparing to meet the growing demand for the administration of certain medicines in a vinous vehicle. The *Morning Advertiser*, recognising this fact, says "the recent appearance at the Brewster Sessions of chemists in different parts of the country in the capacity of applicants for wine licences has once more aroused the attention of a trade contemporary. The sale of medicated wines is understood to be the object of their interview with the licensing justices, but as the licence covers every other description the retail trade will observe that competition threatens them from another quarter. It is possible that many chemists would not avail themselves of the full extent of their privileges under any circumstances, but adhere closely to their own legitimate sphere. Others, again, might see no impropriety in supplying a demand with the knowledge that the transaction had the full sanction of the law. In any case, however, there is no reason, as our contemporary says, why chemists should enjoy the monopoly even of the medicated-wine trade. Let the licensed victualler and the grocer stock such goods equally with the distinctly beverage drinks. And if the chemist does decide to compete with them on their own ground, let him not make the business a by-word and a reproach, as his American colleague has done, evoking the execration of his own trade organs." The organ of the gin-palaces urging on chemists the necessity of conducting their businesses decently is an edifying spectacle, and we hope the pharmaceutical body will endeavour to merit the approval of its self-constituted censor.

WASTE CALCIUM CHLORIDE.—It has always been a problem of great moment to alkali manufacturers what they should do to get rid of calcium chloride in a profitable way. The quantity of it which is annually run to waste is enormous. Now there is a prospect of its utilisation to a fair extent. It is one of the most difficult things to get rid of the sulphur in iron and steel, but Mr. E. H. Saniter, of Wigan, appears to have hit upon a process which works admirably, and which he described to the Iron and Steel Institute last week. To every ton of iron he adds a mixture of 25 lbs. of calcium chloride and 25 lbs. of lime, and in the course of half-an-hour's fusion the sulphur is completely eliminated by the mixture. The process is also adapted for the removal of silicon, but in this case chalk has to be used instead of lime. If the process should be adopted for all the sulphur containing iron treated in this country, there would be created an outlet for about 80,000 tons of calcium chloride annually.

Gazette.

PARTNERSHIPS DISSOLVED.

Jones, J. W., & Crossley, A., under the style of the New Cambrian Chemical Company, Talywain, Pontymoile, Townforge, and Caldicot, Monmouthshire, drysalts and colour manufacturers.

Ryland, H., Proctor, W., & Ryland, F. W. P., under the style of H. & T. Proctor, Bristol, manufacturing chemists, and manufacturers and dealers in agricultural implements and manures; as far as regards F. H. Ryland and F. W. P. Ryland.

Stirling & Male, Grays Thurrock, Essex, physicians and surgeons.

TO EXTERMINATE ANTS, make a mixture of equal parts of sugar and tartar emetic into a thin syrup with water; spread this on pieces of writing-paper, and lay these where the ants can readily get at them—they'll do the rest.

ETHER.

By A. C. ABRAHAM, F.C.S., F.I.C.

This paper was read some months since to the Liverpool Chemists' Association, but is now published with numerous additions by the author.]

BY the use of the term ether in the singular, I need hardly say that I refer to the ethyl ether, or oxide of ethyl, so well known in medicine and pharmacy, and not to the large class of bodies known to modern chemists as "ethers."

HISTORY.

Ether, or sulphuric ether, as it was formerly called, was known before 1540, when it was described by Valerius Cordus. It is, therefore, by no means a modern production. Experiments were carried on by Boyle and Sir Isaac Newton as to its preparation and properties, and later two Germans, Dr. Frobenius and Godfrey Hankovitz, who seem to have been assistants under Boyle and Newton, continued the investigation, and the former (Dr. Frobenius) published directions for its manufacture in the "Philosophical Transactions" of 1730, while his coadjutor, Godfrey Hankovitz, carried on its manufacture, and is, indeed stated—no doubt correctly—to have been the first to do so on a large scale; although what may have been regarded at that time as a large scale would be considered now an extremely small one.

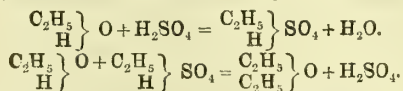
Frobenius's process consisted in distilling equal parts by weight of oil of vitriol and highly rectified spirit of wine until a heavy liquid began to come over, cooling the retort, adding half the previous quantity of spirit, again distilling and repeating the process as long as ether was produced. This crude product was then rectified.

A process essentially the same as this remained official in the London Pharmacopœia as late as 1836, but the Edinburgh Pharmacopœia had at a somewhat earlier date discarded this process in favour of the continuous one.

The name "ether" would appear to have been first employed by Frobenius.

MANUFACTURE.

Ether may be made by many processes, among others by the action of phosphoric and arsenic acids, fluoride of boron, chloride of zinc, tetrachloride of tin, and other metallic chlorides upon alcohol, but in practice it is always made by the action of sulphuric acid upon alcohol, the following well-known reactions taking place:—



The sulphuric acid first forming sulph-ethylic acid and water, and the sulph-ethylic acid being again decomposed by more alcohol to form ether.

That this is actually the change which takes place there can be little doubt, because on the admixture of sulphuric acid and alcohol sulph-ethylic acid is undoubtedly formed, for its salts are easily prepared, and, further, it is beyond dispute that ether is formed when alcohol and sulph-ethylic acid are distilled together.

The continuous process which is now employed, and which seems to have been introduced either by Boullay or Mitscherlich, differs but little in principle from that originally described by Frobenius, the only difference being that instead of adding the alcohol in portions from time to time it is added in a continuous stream.

The practical advantages of the latter process are, however, no doubt enormous, for the following reasons, viz.:—

1. It avoids the cooling of the still before each addition of fresh spirit, and this is of more importance than would at first sight appear, because not only is a great loss of time saved, but every time any apparatus containing ether is cooled and heated, a large amount of ether is carried away dissolved in the air admitted on the cooling, and expelled on the re-heating.

2. By running the spirit in continuously it is possible to keep the temperature of the mixture in the still almost constant, the importance of which cannot be over-rated

when it is remembered that if the temperature is too low a large proportion of unaltered alcohol comes over, and if too high the product is contaminated with olefiant gas, oil of wine, and other impurities.

With regard to the actual proportion of materials employed, form of apparatus, and details of manufacture in this and most other countries, it is not possible to speak with any confidence, as different makers will no doubt vary the process somewhat, and they are not generally disposed to enlighten outsiders on these points.

Watts in his dictionary states that 5 parts of spirit of 91 per cent. by volume (*i.e.*, practically 60 o.p.) are treated with 9 parts of oil of vitriol, and distilled in a lead-lined still at 140° C. (284° F.), and that more spirit is run in so as to maintain that temperature until about 30 parts of alcohol have been used.

A practically similar process is directed in the Pharmacopœia of 1867.

Attfield gives 284°–290° F. (140°–143° C.) as the best temperature, but possibly this may refer to the best temperature for making experimental quantities in glass, from which ebullition generally takes place at a higher temperature than from metal.

Souberan recommends 130° C. (266° F.), so as to avoid the formation of gaseous hydrocarbons. Squibb also employs the latter temperature.

At this temperature more unaltered alcohol no doubt comes over than at the ordinary temperature recommended; but as Squibb employs a continuous process by which the undecomposed alcohol is constantly being returned to the still this drawback is minimised.

I will, as shortly as possible, describe Squibb's process, because I believe his product has a great reputation in America, and from my examination of a sample obtained from thence, I believe it to be, in some respects at least, superior to what is ordinarily sold in this country.

He employs 13 gallons (American)—*i.e.*, roughly, 85 lbs. (American)—of spirit, and 360 lbs. (American) of sulphuric acid. It will thus be seen that he uses more than twice as much acid as Watts and the Pharmacopœia mention, the proportions, reduced roughly to the same standard of acid—*viz.*, 9—being as follows:—

Parts alcohol to 9 parts acid	Temp. of distillation	
	C.	F.
P.B., 5	not given	
Watts, 5	140°	284°
Squibb, 2½	130°	266°

Having charged his still with these quantities of acid and alcohol, he distils by means of a heavy lead coil, heated by steam, at 40 lbs. to 60 lbs. pressure at 130°, and conducts the vapour first through a purifier, where it is washed by passing in small bubbles through a solution of potash kept at such a temperature that the ether and alcohol pass on uncondensed, thence through six still heated purifiers, similar in principle to a Coffey's still, where it meets descending warm distilled water. It then consists of ether, alcohol, and uncondensable gases (the latter, being specially mentioned by Squibb, we may assume are formed even at 130°).

To separate the alcohol, the vapour is then passed through a block-tin worm, cooled to 35° C. (95° F.), from which the liquid, consisting of spirit, is returned to the feed, and again passed back to the still. The ether, still containing about 4 per cent. of alcohol, is then condensed and stored for distribution as stronger ether of the U.S. Pharmacopœia.

One point should here be noted with regard to Squibb's process—*viz.*, that while Watts gives 30 parts of alcohol as the amount which may be used before the acid becomes too weak and impure for economical use, Squibb etherifies 120 barrels before he renews his acid, and then only because, owing to the impurities in the alcohol, it has become very black and froths inconveniently. He must, therefore, get rid of the water contained in the spirit used as fast as it is added, and probably this is due to the large proportion of acid employed.

Before dealing with the properties of ether, and the tests for its purity, let us for a moment consider its

USES.

From soon after the time of its being named ether by Frobenius, until about 1846, it was used exclusively inter-

nally as a sedative, antispasmodic, and carminative, and, possibly, externally as a refrigerant. It was recognised as a narcotic, but it is doubtful whether this property was utilised.

In 1818, a writer, believed to be Faraday, in the *Quarterly Journal of Science*, compares the effects of inhaling the vapour of ether mixed with air to the action of nitrous oxide, which he states it greatly resembles in many respects. Pereira describes its anæsthetic effect in 1842.

The next mention I find of its use as an anæsthetic is in a reprint in the *Pharmaceutical Journal*, January, 1847, of an article taken from the *Medical Gazette*, in which its successful use as an anæsthetic, by a Dr. Morton, a surgeon of Boston, is mentioned. There seems to be little doubt that he was the first to employ it practically as an anæsthetic, and a monument has since been erected to his memory on account of his discovery.

The home of ether as an anæsthetic is, therefore, America, and it is there that it has, as far as I can learn, most steadily held its own in the competition with chloroform and other anæsthetics.*

In this country its use extended so rapidly, that there are upwards of twenty varieties of ether-inhalers described in the *Pharmaceutical Journal*, 1846-47.

IMPURITIES AND THEIR DETECTION. DECOMPOSITIONS.

There are, or may be assumed to be, four classes of impurities found in ether, viz. :—

1. Those pre-existing in the alcohol from which it was produced, or decomposition products of such impurities.
2. Decomposition products from the alcohol and sulphuric acid employed.
3. Alcohol and water in so far as these are to be regarded as impurities.
4. Products of the decomposition of the ether itself or which are said to be so formed.

The first may be detected by allowing the ether to evaporate spontaneously when the odour given off towards the end or after the completion of the evaporation, will reveal their presence, and also that of oil of wine.

The second—viz., those derived from the alcohol and sulphuric acid—are acetic and sulphurous acids and oil of wine. The acids may be detected by placing a piece of moistened litmus-paper in the sample, and the oil of wine will have been previously detected by the evaporation test.

The alcohol and water, which form the third class of impurities or diluents, are practically detected by the sp. gr.

The French Pharmacopœia says that the "ether officinal" which has a sp. gr. of '720 at 15° C. is absolutely uncoloured by a crystal of fuchsin.

This is supposed to be a test for the presence of alcohol, but Squibb says that it admits of the presence of '2 per cent. of that substance, but that it is an extremely delicate test for water.

He (Squibb) says that the acetate of rosaniline is the variety to use and not the hydrochlorate, both of which are known as fuchsin.

The presence of alcohol is also said to be shown with great delicacy by the formation of iodoform when Lieben's test is applied.

Stefanelli says that ether containing 1 per cent. of alcohol is coloured when shaken with aniline violet.

Allen says not only that pure ether is not coloured by fuchsin, but that if a sample is coloured, the amount of alcohol may be accurately estimated colorimetrically. Except, however, as an indirect means of distinguishing between ether derived from pure or methylated spirit, these various tests are unnecessary as the sp. gr. is sufficient.

The fourth class of impurities are the most difficult to deal with, because it is not certain either what they are or how they are formed.

Some years since, Warden pointed out that certain samples of *Æther Purus* liberated iodine from a solution of iodide of potassium, and that they also yielded a substance like aldehyde resin with caustic soda. He imputed these reactions to the presence of aldehyde, but it has been conclu-

sively shown since that these two reactions are due to two separate impurities, and indeed, samples are met with which yield the one and not the other, and it is also easy to separate a sample which shows both reactions into two portions, one of which liberates the iodine and does not affect the caustic, and the other of which discolours the caustic but does not affect the iodide. Moreover, aldehyde does not liberate iodine from solution of iodide of potassium.

Long ago Schonbein stated that ether, like phosphorus, on exposure to air or oxygen formed ozone, and that it then liberated iodine from a solution of iodide of potassium, and he imputed this to the formation of ozone.

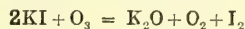
Watts says that it is decomposed by passing through a hot tube, olefiant gas, aldehyde, carbonic oxide, and water being formed, also that spongy platinum decomposes it into aldehyde, acetic, formic, and carbonic acids, water and a peculiar pungent substance, acetylous acid; and, further, that the vapour, if passed over potash or soda lime, forms hydrogen and marsh-gas, and leaves an alkaline carbonate, bleaches indigo and oxidises phosphorus, but does not affect litmus.

Perkin states that an incomplete combustion takes place when ether (preferably containing 10 per cent. of alcohol) is evaporated in contact with air or run on to a hot plate, a very irritating vapour being formed.

Christison says that ether is decomposed by exposure to air, acetic acid and water being formed.

Buchner thinks that the liberation of iodine from solution of iodide of potassium is due to dissolved ozone, which he considers is rapidly formed from ether in diffused light, but that in the dark freshly rectified ether remains free for some weeks.

Werner found that samples rectified from potash ceased to react with iodide, but soon (four to eight hours) did so if exposed to light; but in the dark, or in bottles only admitting chemically inactive rays, there was no sign of decomposition in a month. He holds that this proves conclusively that the impurity which liberates iodine is not a persistent one, but one formed by decomposition under the influence of light, assisted by heat. He supports Buchner's view that it is due to ozone, but admits that it is not entirely so, because he was unable to detect ozone in sufficient quantity even in a sample which would, assuming that the following reaction took place—



(this reaction is, however, to say the least of it, highly improbable as a very minute quantity of KHO immediately reacts with the iodine, and renders it invisible)—have contained as much as 16.8 per cent. of its volume of that substance.

He states that by washing ether the property of incrusting solid caustic is partly or wholly lost. Also—and this is important—that "comparative experiments made with a specimen of rectified ether containing $\frac{1}{2}$ per cent. of aldehyde gave results which rendered doubtful the existence of this compound in commercial ether." The aldehyde could easily be detected in the sample to which it had been added, but scarcely at all in a commercial sample giving an equal reaction with solid caustic soda. He thinks that peroxide of hydrogen is also present. Kingzett says that by passing air over ether peroxide of hydrogen and acetic acid are formed, peroxide of acetyl being an intermediate product; and it should not be forgotten that this chemist maintains that the ozone supposed to have been found by many of the old observers was really peroxide of hydrogen. Messrs. Dunstan and Dymond have gone into this subject. They say that the amount of iodine liberated in a given time is dependent upon the strength of the solution of iodide used. They clearly show that neither air nor oxygen produces the substance which liberates the iodine.

They also state that light is not essential to the production of peroxide of hydrogen, which they consider to be the immediate cause of the liberation of iodine.

They believe that this peroxide is produced from an unknown impurity formed during manufacture. They conclude, however, that it can be removed from the ether by the employment of an ample quantity of lime and twice washing with alkaline water, and find that if so treated no peroxide is subsequently developed. They did not find a trace of peroxide of hydrogen in a sample of pure ether ten years old.

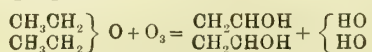
* From a note published in the *Ephemerts*, by Squibb, and received since this paper was read, it would appear that ether is and has been almost exclusively used as an anæsthetic in the New England States, to the exclusion of other compounds.

As might be expected from the authors of this paper it is, as far as it goes, thorough and exhaustive, and may be said to have completely disproved some of the views which I have quoted (and which, indeed, I should not quote were it not for their possible bearing upon the other impurities); but, unfortunately, it does not deal with the aldehyde-like body acting upon solid caustic soda, which substance is quite ignored.

Moreover, the last few sentences of their paper were accepted by the ether-manufacturers present as an indication that the purity now attained was quite sufficient, and they naturally went home delighted. Messrs. Dunstan and Dymond, indeed, stated that perfectly pure ether will not stand the Pharmacopœia test.

Poleck and Thummel have come to the conclusion that vinyl alcohol, CH_3CHHO is a constant impurity of commercial ether, and in their opinion the presence of this substance is the cause of the action upon caustic potash.

They consider that it is not only formed during the manufacture of the ether but by subsequent oxidation by air and light, hydrogen peroxide being at the same time formed.



They say that it is also formed from ether by hydrogen peroxide. Also that the acid reaction is due to acetic acid formed from the vinyl alcohol, and—what is more important—that the latter may be removed by washing with water repeatedly, or with an alkaline solution of mercury monochloride, or by treatment with phenylhydrazin.

I have myself made a large number of experiments at irregular intervals during the last few years upon various samples of the finest æther purus obtainable in quantities of from $\frac{1}{2}$ to 2 gallons at a time, with the object of discovering a ready means of removing the impurities alluded to by Warden.

These experiments go entirely to confirm Messrs. Dunstan and Dymond's statement that pure ether (and by this I refer to that free from all recognised impurities, except traces of water and possibly of alcohol) does not by exposure to air and light develop the impurity which affects weak solution of iodide of potassium; but I would go further, and say that under these conditions it does not affect solution of iodide of potassium of any strength if the iodide is the article described in the Pharmacopœia, and not an absolutely pure neutral one liable to spontaneous decomposition, and which latter, I gather, was the variety used by Messrs. Dunstan and Dymond.

My experiments also quite confirm their view that the iodine-liberating substance is formed from an unknown impurity; and, further, I think there can be no doubt that the aldehyde-like body is also formed from an unknown impurity, but whether from the same or another is uncertain. I find that this impurity or these impurities, as the case may be, can be removed entirely by treatment with a syrupy solution of caustic soda and subsequent rectification from quicklime, but that rectification from solid caustic soda causes the decomposition of the ether and the formation of this impurity or these impurities, if there be two; also that long contact in the cold with finely-divided caustic soda produces the same effect.

I will not say more regarding Messrs. Poleck and Thummel's conclusions than that, although they may be quite right respecting the presence of vinyl alcohol, their theory that it is formed by exposure to air and light is quite opposed to the experiments of Messrs. Dunstan and Dymond and myself; and, further, that if this substance is present in pure ether one would expect it to be present and undergoing similar decompositions in the less-highly rectified varieties, which is not found to be the case, for ether of '735 sp. gr. from pure spirit may be kept exposed to air and light for a length of time without its showing an acid reaction or developing the other impurities.

VARIETIES.

There are many varieties of ether known in commerce, some derived from pure and some from methylated spirit.

They are distinguished commercially by their sp. grs. and the kind of spirit employed in their manufacture. Of those made from methylated spirit the following may be mentioned, but there are many other kinds.

Meth. '717.—An extremely volatile article used for producing local anæsthesia and for freezing specimens to enable them to be cut into sections for the microscope. It is from a chemical point of view extremely impure, as its sp. gr. is sufficient to show—pure ether, free from water and alcohol, having, according to Squibb (whose figures are probably the most reliable), a sp. gr. of '7189, or practically '719, at 60°. This low gravity is due to the presence of methylic ether (methyl oxide), which, although a permanent gas, is freely soluble in ether.

But, nevertheless, that this article can be purified so as to be a very efficient anæsthetic agent would appear to be clear, for the products of two makers, which have a high reputation, and which are sold as proprietary articles, and at such a price as to preclude the idea of their being made from pure spirit, are extremely free from all the recognised impurities. A sample of one of these examined some years since had a sp. gr. so low as '71552, and the other recently was found to be of sp. gr. '7175.

Meth. '725.—Treble rectified. This variety is generally in my experience by far the purest derived from methylated spirit in the market. It is said to be specially made for photographic purposes, and no doubt impurities which might be inhaled by a patient without the fact of their presence being recognised soon tell a tale when the photographer is the operator. It doubtless, however, contains water or alcohol, or both, and its suitability for inhalation is, of course, a separate question.

Among the many other varieties of methylated ether those of sp. gr. '735 and '720 are merely cheap substitutes of the articles named in the Pharmacopœia under the names of æther and æther purus, and I have had no experience with them. The remaining kinds need no mention, as they are merely cheaper and more impure ones suited to purposes where the presence of the diluents, alcohol, water, and of the impurities, are more or less of no moment.

Pure '735.—This is essentially the ether of Frobenius and the subsequent Pharmacopœias, and is a substitute for, and is employed for the same purposes as, that so long known and used medicinally. It is, of course, prepared from pure spirit, and as it can always be easily obtained of a satisfactory state of purity, no more need be said about it.

It now only remains for me to mention one other variety, but it is by far the most important of all, because it is, or ought to be, the most perfect anæsthetic ether, and any others preferred for that purpose are only so preferred on account of their cheapness, or on account of the unsatisfactory condition in which this is often, if not always, put upon the market. I refer to absolute '720. This is the æther purus, or pure ether, of the British Pharmacopœia, and I would first allude to the most unfortunate and misleading name applied to it. I say unfortunate and misleading, but I might say dangerous, for it is seldom understood by those most interested.

I may remind you that the Board of Trade orders "æther" to be supplied in one of its scales where, owing to their also ordering an ether-inhaler, it is clear that it is the æther purus which they want. There are, therefore, probably dozens of ships crossing the Atlantic carrying an article which it would be most dangerous to employ.

Water and alcohol when present are not generally regarded as impurities but only as diluents and the use of the term in this sense, although perfectly correct, is highly misleading, and seeing that, although it has now been in the Pharmacopœia for twenty-five years, it is practically not understood by medical men, and seldom by chemists, it is, I think, quite time that we returned to the term absolute ether or anhydrous ether, or some other name which is actually known and used.

This article was first introduced into the Pharmacopœia of 1867, and was, and still is, directed to be made by washing æther twice with distilled water and drying by standing on freshly-burned lime and chloride of calcium, and after twenty-four distilling therefrom. It is some years since I attempted to produce absolute ether by this process, and I have not been able to turn up any notes of the sp. gr. of the product resulting therefrom, but I failed to get an ether of '720, and although no doubt it can be done, it is, I believe, practically impossible on the large scale; and in confirmation of this I may say that for many years one large firm of

manufacturers would not guarantee their absolute ether to have a gravity of .720.

Now, with regard to the purity of this absolute ether, anhydrous ether, or, as the Pharmacopœia calls it, pure ether. In the first place, it generally is *not* pure, and, indeed, is much less pure in the ordinary sense than the more dilute article of sp. gr. .735.

The samples examined by Warden, and found to be so impure, were all nominally æther purus. Paul says that he found that it was only the most expensive ethers which liberated iodine.

Werner found that the best samples, judging by price, sp. gr., &c., caused most incrustation. Others have confirmed these statements, and I can fully do so, and may add, as an example, that of seven samples examined for acid recently, the æther purus was the only one containing any, although they ranged from the commonest methylated ether.

We are, therefore, irresistibly led to the conclusion that the ether which is of by far the most importance, and upon which the lives of thousands annually depend, contains at least two impurities the constitution and properties of which are entirely unknown, as well as peroxide of hydrogen, which is probably harmless.

I have before mentioned that ether is partly decomposed by rectification from dry caustic soda (or long contact in the cold therewith), and I believe that this fact, in conjunction with the difficulty of rendering ether anhydrous by the mild process of the Pharmacopœia, furnishes us with a clue to the origin of the impurities pointed out by Warden. Rectification from dry caustic soda, or even rectification from lime after long contact with the former, is a very ready means of obtaining an ether of a gravity below .720; and, for my own part, I have no doubt that it is adopted, although, of course, I may be wrong.

If manufacturers like to enlighten us as to how they do actually proceed, it may be possible to trace all the impurities, and find means to avoid their presence or ignore such as are found to be harmless; but, at present, I think that when it is easy to make an article free from all known impurities (except a trace of water) and not liable to form others under ordinary conditions, it is incumbent upon the Pharmacopœia to insist upon such a standard.

The following tests would, I think, meet the case:—

ETHER ANÆSTHETICUM.

Two fluid drachms allowed to evaporate spontaneously on a plate should not give rise to any foreign odour towards the end or after the completion of the evaporation.

No effect should be produced upon solid sodium hydrate, solution of iodide of potassium, or moistened red or blue litmus-paper after twenty-four hours' contact.

Sp. gr. should not exceed .722.

It may be thought that these tests are too severe, but I may say that I have myself insisted on what I have bought for some years practically answering these tests, and have not had any difficulty except having had to pay slightly more. Moreover, one manufacturer, who formerly stated that these conditions were unattainable, has recently sent me a sample fully answering them.

It may be held that Warden's impurities are harmless, and it is certainly extremely difficult to obtain evidence to the contrary, but it is curious and suggestive that the varieties which have the highest reputation are most free from them, and one sold under a brand is so free that, after keeping in a badly stoppered bottle for about five years until nearly half has evaporated away, it fully answers them.

Squibb's practically answers all except in gravity, which I found to be .726. It did, however, give a very slight reaction with the soda in twenty-four hours, and more in a longer period.

METHYLATED ETHERS.

A paper upon ether would probably hardly be complete without some mention of the means of distinguishing between those varieties made from pure and methylated spirit.

The first and primary difference is the presence in the latter of a considerable proportion of the gaseous methylic ether dissolved in the ethylic, in which it is freely soluble. The effect of its presence is to lower the sp. gr. and the boiling-point considerably, and hence an ether of the same

gravity as one derived from pure spirit must contain a larger proportion of alcohol and water or other heavy impurities, than the latter.

This fact should not be forgotten by those who employ a methylated ether of .720.

It is not the best approximation to the article of the same gravity from pure spirit, but merely an imitation—that is to say, it is not an absolute ether made from methylated spirit, but a methylated ether adjusted to that gravity.

Methylic ether is said by Richardson to be as good an anæsthetic as ethylic, and in some respects better, so that a properly purified methylated ether is doubtless a very good article; but it is quite another matter if you dilute this or leave diluents in it to produce an imitation of something else quite different in composition.

For taking the sp. gr. of ethers, I employ a bottle graduated upon the neck, and to the stopper of which is attached a thermometer dipping down to the centre of the bottle and graduated at 60°.

The sample shown in contact with caustic soda and solution of iodide of potassium was rectified by myself in February, and has been in contact with these reagents in the presence of light and air since that date (*i.e.*, three months), and, as will be seen, is absolutely unaffected thereby.

In conclusion, I must apologise for the length of this paper, but the great importance of the subject must be my excuse.

I would also express a hope that the subject may be thoroughly dealt with in the research laboratory of the Pharmaceutical Society, as it is practically impossible that those who, like myself, have their attention called to such matters by the exigencies of business can systematically and continuously conduct such experiments as are desirable.

MAJOR EXAMINATION: QUESTIONS AND ANSWERS.

THE October examinations at Bloomsbury Square, W.C., commenced on Tuesday, September 27, the new regulations as to entry having enabled the examiners to set the questions to Major candidates somewhat earlier than the date fixed. Below we print the questions given in chemistry, with model answers appended to them.

CHEMISTRY.

(Time allowed: Three hours.)

Question 1. *How is potassium permanganate prepared? Give equations. Show the nature of its action upon an easily oxidisable organic substance; (a) in acid, (b) in alkaline solution.*

Answer. Permanganate of potassium is made by mixing finely divided black oxide of manganese (8 parts), potassium chlorate (7 parts), and stirring in potassium hydrate (10 parts), dissolved in a little water. The product is evaporated to dryness, powdered, and heated in a crucible to incipient fusion. The resulting mass, which contains potassium manganate, is cooled, powdered, and boiled with water. The precipitate which forms is allowed to subside, the clear solution is decanted, and a current of carbon dioxide is passed into it until no more is absorbed. The solution is now further evaporated, and allowed to crystallise. The crystals are drained and dissolved in a little boiling water, the solution so obtained being filtered through asbestos. On again cooling crystals are obtained, which must be drained and dried over strong sulphuric acid.

The following equations represent the changes that occur in the various stages of the above operation:—

1. $3\text{MnO}_2 + 6\text{KOH} + \text{KClO}_3 = 3\text{K}_2\text{MnO}_4 + \text{KCl} + 3\text{H}_2\text{O}$.
2. $3\text{K}_2\text{MnO}_4 + 2\text{H}_2\text{O} = 4\text{KOH} + \text{MnO}_2 + \text{K}_2\text{MnO}_3\text{O}_4$.
3. $\text{K}_2\text{MnO}_3\text{O}_4 + 4\text{KOH} + 4\text{CO}_2 = \text{K}_2\text{Mn}_2\text{O}_8 + 4\text{KHCO}_3$.
4. $\text{K}_2\text{Mn}_2\text{O}_8 - 4\text{KHCO}_3 = \text{K}_2\text{Mn}_2\text{O}_8 + 2\text{K}_2\text{CO}_3 + 2\text{H}_2\text{O} + 2\text{CO}_2$.

Permanganate of potassium readily parts with a portion of its oxygen to easily-oxidisable organic bodies; for example, oxalic acid would be converted into carbon dioxide and water.

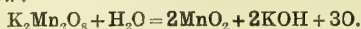
(a) When the permanganate is brought into contact with the organic body in an acid solution each molecule, con-

sidered as $K_2Mn_2O_8$, gives up five atoms of oxygen, the manganese and potassium forming salts with whatever acid may be present. Thus—



The nascent oxygen is expended in the oxidation of the organic body and, as the almost colourless sulphates replace the rich purple permanganate, the deep colour of the original solution entirely disappears.

(b) In alkaline solution an oxidation of the organic substance and a reduction of the permanganate will also occur, but the reduction of the latter will not be pushed to so extreme a stage, and hence, *ceteris paribus*, the amount of oxidation of the former will be less also. Each molecule of $K_2Mn_2O_8$ now parts with three atoms of its oxygen as represented below:—



The solution will become turbid from the precipitation of the oxide of manganese, which occurs in a bulky hydrated form. Under the influence of prolonged boiling a further reduction of the manganese to the manganous-manganic hydrate may also take place.

Question 2. Describe the various stages in the manufacture of rectified spirit.

Answer. The process may be divided into the following stages:—

1. Preparation of a fermentable saccharine liquid.
2. Fermentation of the liquid.
3. Separation by means of distillation of the alcohol produced in stage 2.

1. The "saccharine fluid" may be prepared from grain, potatoes, or grapes. Taking grain as the source, it is first bruised or ground, and is mixed with malt, so that the latter forms from 15 to 25 per cent. of the whole. The mixture is then heated with water at a temperature of about 125° F., and the whole well agitated so that quite a homogeneous semifluid mass results. In practice, about 2 parts of water are used for three of the crushed grain. The mass is left for about half an hour, and then a further portion of hot water is worked in, the temperature and quantity being such as to bring the whole to about 170° F., and the total amount of water to about four times that of the dry materials. In two or three hours the original thick and viscid liquid becomes more fluid and transparent, and its taste and smell are entirely altered. This change has been brought about by the action of the diastase of the malt upon the starchy matters present, converting them into dextrin and sugar.

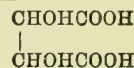
2. The saccharine fluid, "wort" or "mash," cooled to a suitable temperature, is next mixed with yeast in order that the alcoholic fermentation may be set up. The amount of yeast added and the temperature are both so regulated that the fermentation may be as speedy and complete as possible. The decrease in the specific gravity of the wort as its saccharine constituents are converted into alcohol, carbonic acid gas, &c., enables the operator to estimate the rate of the change, and informs him when the process has advanced far enough.

3. The amount of alcohol in the fermented liquid being ascertained by the decrease in its specific gravity, it remains to distil from it such a fraction of the whole as will ensure the complete removal of all the alcohol. The distillate from this first operation will contain 20 per cent. of alcohol or less. The concentration of this weak spirit has to be effected by redistillation modified, however, in various ways in order to economise time and fuel. For example, by cooling the vapours given off to a temperature above that at which concentrated alcohol boils, but below the boiling-point of the weak spirit from which the vapours were evolved, a partial condensation occurs, the portion separating being much poorer in alcohol than the average of the vapours. This portion is separately collected, whilst the remainder of the vapours, now more strongly alcoholic, are entirely condensed and collected in another part of the apparatus. The alcohol has not only to be freed from excess of water, but also from other alcohols, acids, ethers, &c., which are produced during the fermentation. For the removal of these recourse is had not only to repeated redistillation, but also to the action of charcoal, and sometimes of caustic alkalis and other reagents with a view to the destruction or fixation of the impurities.

Question 3. Describe the manufacture of commercial tartaric acid, give its constitutional formula, and name its most frequent impurities. Is there any process by which it may be synthetically prepared?

Answer. Tartaric acid is obtained from the precipitate called argol or crude tartar, formed in the vats in which the fermentation of grape-juice is conducted. This consists mainly of acid potassium tartrate, and, on boiling it with water and adding chalk until effervescence ceases, calcium tartrate is formed and precipitated, and normal potassium tartrate remains in solution. The addition of calcium chloride causes the precipitation of a further quantity of calcium tartrate equal to the former, potassium chloride being left in the supernatant liquid. The calcium tartrate is now treated with dilute sulphuric acid, the result of the interaction being the formation of tartaric acid and of the sparingly soluble calcium sulphate. The latter being allowed to subside, the separated solution of tartaric acid is evaporated to a low bulk (s.g. 1.21) when the remainder of the calcium sulphate separates. Further evaporation of the clear liquid and subsequent cooling furnishes crystallised tartaric acid. The impurities most frequently met with are lead, calcium, and sulphates.

Commercial tartaric acid is one of the four acids represented by the formula—



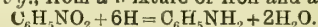
and it can be prepared (1) by the action of nitric acid upon milk sugar and other carbohydrates. (2) From dibromosuccinic acid by the action of moist silver oxide. This does not produce ordinary tartaric acid directly, but one of its isomers called racemic acid, which admits of resolution into the ordinary acid, and a third isomer, *levo*-tartaric acid.

Question 4. Distinguish between the amines and the amides, give examples of each, and show how they are prepared.

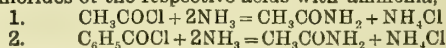
Answer. Amines are alkaline bodies which may be regarded as derived from hydrocarbons by the substitution of the univalent radical NH_2 for one or more atoms of hydrogen, or as derived from ammonia by the replacement of hydrogen by a hydrocarbon residue.

Amides are neither acid or alkaline, and may be regarded as derived from acids by the substitution of the radical NH_2 for the hydroxyl of the acid, or as derived from ammonia by the replacement of hydrogen by an acid residue.

Examples of amines: Methylamine, CH_3NH_2 , and phenylamine (or aniline), $C_6H_5NH_2$. Methylamine may be prepared (1) by the action of ammonia on iodomethane ($NH_3 + CH_3I = CH_3NH_2 + HI$) and the subsequent decomposition of the hydriodate by an alkali, or (2) from the molasses obtained in refining beet sugar. Phenylamine may be obtained from nitrobenzene by the action of nascent hydrogen evolved, e.g., from a mixture of iron and acetic acid—



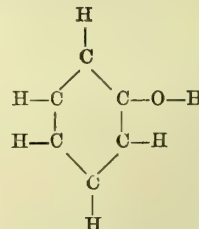
Examples of amides: Acetamide CH_3CONH_2 , and benzamide $C_6H_5CONH_2$. These may be formed, like other members of the class to which they belong, by treating the chlorides of the respective acids with ammonia, thus:—



Acetamide may also be prepared by heating a mixture of sodium acetate and ammonium chloride.

Question 5. Give the chemical constitution of such of the hydroxyl derivatives of benzene as are found in commerce, and the methods of preparing them.

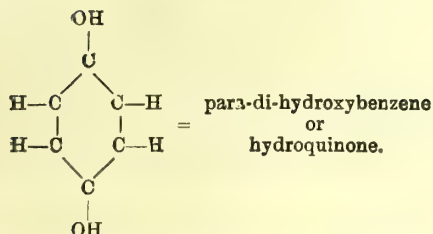
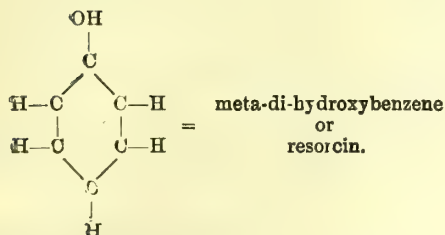
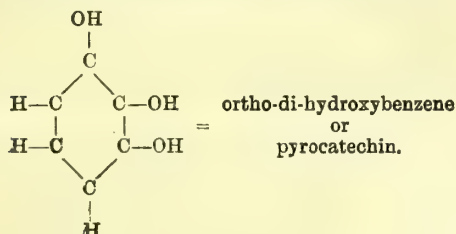
Answer. (a) Phenol or carbolic acid. This is a monohydroxyl derivative of benzene and may be represented by the formula—



It is commercially obtained from the heavy oil of coal-tar by treating it with caustic lye, separating the alkaline solu-

tion of phenols, neutralising the lye with acid, removing the phenols, and purifying by fractional distillation.

(b) Three di-hydroxy derivatives of benzene are known and may be represented by the following formulæ:—

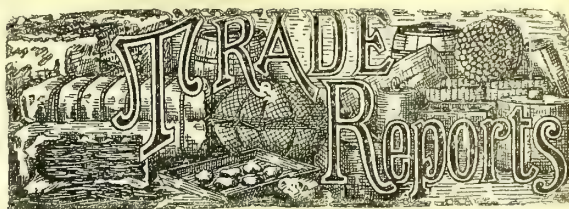


The first of these, obtainable by the dry distillation of catechu and other substances, can hardly be ranked as an article of commerce. Resorcin may be made by fusing phenolsulphonic or benzenedisulphonic acid with caustic potash, and is manufactured on the large scale, as, besides its use in medicine, it is extensively employed in the arts for making dyes, &c. Hydroquinone is produced by the action of sulphurous anhydride on quinone in watery solution. The liquid at first turns brown, and afterwards becomes colourless. It is now evaporated, and ether is used to extract the hydroquinone.

Pyrogallol acid, or pyrogallol, is a trihydroxybenzene, $\text{C}_6\text{H}_3(\text{OH})_3$, and is formed by the action of heat on gallic or tannic acids.

Question 6. Give a short account, with examples, of the class of substances known as "soluble ferments"

Answer. The remarkable substances called "soluble ferments" all contain nitrogen, and are closely related to the proteids. Each possesses the power of causing certain chemical changes in one or more substances, such changes always taking the form of the resolution of more complex into simpler forms, and being usually accompanied by the absorption of water—this absorption being, so to speak, the signal for the decomposition of the substances which take in the water. This phenomenon is called hydrolysis. All the ferments of this class require certain conditions for the production of their specific actions—as, for example, the presence of water and a suitable temperature. In all cases too great a degree of heat coagulates the ferment, and renders it permanently inert, whilst at a too low temperature its activity is more or less completely arrested. As examples of this class of substances, we may select diastase, to which reference has already been made in the answer to question 2, and which possesses the power of converting starch into sugar; ptyalin, analogous to diastase, and found in the saliva; emulsin, contained in bitter almonds, and capable of resolving the amygdalin (also found therein) into essential oil, hydrocyanic acid, and sugar; and myrosin, in black mustard, which splits up the glucoside sinigrin into allyl isosulphocyanate, potassium acid-sulphate, and sugar.



Notes to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., September 2

BUSINESS in the drug and chemical markets has been fairly brisk this week, and at to-day's auctions, which were rather lengthy, a decided improvement in tone was noticeable. One of the chief features of the drug market has been the run upon cascara sagrada which has taken place this week. Senega is also much dearer. Camphor has quieted down, but remains very firmly held. The chief incident of to-day's auction is the pronounced rise in Tinnevely senna, and the advance of about 1s. per lb. in Rio ipecacuanha. On the other hand, Carthagena root not only did not participate in the advance, but it is even slightly easier. Cardamoms are dull of sale and tending lower, rhubarb is flat, vanilla very firm, and for long buchu-leaves exceptionally high prices were paid. Tonquin beans are also a little higher again. The market for ergot of rye is uncertain, but holders are very firm, and on the whole the article is dearer. A strong demand at higher prices is reported for liquorice-root, and fine Jamaica honey is not very plentiful. Gum myrrh is slightly easier, and so is star-anise oil for arrival. Musk sold irregularly, but mostly at cheaper rates; senna-pods and civet are both lower. In chemicals, citric acid continues to advance, but quinine is again receding. Carbolic acid is quoted easier, and for Japanese antimony lower prices were accepted to-day. In articles allied to the drug business alterations are mostly of an upward nature. Spices (with the exception of nutmegs, which are lower) are mostly firm, and in several instances there has been some improvement in prices; cloves are about $\frac{1}{8}$ d. per lb. dearer. Black pepper has also moved upward. Chillies and pimento are higher, and mace has risen 1d. to 2d. per lb. There has been a large business in indiarubber at advancing prices. Gambier is firmer, and shellac closes dearer on the week. Turpentine is a little lower. The Bank rate remains at 2 per cent. Bar silver is worth 38 $\frac{1}{2}$ d. per oz. The Bombay exchange is 1s. 2 $\frac{1}{2}$ d.; that of Calcutta is closed to-day.

Liverpool. Our Liverpool correspondent tells us that the chief features of the drug-market in his city have been a fall in canary-seed, which, though it commenced last week, has made further progress this, a rapid rise in cascara sagrada, and a clearance of the available stock of Soudan gums at full prices. Sierra Leone chillies sell readily; cannabis indica is neglected; and Guinea grains have recovered some of the ground lost last week. Castor oil is lower, owing to a heavy arrival, and the stock of Chilian honey is growing rapidly.

New York. Our correspondent, writing under date of September 21, states that the general market is fairly active, with a decided upward tendency in the large majority of cases where any change has occurred. A marked exception to this rule is noted in the case of Mexican Sarsaparilla (Truxillo) which has come in in unusually large quantities during the week, leaving the market gorged and dull. The arrivals during the past ten days have been about 300 bales, and 200 more due; now 9c. to 10c. is the price asked, with no takers of large lots. It is the usual story with this article, just as soon as good prices are reported the shippers all rush in to take advantage of them, and unless the stock

in Mexico is really very small the quantity sent in is sufficient to knock the bottom out of any attempted corner. *Jalap* is coming in in dribble, only a few bales at a time, and there has been no serious difficulty in maintaining a fair price, 30c. to 33c. as to quality. *Senega-root* is attracting considerable attention, and spot prices have nominally advanced to 35c. to 40c. The western dealers do not make firm offers, and claim a material shortage in the crop. Spot stocks are light. *Ipecac* has advanced, under European advances and light stocks, to \$2 to \$2.10, with sales of 2,000 lbs. *Golden seal* is quiet at 22c. to 23c. spot. *Mandrake* is utterly neglected. *Ginseng* is in fair demand at \$2.40 to \$2.50 for average good quality. *Balsam Peru* is in better demand, with sales of 12 packages from first hands at prices ranging up to 97½c. Jobbing lots are held at \$1.00 to \$1.10. *Balsam Tolu* and *copaiba* are quiet. *Cascara sagrada* is being asked for, and the prices have been advanced to 6½c. to 7½c. as to quality and holder. The smaller lots are said to have been pretty well taken up, and the tone is quite firm at this moment. *Vanilla-beans* are held with increasing firmness because of unfavourable reports from Mexico, and holders of really prime goods have advanced their quotations slightly. *Tonquin-beans* are firm at \$2.25; \$2.50 for Angosturas, prime; and 40c. to 45c. for Pará. The quinine market was somewhat unsettled, through the influence of two holders who wished to unload, and foreign weakened to 18c. It has now improved, and 18½c. to 19c. is the ruling price. The distributive business is very good, and holders confident. Domestic makers, however, will sell at 20c. in large bulk, and this prevents any further upward movement. *Opium* is dull and easy at \$1.63½ for cases, and, in fact, it is reported that \$1.60 has been accepted for lots. The demand is only moderate. *German chamomiles* have been active at 12½c. to 17c. for such old lots as are to be had. The reports of shortage in the crop, together with the quarantine complications, have affected this as all other continental drugs, though this rather more than others. *Lycopodium* has been active, advancing to 50c., with sales at this price, and even more wanted in some quarters. *Marjoram* has advanced from 13c. to 15c. *Buckthorn-bark* has improved from 10c. to 11c. *Damiana leaves* command 20c. to 22c., with sales of 500 lbs. at the inside figure. Twenty-five bags *blue Aleppo galls* sold at 15c. to 16c. *Corrosive sublimate* has been advanced to 68c, and is in heavy demand on account of the cholera scare. *Quicksilver*, curiously enough, has declined. *Cream of tartar* is unsettled. Some of the manufacturers are short of spot goods, and some have advanced their quotations from 22c. to 23c, though one maker still quotes 20c. to 20½c. *Bleaching-powder* has come in more liberally during the week, but the arrivals have not been sufficient to relieve the shortage, and the ruling quotation is 5c. to 5½c. in casks, and 6c. to 7c. in barrels, with sales at the inside figure. *Carbolic acid* is rather easier. *Peppermint oil* is dull at unchanged figures. Farther arrivals of *gum chicle* have been taken up, at 22½c. *Egg albumen* is very scarce, and the price has been advanced from 55c. to 60c.

ACID (CARBOLIC).—Liquid is again easier; 95–98 per cent. may now be had at 1s. 8d. per gallon on the spot, and at 1s. 6d. for delivery within a few weeks. Crystals are practically unaltered in price, but there is very little demand for them.

ACID (CITRIC) continues to be advanced by the makers though at present the rise appears to be due in a larger measure to the increased quotations for concentrated juice from Sicily than to any unusually pressing demand here. One of the makers now quotes 1s. 7d. per lb. for B.P.; another asks 1s. 6½d. per lb. for the same quality. Second-hand holders offer at 1s. 6½d. per lb. The quotations for juice run from 22½ to 23½ c.i.f. but it is doubtful whether more than 21½ 10s. c.i.f. has yet been paid.

ACID (TARTARIC).—It is said that there is just a shadow of a better feeling in the market; if it exists, however, it is so slight as to be practically imperceptible, as it would still be possible to buy foreign second-hand at 11½d. per lb. The price of English runs from 11½d. to 12½d. per lb. A somewhat improved demand for the North of England (November–December delivery) is spoken of.

ALOE.—Of *Socotrine* aloes about 50 barrels of good but rather soft brown juice sold to-day at 100s. per cwt.; while a few lots of dark juice realised 23s. to 29s.; and 12 packages of low black rubbish brought 12s. per cwt. Of *Cape* aloes only 14 packages were shown. These were all bought in at nominal rates.

AMBERGRIS.—There is very little demand at present; for fine grey ambergris 120s. per oz. was suggested as the price at the auctions, but there were no bids either for this kind or for common gums.

ANISE.—*Russian* seed is firmly held, and holders expect to be able to raise their quotations still further. *China Star-anise*, however, is again a little lower, and offers at 75s. per cwt. c.i.f. terms, for October–December shipment.

ANTIMONY.—Crude Japan is slightly lower, with sales at to-day's auctions of forty cases at 25½ 10s. per ton.

ARECA-NUTS.—The holder of a parcel of 20 bags of fair quality asks 32s. per cwt.

ARSENIC remains firm at 13½ 10s. per ton for white powder, landed terms, spot.

BLEACHING-POWDER.—Almost unaltered in London at 10½, landed terms, for immediate delivery. Liverpool quotes 9½ f.o.b., Newcastle 8½ 15s. f.o.b., and business is reported at about these prices.

BUCHU.—There have been one or two small arrivals this week. Genuine leaves, however, remain very scarce, and a parcel of 7 bales, just come in and offered at to-day's auctions, proved to consist of spurious long leaves without flavour. There were no buyers for it at 1d. per lb. The only bale of genuine leaves offered (long and rather dark mixed) brought the extraordinary price of 2s. 2d. per lb. Similar quality sold privately last week at 1s. 9d. per lb. Round leaves are also considerably dearer. Only 2 bales were offered to-day, and for these (rather dark and of poor flavour) 5½d. to 6d. per lb. was paid.

CALUMBA.—Without improvement. Thirty bags rather dark greyish mixed, slightly wormy, sold at 22s. to 23s. per cwt. to-day.

CAMPHOR (CRUDE).—At the close of last week a further sale of 30 tubs Japan camphor took place on the spot at 150s. per cwt. Since then there has been little business, not because the position has weakened, but because there is very little offering. Japan on the spot is held for 155s. per cwt. Of China there is none offering. For shipment the quotations are:—Japan, 150s. per cwt., c.i.f. terms; China, 135s. to 145s., c.i.f. terms. The total exports of camphor from Japan amounted to 2,630 tons (valued at 262,184½) in 1891, against 2,640 tons (valued at 327,030½) in 1890. At auction 30 tubs raw Japan camphor were bought in at the nominal price of 175s. per cwt.

CAMPHOR (REFINED).—*English* refined is unaltered at 1s. 9½d. to 1s. 10d. per lb. for bells. Some of the German agents say that they will take orders at 1s. 7d. per lb. net (an advance of ½d. per lb.), others have no instructions from their principals.

CANARY-SEED.—The market has given way considerably, mainly because of the arrival of some considerable shipments. For very fine *Morocco* seed 80s. has been paid, while *Spanish* has sold at 85s. per cwt. To-day the position of affairs has taken an unexpected turn. The parcel which, through being sold without reserve, had caused the depression, is apparently cleared off, and prices are again rising rapidly. Two hundred bags *Turkish* have been sold to-day at 80s. per cwt. here.

CANNABIS INDICA.—No demand, and a plentiful supply. For good slightly stalky tops 4d. per lb. would be accepted, while for fair ditto 3d. per lb. is asked.

CANTHARIDES.—*China* flies are now held for 1s. 5d. per lb. Two casks nice green *Russian* flies were bought in to-day at 3s. 6d. per lb. nominally.

CARAWAY.—Holders are now willing to accept some reduction in price for all kinds except fine pale seed.

CARDAMOMS.—About 300 packages had been declared for auction to-day, but nearly one-half of this was bought in at nominal rates or withdrawn. Of the remainder about

45 cases sold without much alteration in price, the tendency being easier on the whole. The following prices were paid: *Ceylon*—*Mysore*, long medium to bold pale good 2s. 11d.; medium size, 2s. 2d.; small size, 1s. 10d. to 1s. 11d. per lb.; small to medium round yellow, 1s. 5d. to 1s. 10d.; small to lean ditto, 1s. 2d. to 1s. 3d.; small dull partly split, 1s. 3d. to 1s. 5d.; very small split brown, 9d. per lb. *Malabar* medium to bold grey long, 2s. 2d.; medium size, 1s. 8d.; very small, 1s. 2d. per lb. A considerable quantity of *Seeds* was offered and sold at 1s. 5d. for fair brown, 1s. 3d. to 1s. 4d. for dull grey.

CASCARA SAGRADA.—There has been a sudden run on sagrada bark this week. As mentioned in our last, some sales had been made up to last Thursday at 25s., but since then 30s., 35s., and 40s. per cwt. has been paid, and we even hear that 45s. per cwt. has been conceded, while some holders have withdrawn from the market altogether for the present. It is pointed out that if no bark has been collected this season prices may rise to several times their present value, as old cascara is decidedly superior to new bark for pharmaceutical purposes, and even next year's crop would therefore not be worth its full value until it had been stored for some months.

CASCARILLA.—Of 15 bales offered to-day a portion sold at 24s. to 25s. 6d. per cwt. for thin and dull bark, mixed with stones, and all more or less damaged.

CASTORUM.—Very high prices are paid for this drug. Good dry pickings realised 38s. per lb. to-day, while for good thirds 47s. 6d. per lb. was refused.

CHAMOMILES.—*Belgian* flowers are firm at 70s. per cwt. for fine pole (with business thereat), while for fair to dark and common from 66s. down to 47s. 6d. per cwt. is asked.

CHILLIES.—A parcel of 70 bags fair quality, slightly yellow mixed, from Sierra Leone, was bought in at 70s. per cwt. to-day. At yesterday's auctions 68s. was paid for fine quality, and 55s. for ordinary dull Zanzibar.

CHLORATE OF POTASH.—In Liverpool 7½d. per lb. f.o.b. for prompt shipment is now the quotation, and business has been done at that price.

CHLOROFORM.—One of the Scotch makers still quotes 1s. 4d. per lb., the other is reported to have advanced his price to 1s. 9d. per lb.

CIVET.—Prices are lower. One horn sold to-day at 5s. 3d. per oz. for fair quality, others were bought in.

COCA-LEAVES.—Fine American were not offered to-day. Two packages East Indian (Darjeeling) dark brown, thin, and broken leaves sold without reserve at 3d. per lb.

COCULUS INDICUS.—For 50 bags of fair quality 8s. 6d. per cwt. would be accepted.

COLOCYNTH.—For rather broken and partly shrivelled pale *Turkey* apple 11d. per lb. would be accepted.

COWHAGE is practically unsaleable. The holders are not willing to come down to ¼d. per oz., and that is the highest figure they can get for ordinary stony quality.

CREAM OF TARTAR remains quiet at 82s. 6d. per cwt. for best white French crystals.

CUBEBS.—For cubeb-stalks the price of 62s. 6d. was offered to-day, and will be submitted to the owner; meanwhile the lot was bought in at 75s. per cwt. nominally. Eighteen bags were bought in to-day at 7l. for brown, rather dusty and stalky, from Singapore; and at 6l. 10s. for small and dark berries from Bombay.

CUMIN.—*East Indian* seed was held for 21s. per cwt. at to-day's auctions. For good bright *Malta* seed 42s. 6d. per cwt. is still asked on the spot, but not much progress can be made at that figure.

CUTTLE-FISH.—Fifteen cases fair but broken pale bone from Bombay realised 3d. per lb. to-day.

DRAGON'S-BLOOD.—Fine gum is scarce, and held for high prices, but nothing was sold to-day. For bold fiery, but rather damp saucers 9l. 12s. 6d. to 9l. 15s. was suggested as the price, and a fine lot was bought in at 10l. 10s.

ERGOT OF RYE.—Holders are very firm, and the limits have been raised by most of them. Nevertheless, there is no

very strong demand, although where a lot is wanted an advance has to be paid. At to-day's auctions 2s. 3d. per lb. was paid for a lot of rather dull *German*, and 2s. 6d. per lb. for a rather better parcel. Holders of new *Spanish* fair, rather mixed with seed, want 2s. 9d. to 2s. 10d. per lb. Particularly, 2s. 4d. has been paid for fair *Belgian* and *German*. Several parcels, amounting to 53 packages, were offered to-day.

GALANGAL.—A parcel of 44 bags of fair quality from Canton sold cheaply at 19s. per cwt. for soft, and from 19s. to 20s. for sound and damaged.

GAMBOGE.—Thirty-four packages at auction were all bought in to-day; for good Singapore in broken, slightly cakey pipe of bright fracture, 11l. 15s. is asked, and for a somewhat less good lot, 11l. 5s. per cwt.

GUM AMMONIACUM.—Neglected; good clean almonds partly blocky sold cheaply at 40s. per cwt.

GUM ARABIC.—Genuine *Soudan* sorts are selling in a very small way at 75s. per cwt., but there is not much demand here. At auction a lot was bought in at 80s. per cwt. Fair but somewhat dark and barky mixed *Gehirah* gum was bought in at 45s. per cwt. Fair small pale selected *Alexandria* gum sold at 9l. 2s. 6d. per cwt. Trieste-picked gum, good pale was bought in to-day at 13l. per cwt. nominally; grey ditto at 8l. 10s. per cwt., and rather dull and glassy sorts from Suez, at 80s. per cwt. No demand was shown. For *Cape* gum rather lower prices are being accepted—namely, 71s. to 72s. for fine pale, rather dusty, sorts; 61s. to 69s. for somewhat darker ditto; and 15s. for ordinary dark and glassy drop.

GUM BENZOIN.—No *Siam* gum was sold to-day, the owners' limits being too high. Good medium to bold almonds, partly blocky, were bought in at 16l.; small bright almonds in block at 7l. 10s. per cwt. We believe that since the sales some of the *Siam* gum offered has been sold; there is not much of this description to be had at present, and siftings are said to be particularly scarce. Of *Sumatra* gum very little was offered, and no sales were effected; fair almondy *Palembang* is held for 35s., and a parcel of common resin sold at from 13s. 6d. to 14s.

GUM GUAIACUM remains steady with sales of fair bright block at 1s. 5½d., and common dark and broken, very dusty and mixed with dark, at 5d. to 6d. per lb.

GUM KINO.—Only 2 cases fair *East Indian* were placed in sale to-day, and for these 110s. per cwt. is demanded.

GUM MYRRH is tending somewhat easier, and supplies are now rather larger than they were. Of 84 packages offered at auction, only 3 sold at 77s. 6d. for good *Aden* sorts, which is about 2s. 6d. lower.

GUM THUS.—Twenty-eight barrels rather yellow sold without reserve at from 8s. 6d. to 9s. per cwt.

HONEY.—*Brazil* honey, dark, candied, of poor flavour, brought 17s. 6d. per cwt.; and for a parcel of *Australian* in tins 20s. per cwt. was accepted. *Jamaica* honey is steady, and for fine, clean, liquid amber full prices must be paid—viz, 27s. to 28s. 6d. per cwt. Dark brown ditto sold at 25s. to 25s. 6d. per cwt.

IPECACUANHA.—Since our last report our only arrival of Rio root has been one of nine packages from Montevideo. Of *Cartagena* root a newly-arrived parcel of 42 bales from Panama was included in the auctions. The greater part of it (28 bags) sold at from 5s. 8d. to 5s. 11d. per lb. for good stout, and from 4s. 6d. to 5s. 7d. for lean to fair root. Every bag of the lot was damaged. Another small lot brought 5s. 11d. to 6s. 1d. per lb. for good bold root. Of Rio root 41 bales were offered, and 34 of these sold, with very strong competition, at an advance of about 1s. per lb. on last auction rates. The average quality was a little higher to-day. Good stout sound root brought 8s. 11d. to 9s. per lb.; thin and wiry ditto, 8s. 6d. to 8s. 8d.; damages from 8s. 6d. to 9s. per lb., according to quality. The buying was pretty general, the home trade, continental exporters, and American buyers all participating. The drug has now almost reached the highest price ever recorded. It is said that 7s. 6d. per lb. had been paid privately before the auctions.

JALAP.—There is not much demand, but our stock is well concentrated and not large.

KAMALA.—Two cases of fair East Indian kamala were bought in at 8*d.* per lb. to-day.

KOLA.—Fine dried kolas are in good request, but there is not much of this description offering. For bold, but very mouldy, West Indian 5*d.* per lb. was accepted.

LIME-JUICE.—The market is now fairly steady at the recent decline, although arrivals still continue to take place. Ten puncheons *West Indian* juice sold to-day at 11½*d.* per gallon for fair quality; rather mixed with pulp, ordinary dark, at 8½*d.* per gallon.

LIQUORICE.—*Russian* root is higher, and the demand is said to be strong. From 27*s.* 6*d.* to 28*s.* per cwt. c.i.f. is now the price for good natural. Several parcels were offered at auction to-day, but no sales were effected. Good pale decorticated Spanish is held for 47*s.* 6*d.* per cwt.

MANNA.—For to-day's auctions 32 packages of old manna had been scraped together, probably in anticipation of high prices. There was very little competition, however, at anything like acceptable limits, and only one case of ordinary brown sorts sold at 1*s.* per lb., good bold flake being bought in at 6*s.* per lb.

MATÉ (PARAGUAY TEA).—Three 150 bales of crushed leaf, mixed with stalk, sold at 2*d.* to 2½*d.* per lb. to-day without reserve.

MUSK.—A fair quantity of musk was sold to-day at rather irregular, but on the whole lower, prices, pile 1 pods being about 2*s.* or 3*s.* cheaper. The following prices were paid:—*Tonquin* pods, first pile: Of 17 cases 12 sold at 54*s.* 6*d.* to 55*s.* 6*d.* for good old-fashioned dry, well-trimmed, small to bold pods; 55*s.* for small to bold pods, thin grey underskin dry, but of weak flavour; and 63*s.* for good pods, well trimmed, thin grey skin and underskin. Of 7 caddies, third pile, 4 sold at 25*s.* for old-fashioned skinny and very damp pods. A large quantity of *Grain musk* was offered, but did not sell.

NAPHTHA.—Wood naphtha is very flat, and quoted now at 3*s.* 10½*d.* per gallon for miscible 60 o.p., and 3*s.* 11*d.* per gallon for solvent.

NUX VOMICA.—The failure of the Madras crop is confirmed by the Calcutta mail reports. The arrivals in Calcutta are small, and on September 6 there were only 150 maunds in stock. Five hundred and sixty-three bags were offered to-day: they are held at 9*s.* 3*d.* per cwt. for rather dark and small Calcutta, and 9*s.* for dull and dark mixed old Madras.

OIL (CASTOR).—A quiet market, at 2½*d.* to 2¾*d.* per lb. for fair Calcutta seconds. Calcutta reports, dated September 27, state that the price of castor oil is well kept up in consequence of the slight stock and limited production. Common grades are relatively dear, and it would not be possible to execute a large order (supposing it were placed upon the market) at the quotations now prevailing. Twenty cases Italian oil were bought in to-day at 4¾*d.* per lb.

OILS (ESSENTIAL).—Spot sales of *peppermint* (HGH) have been made at 12*s.* 6*d.* per lb. *Eucalyptus* oil is again quoted higher by some holders, Bosisto's brand being now held at 3*s.* 9*d.*, for good Australian kinds, at 3*s.* 6*d.* per lb. Of Spanish *Geranium* oil eight 24-lb. coppers sold to-day, without reserve, at 18*s.* 6*d.* to 18*s.* 9*d.* per lb. Oil of *Star-anise* is held at 5*s.* on the spot, but for shipment offers of 5*s.* 4½*d.*, c.i.f. terms, would be submitted. Of Fisher's *Kananga* oil a few cases of twelve bottles, each 12 oz., were bought in at 2*s.* 6*d.* per oz.; 2 cases of ditto *Nutmeg* oil, 48 bottles each, at 4*d.* per oz.; and a few cases of *Patchouli* oil, of twelve 22-oz. bottles each, at 1*s.* per oz.

OPIMUM.—The London market has been quiet this week, and quotations for all kinds are practically unchanged. Our Smyrna correspondent writes on September 17:—"Our market has been very active, owing to a continuation of purchases for current Talequale, as also to a brisk demand for Karahissar opium by parties who had sold to the Dutch Government. Hitherto 300 baskets have been taken by the contractors, at the equivalent of 7*s.* per lb. f.o.b., but it is more than probable that one-half of the above quantity will be rejected by our examiners as unsuitable for the pur-

pose required. It is reported that the Government have accepted offers to the extent of 500 cases, to be shipped during the months of November, December, and January. A good deal of opium will therefore be required to make up this quantity, and it is probable that the next purchases effected will be 2*d.* to 3*d.* per lb. dearer than the prices paid this week. The sales of Talequale since September 7 amount to 85 baskets, and our market is firm at the prices noted in our telegram of the 14th." Another Smyrna correspondent writes, under date of September 17, that the agents for the Dutch Government had bought 300 cases new Karahissar at 63 to 64 piastres, on condition that the drug should pass the standard examination, which was to be made the following week. As this examination is very severe, it was expected that no more than 100 cases at the most would emerge successfully from the test. The arrivals up to date were 2,610 cases, against 2,120 cases in 1891.

ORANGE-PEEL.—Thin cut *Maita* peel is said to be very scarce here.

ORRIS.—Five bags mixed Italian root, rather yellow but bold, sold to-day at 83*s.* per cwt.

QUININE.—At to-day's sales 6,000 oz B. & S., in 100-oz. tins, about two years old, and of good quality, sold without reserve at 9*d.* per oz. Previously that price had been accepted this week by private treaty for several small lots, aggregating about 4,000 oz. The market is thus again ½*d.* per oz. lower.

RHUBARB.—The market is dull, and of 84 cases offered to-day only 16 sold at unaltered prices. *Shensi* medium to bold even pinky grey fracture round at 2*s.* *High-dried* medium good even pinky fracture flat, 1*s.* 2*d.* to 1*s.* 3*d.*; small dull coated round, of fair partly grey fracture from 8½*d.* to 9*d.* per lb.

SANDAL-WOOD.—Of 1,080 packages rather ordinary Java wood, a portion sold at 26*l.* per ton.

SARSAPARILLA.—The *Medway* brought 52 packages of genuine grey *Jamaica* root this week. The whole of this new arrival, with a few older bales, was offered at auction to-day, and all sold with good competition at steady rates—viz., 1*s.* 5*d.* per lb. for good sound, and from 1*s.* 2*d.* to 1*s.* 4*d.* per lb. for damaged grey Jamaica. *Honduras* root was not offered. Common damaged *Native* Jamaica sold at 8½*d.* to 9*d.* per lb.

SCAMMONY-ROOT.—The price for fair quality, of which several lots were offered, is 30*s.* per cwt.

SENEGA.—A New York correspondent, who is in a position to know the market well, writes under date of Sept. 16:—"For some years there has been fierce competition between dealers in the North-west, with the result that at last such low figures were paid to the diggers, it was no longer of any object to collect it. Last year the bulk of the crop, from the same cause, was of inferior quality. We drew the bulk of our supplies last season from Manitoba; but the price was so low that the trade was being carried on at a loss. The early part of the summer in Manitoba was so wet that very little root could be got there, and when the New York importers became alive to this fact, and offered to raise their limits, they were told that it was too late, for the season was over, and winter would set in next month. This year an agreement was signed by the exporters not to pay for any senega root till it had been inspected. This did not appear to disturb the Minnesota dealers in the least. They offered last year's poor root at low figures, and when inquiries from Europe became pressing, one of the signatories backed out of the agreement. He could not secure much, however, and it is now realised that low prices killed the production, and a decided short crop and great scarcity have to be faced. There is no stock of prime root in New York, and the No. 2 quality has all gone into hands of home consumers, who are not nearly supplied yet. All the dealers in Minnesota agree that the crop is short, and as they have not made up their differences, there is no 'corner,' or anything of that kind, and the worst of it is, that the season is too far advanced to get the diggers at work." It is said that 2*s.* 6*d.* per lb. has been refused here for fair-quality root this week, and that several New York houses have cabled instructions to their consignees not to sell at any price. To-day 3*s.* per lb. is talked of.

SENNA.—A recent arrival of 164 bales Tinnevely leaves was sold to-day with fierce competition at an all-round advance of about 20 to 30 per cent. upon the last sale prices, making a rise, since the first arrivals of the season, of nearly 100 per cent. Good bold green leaves realised 10*d.* to 10½*d.*; medium to bold green to fair rather yellowish mixed, 8*d.* to 5*d.*; small to medium greenish and yellow mixed partly specky from 4½*d.* to 2½*d.*; ordinary dull and low from 1½*d.* down to ¾*d.* per lb. Of about 50 packages old secondhand leaves a portion sold at about the same rates. The quality of the new crop which has been offered thus far is very inferior and it seems now to be generally accepted that the crop will be small. An unusually large proportion of pods is being sent over this year (probably on account of the sudden demand for this article about a year ago); but these are now saleable only at very low prices—viz., from ¾*d.* to 2½*d.* per lb., according to quality. At to-day's sales 123 packages went at those figures. *Alexandrian* senna remains neglected. A parcel of 13 packages from *Suakin*, small green leaf, brought 6½*d.* to 6¾*d.* per lb. to-day. For good *Alexandrian* pods 6½*d.* per lb. is still required.

SHELLAC.—The market closed last week with a very firm tone, both on the spot and for arrival. Second orange lac sold at 81*s.* to 83*s.* 6*d.* for TN; garnet AC at 74*s.*; and good to fine button at 91*s.* to 92*s.* 6*d.* per cwt. At auction on Tuesday 1,167 cases were offered, of which 773 sold at a rise, for second orange, of 1*s.* to 2*s.* per cwt. on the last auctions, which was barely equal, however, to the figures since reached privately; garnet lac was 1*s.* per cwt. higher, and button realised steady rates. The following prices were paid:—*Orange* lac, worked, reddish livery, to fine pale, 80*s.* to 87*s.*; unworked good pale, but cakey to fine pale, 83*s.* to 86*s.*; broken livery to fair bright flat curly, 81*s.* to 83*s.* per cwt. Garnet: Good flat unworked AC, 75*s.* to 76*s.*; blocky and curly from 72*s.* to 74*s.* per cwt. Button lac: Good unworked firsts, 91*s.*; good seconds, 85*s.* to 86*s.*; dark to good thirds, 48*s.* to 79*s.* per cwt. Since the sales TN October delivery has been sold at 84*s.* 6*d.* per cwt.

SOY.—*China* is somewhat firmer, with sales privately at 1*s.* 3*d.* per gallon on the spot. The price for arrival is rather higher, and nothing is now obtainable below 1*s.* 2½*d.* per gallon, c.i.f. terms.

SQUILLS.—In fair demand. 3½*d.* was paid to-day for 20 bags fair pale Malta.

STROPHANTHUS.—Brown seed sells occasionally in small lots at 9*d.* per lb.

TEA.—The China market after an advance of fully ½*d.* to ¾*d.* per lb. from the lowest is very steady at the advance, though lower grades are still by no means dear. Useful Mingchows at 6*d.* and fair common Panyonge at the same figure cannot be much too dear, and if Indians and Ceylons are going to be higher, still China teas like these will be wanted. The sharp advance recently established in lower grades of Ceylon and Indian teas was maintained in Monday's and Tuesday's auctions, but later the tone has been quiet and the feeling not quite so good. The terminal market, which ran up from 6½*d.* to 7¼*d.* for Indian type in about a fortnight, has had a sharp relapse to 7¼*d.* this week, a natural reaction from a too rapid and unnecessarily high advance. Common Indians and Ceylons have now for so long been so very cheap—abnormally and unhealthily cheap—that present prices look very dear in comparison, although common teas are doubtless still not above a fair normal figure.

THYME-SEED.—For a small parcel of 19 bags East Indian 11*s.* 6*d.* per cwt. is wanted.

TONQUIN BEANS are again advancing. Privately business has been done at firmer rates, and at to-day's auctions 8 packages sold at an advance of about 3*d.* per lb.—fair black *Pará* realising 2*s.*, more or less fancy mixed ditto 1*s.* 4*d.* to 1*s.* 5*d.* per lb. A cask of good bold frosted *Angostura* beans was bought in at 10*s.* 6*d.* per lb. nominally.

TURMERIC.—At the auctions nothing was sold. Fine bright *China* finger, mixed with bulb, was bought in at 19*s.*; good bright split *Cochin* bulbs at 9*s.* per cwt. Prices in Calcutta (says a report of September 6) have advanced owing to the good local demand, and the market has still an upward tendency.

VANILLA.—A new York firm, largely interested in the Mexican vanilla business, write that this year's crop of Mexican vanilla will be between 200 and 300 cases short of last year's. The vanilla districts have been visited last spring and summer with extraordinarily long droughts, which withered many of the plants and destroyed the greater portion of the flowering. This condition of affairs also indicates a very small crop for next year, and most of the dealers who have shipped consignments have placed higher limits on their prices. At to-day's auctions about 120 tins *Bourbon* and *Mauritius* vanilla were offered, all of which sold at very firm prices, especially for fine qualities, which are scarce. For fine brown, 8 to 9 inches, 16*s.* was paid; 7 to 8 inches realised 13*s.* to 14*s.*; 6½ to 7 inches, 10*s.* to 12*s.* 6*d.*; 5 to 6 inches, 11*s.* 9*d.*; 4½ to 6 inches, from 7*s.* 9*d.* to 9*s.* 3*d.*; mixed and dull, from 4*s.* 6*d.* to 6*s.* 9*d.* per lb. The *Mexican* vanilla which was offered on our market some time ago has all been sold. Now there are many inquiries; but there is nothing more of this kind to be had.

WAX (BEES').—A cask of good Australian of mixed colours sold at 6*l.* 5*s.* per cwt. to-day. *Madagascar* wax is neglected, and about 1,100 packages were all bought in, being held above the market value. *Jamaica* wax is in strong demand, and 51 packages offered to-day all sold rapidly at very firm prices—viz., 6*l.* 15*s.* to 7*l.* for brown and grey mixed to red, and 7*l.* 2*s.* 6*d.* to 7*l.* 5*s.* for fine orange. Three packages *Brazil* wax, fair orange colour, brought 6*l.* 10*s.* per cwt.

WAX (JAPAN) may be had at 36*s.* per cwt. for good pale squares on the spot.

THE LIVERPOOL MARKET.

CALABAR BEANS.—These beans continue to arrive in small parcels, and this week a recent import sold at 1½*d.* per lb.

CANNABIS INDICA.—Twenty bales of recent import, good green, were offered at auction, but found no buyers. Holders' ideas were 4*d.* per lb., but less might be taken.

GUM ARABIC.—Large sales have been made during the week, and the market has been practically cleared of fine *Soudan* sorts at prices ranging from 75*s.* to 80*s.* per cwt.

HONEY.—The stocks of *Chilian* continue to accumulate, but holders show little disposition to meet buyers' views.

OIL (CASTOR).—The *Orion* has arrived with 600 cases, and spot value has declined 2½*d.*, but holders are firm thereat. 2½*d.* is still asked for first-press French.

WAX (BEES').—*Chilian* has been sold in small lots at 6*l.* 15*s.* for grey and yellow to 7*l.* 15*s.* for half-bleached and white.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

SEVENTY cases of manufacturing opium have changed hands here this week at steady prices, which show no alteration upon last week's—viz., 6*s.* 4*d.* to 6*s.* 7*d.* per lb. f.o.b., according to quality. For new crop Karahissar opium 7*s.* 6*d.* per lb. f.o.b. has been conceded, which is an advance of 6*d.* per lb.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, Thursday evening.

At to-day's bark auctions only 3,130 packages Java bark out of a total of 5,567 were sold, over 40 per cent. of the supply being held at limits over the market value. The average sale-unit was 6¼*c.*, or 1½*d.* per lb. (the same as at the last sales), and the principal buyers were the Auerbach factory, Mr. Gustav Briegleb (of Amsterdam), the Frankfort factory, and the Brunswick factory. The following prices were paid:—Manufacturing barks, in quills, broken quills and chips, 9*c.* to 69*c.* (= 1½*d.* to 12½*d.* per lb.); ditto root, 11*c.* to 49*c.* (= 2*d.* to 8¾*d.* per lb.); druggists' barks, in quills, broken quills, and chips, 9*c.* to 71*c.* (= 1½*d.* to 12½*d.* per lb.); ditto root, 10*c.* to 16*c.* (= 1½*d.* to 3*d.* per lb.).



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Insane Nuts.

SIR,—In a letter to your journal for July 2 Mr. C. C. Bell asks for the name of the plant that Clusius describes under the name of *Pruna insana*, and in another letter this gentleman says the mad plums or nuts are figured and described in Gerard's "Herbal." Mr. J. Henry Bell, in THE CHEMIST AND DRUGGIST for July 9, gives a translation of the article "Nux Insana" from Lemery's "Traite Universel des Drogues Simples," where descriptions of the fruit and the tree are given. The materials for identifying this drug in the present time are rather scanty, but as it came originally from the Indies, I should like to mention two fruits having properties as those described by your correspondents, and one of which seems to answer to Clusius' *nux insana*.

The first of these is the fruit of *Hydnocarpus venenata*, Gärtn. (*H. inebrians*), a tree of the natural order Bixineæ. This tree grows in Ceylon and in Travancore, in Southern India, and from a specimen I have seen of it is very much like a cherry-tree in habit, and the leaves have a strong resemblance to those of the peach. The fruit is round, about the size of a plum, and covered with a hard shell. Within the shell are the pulp and several oily seeds, and it is remarkable that when the fruit is dry these seeds, like those of *gynocardia*, have a grey appearance. There is no mistake about their poisonous qualities: the fruits are used for intoxicating fish, and excite delirium in human beings. The external characters of this tree resembling the drupaceous Rosaceæ, and the fruit having a hard shell and poisonous properties, indicate a strong alliance with Clusius' *Pruna insana* yielding the *nux insana*. Some fruits belonging to the same natural order as the *hydnocarpus* have a plum-like appearance—as, for instance, the *Flacourtia cataphracta*, which affords the French *prunier d'Inde*.

The other poisonous nut I am acquainted with is the betel or areca nut. In almost every betel-plantation one or two trees are found the nuts of which have poisonous properties when dried. The ordinary nut in a fresh state often causes giddiness and a sensation of strangling in the throat, but when dry it loses these properties. Rumphius appears to be the only authority who has noticed these nuts, and he called them *Pinanga inebrians*. Dr. Dymock met with them about four years ago, and he supposed they were from trees which had reverted to the wild form. They cannot, however, be distinguished from the cultivated plant. An accident is avoided by using the cooked or red betel-nuts. Rumphius suggested salt, lime-juice, or acid pickles as remedies when the poisonous variety had been eaten in mistake.

It would be very difficult to identify the "insane root" of Shakespeare's "Macbeth," but I should not come to the conclusion that it is the root of Clusius' *Pruna insana* just because this tree yields the *nux insana*. I think it must have been of European origin.

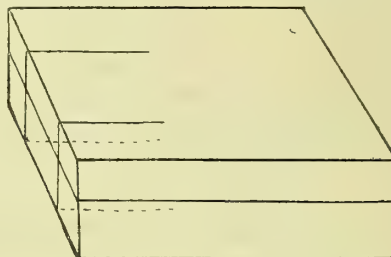
Ootacamund, Sept. 6.

DAVID HOOPER.

Stamping Proprietaries.

Mr. F. Round, Southport, sends us particulars of a correspondence with the Board of Inland Revenue respecting the

position of the stamp on a package of medicine liable to stamp-duty. The Board informed him that he had rendered himself liable to a penalty of 10% for having imperfectly stamped a certain box. The box was a hinged one, and the stamp was affixed as shown in the diagram with the label over it on the top surface. Mr. Round asked how it should



have been attached, as (in his opinion) the contents could only be removed by destroying either the stamp or the box. The Board in reply said: "The contents of the box could be removed, and were removed, without destroying the stamp; and, in order to comply with the requirements of the law, it is desirable that the stamp should be affixed round the opening of the box, not across it." Mr. Round further asked if he would be liable for selling patents by other makers considered to be imperfectly stamped. The reply was: "If you sell medicines liable to duty improperly stamped, you render yourself liable to a penalty of 10%, whether the preparations are those of yourself or of another maker."

Pulv. Aromat.

SIR,—I believe that the Board of Health formula for "cholera-mixture" was published between the issues of the 1864 and 1867 Pharmacopœias. Anyhow, it was before the 1867.

In the 1864 edition *pulv. aromaticus* contained all the ingredients, and in the same proportions, of *pulv. cretæ aromat.* P.B. 1885, except the chalk. So that *pulv. aromat.* in the original formula was more closely allied to the *pulv. cretæ aromat.* of the present Pharmacopœia than to the *pulv. aromat.* 1867 and 1885 (which are identical). In the 1864 P.B. there was no *pulv. cinnam. co.*; it had not been adopted from the Edinburgh.

Your obedient servant,
Harlesden, N.W., September 22.

J. W. TAPLIN.

Reply to a Review.

SIR,—It has pleased you to review my pamphlet on "Milk" facetiously. However, there are two points which concern your readers, one professionally, the other commercially:—

1. My new system is a transfer of foodstuff-analysis from the laboratory of the chemical expert to the counter of the chemist and druggist.

2. It is, moreover, known throughout the milling and baking industries as a most rapid and accurate means of examining samples of flour and bread. Chemists will often be asked for a 1-per-cent. solution of potassium permanganate accurately standardised; and any inaccuracies in that respect will render them liable under the Adulteration Act.

I am, Sir, yours faithfully,

Dulwich, London, S.E.,
September 24.

J. BARKER SMITH.

"Scientific Mysteries."

SIR,—Am much pleased with the parcel of "Scientific Mysteries" received to-day, and beg to congratulate you on the general style of the work.

What with the books and attractive show-cards "issued with the same," distributed in my windows, &c., it has given the shop quite a scientific appearance.

I would advise all who wish to cultivate a trade in chemical apparatus, &c., to go in for the above books.

I am, Sir, yours respectfully,

34 Clarence Road, Bristol,
September 21.

JOSEPH BENNETT.

The Pharmaceutical Society of Ireland and Dublin Castle.

SIR,—It will, doubtless, interest many of your readers to peruse the following correspondence, which shows the manner in which some of Her Majesty's faithful and law-abiding subjects who have endeavoured to carry out an Act of Parliament entrusted to their special care are treated by the authorities in Dublin Castle.

Yours truly,

12 Grafton Street, Dublin, WILLIAM HAYES, President.
Sept. 27.

No. 1.

Belfast, 1st Sept., 1892.

To Sir West Ridgway, Under-Secretary, Dublin Castle.
Pharmaceutical Society *v.* Cosgrave.

SIR,—In this case I have acted as solicitor for the Society in a prosecution against Samuel Cosgrave, at Bangor, Co. Down, on the 17th ult. The Magistrates came to a unanimous conclusion—as stated by their Chairman—that defendant had been guilty of two distinct breaches of the Pharmacy Acts, on the two dates for which he was summoned, and as there were four summonses, this meant four fines. Upon hearing that 5*l.* was the fixed amount of the fine which followed each infringement of the Act, the Bench took the extraordinary course of dismissing one summons for each date, by way of reducing the amount of the fine.

I am now informed by the Petty Sessions Clerk of the district, to whom I have written for the third time to issue a warrant to collect the amount of the fine, that defendant has sent in a memorial to the Lord Lieutenant, praying to have the fine further reduced. I wish to ascertain if it is open for the Society in any way to oppose this memorial, as defendant has, since the hearing, been guilty of conduct which very considerably aggravates his offence—an offence which, I regret to say, is becoming very common in this district.

I am, Sir, your obedient servant,

W. B. GALWAY.

No. 2.

Dublin Castle, Sept. 5th, 1892.

To W. B. Galway, Esq., Solicitor, Belfast.

SIR,—I have to acknowledge the receipt of your letter of the 1st inst., and to inform you that their Excellencies were pleased, on the 31st ult., to order that the fines imposed upon Samuel Cosgrave, at Bangor Petty Sessions, on the 17th ult., be reduced to 1*l.* in each case.

I am, Sir, your obedient servant,

F. J. CULLINAN.

No. 3.

The Pharmaceutical Society of Ireland,
67 Lower Mount Street, Dublin, 7th Sept., 1892.

To Sir West Ridgway,

Under-Secretary, Dublin Castle.

SIR,—I am directed by the Council of the Pharmaceutical Society of Ireland, to ask you to bring before His Excellency the Lord Lieutenant and Privy Council the subject of the correspondence between you and our solicitor, Mr. Galway, *in re* Cosgrave, Bangor, Co. Down, by which it appears that the fines imposed on this person have, on memorial, been reduced by their Excellencies and the Privy Council from 5*l.* to 1*l.* in each case. My Council desires me to say that it feels greatly astonished at such a course being adopted without being consulted in the matter. His Excellency and the Privy Council can scarcely be aware of the very arduous duties which devolve upon my Council in connection with the administration of this Act, as breaches of the Act are so alarmingly widespread that it is found almost impossible to cope with them with the very limited means at its disposal; and if it is thwarted or unaided by the authorities in carrying out and vindicating the law, my Council feels that it has no other course left, but to allow the Act to become a dead letter, thus jeopardising the safety of the public and making the state of things worse than before the Act was passed. Under these circumstances, my Council considers that it can have no other alternative but to surrender the trust imposed upon it by Parliament into the hands of His Excellency the Lord Lieutenant and the Privy Council; and perhaps His

Excellency will consider the advisability of appointing paid commissioners to carry out the law.

I am, Sir, your obedient servant,

WILLIAM HAYES, President.

N.B.—His Excellency and the Privy Council may not be aware that the Society's inspector who proved the cases against the defendant is entitled to one-third the penalty inflicted. And it will be necessary to be informed from what source that portion of the penalty is to be obtained.

My Council is also desirous to know if the Privy Council have the power to override the Act, section 30 of which states that for every offence proved the penalty is to be 5*l.*, neither less nor more.

No. 4.

Dublin Castle, 10th September, 1892.

To William Hayes, Esq.,

President, Pharmaceutical Society of Ireland.

SIR,—I am directed by the Lords Justices to acknowledge the receipt of your letter of the 7th inst. relative to the reduction of fines imposed upon Mr. Samuel Cosgrave at Bangor Petty Sessions for breaches of the Pharmacy Act, 1875, and to acquaint you, for the information of the Pharmaceutical Society of Ireland, that their Excellencies' decision in the matter was arrived at after a careful consideration of all the facts before them.

I am, Sir, your obedient servant,

WILLIAM B. KAYE.

No. 5.

Pharmaceutical Society of Ireland,

67 Lower Mount Street, Dublin, Sept. 15, 1892.

To Sir William B. Kaye,

Secretary to the Privy Council, Dublin Castle.

SIR,—I beg to acknowledge receipt of your letter of the 10th inst. *re* reduction by their Excellencies and the Privy Council of the fines imposed upon Mr. Samuel Cosgrave, registered druggist, Bangor, Co. Down, at Petty Sessions, on the 17th ultimo, for illegal compounding. I observe you say that "their Excellencies have arrived at this decision after a careful consideration of all the facts before them." But what my Council regrets and complains of is that their Excellencies and the Privy Council hastily acted on "the facts before them," without seeking to be enlightened by those who could have put other and most important facts before them, which could not have failed to show their Excellencies that the opposite of the course adopted was the only one that should be taken; and while alluding to this matter, I would ask if the letter of the 1st inst. from our solicitor to the Under-Secretary was under consideration, with his suggestion that the Pharmaceutical Society should be heard in answer to the memorial from the defendant, and the information which he gave "that since the hearing of the case Cosgrave had been guilty of conduct which very considerably aggravates his offence"?

Were any inquiries made as to what this grave charge was; and if on the recommendation of the Pharmaceutical Council his name ought not to be erased from the register of registered druggists, in accordance with section 35 Pharmacy Act, 1875? There are some questions which my Council desires to be informed on by their Excellencies in my previous letter which you omitted to answer, and to which I must ask you to kindly let me have a reply:—

1. Has His Excellency or the Privy Council the power to override any section of the Act without first bringing it before Parliament?

2. Have His Excellency and the Privy Council considered the suggestion from my Council to appoint paid commissioners to carry out the Act?

An answer to this latter question is imperative, as the Council of the Pharmaceutical Society feels that, after the course adopted by their Excellencies and the Privy Council in this case, the registered druggists and other traders will be so completely demoralised that it will be found quite impossible to enforce the law with the means at its disposal, and so illegal compounding and the sale of scheduled poisons by unqualified persons will necessarily be alarmingly widespread, as we know—unfortunately, too well—that a large section of the persons registered under the Amendment Act, 1890, and others failing to register, have only been prevented openly defying the law by the fear of the unmitigated penalty of 5*l.* for each offence, the dread of which is now

removed by the knowledge that his Excellency and the Privy Council condone such offences, thus jeopardising the safety of the public and causing the Pharmacy and Poisons Acts to be but dead letters.

I am, Sir, your obedient servant,
WILLIAM HAYES, President.

No. 6.

Dublin Castle, 19th September, 1892.

To William Hayes, Esq.,

President, Pharmaceutical Society of Ireland.

SIR,—With reference to your letter of the 15th inst., I am to inform you that the Council of the Pharmaceutical Society is under a misapprehension in supposing that the memorial of Mr. Cosgrave was dealt with by the Privy Council. The matter is one over which the Privy Council had no control. And the Lords Justices, who alone had the power to deal with the memorial, after careful consideration, and having before them the recommendation of the Magistrates, decided in favour of a mitigation of the penalty.

I am, Sir, your obedient servant,
W. S. B. KAYE.

No. 7.

Pharmaceutical Society of Ireland,

67 Lower Mount Street, Dublin, Sept. 20th, 1892.

To Sir William B. Kaye,

Secretary to the Privy Council, Dublin Castle.

SIR,—I am in receipt of your letter of yesterday, and observe that their Excellencies the Lords Justices desire to take the entire responsibility of their action in the reduction of Cosgrave's fines without consulting my Council or seeking the information which it could have furnished.

Their exonerating the Privy Council of participation in this matter does not, however, in any way mitigate the danger and the serious consequences which must inevitably follow unless immediate steps be taken to reassure my Council, and to in some measure neutralise the demoralising effect of this action of their Excellencies on the registered druggists and other unregistered traders in the country.

I regret very much the necessity for this correspondence, which has not been of my or my Council's seeking, but we have felt the very grave responsibility which has rested on us in our endeavour to carry out the law by prosecuting the law-breakers, and imposing on them such penalties which we hoped might soon be a terror to all evil-doers when they fully realised the determination of the Council, by zeal and energy—regardless of personal odium—to thoroughly stamp out this widespread evil. We were within sight of this consummation when their Excellencies—probably ignorant of all this and much more—stepped in, and by a stroke of the pen undid our work and labour of years.

To begin this unpleasant work *de novo*—with a demoralised constituency to deal with, and the authorities in Dublin Castle condoning the offenders and snubbing the President and Council of the Pharmaceutical Society—is more than my Council feels able or willing to undertake. I have already written two letters in the hope that their Excellencies might be able to find some *modus vivendi*, and with this view have asked several pertinent questions, not one of which you have done me the favour of replying to.

We are not in any sense a political organisation, nor yet a trades union, but a Society created by the British Parliament for the convenience as well as the protection of the Irish public, by preparing highly educated and qualified licentiates or pharmaceutical chemists for the proper compounding of physicians' prescriptions and also the registration, after modified examination, of the lower grades of chemists and druggists and registered druggists, who alone—with our licentiates and apothecaries—are permitted to sell scheduled poisons to the public under certain restrictions and conditions. To faithfully carry out this intention of Parliament has always been the desire and effort of my Council from the time of our first honoured President, Sir Dominick Corrigan, Bart., to the present occupant, who less worthily fills the chair.

And the Privy Council knows full well—as all our Acts were reviewed and approved by it—how arduous and onerous have been our labours in systematising and amplifying the Act, with no other reward looked for or desired but the consciousness and the pleasure of doing our duty.

Is it, then, fair or just to treat us with less than scant

courtesy, and permit us to be stultified in our endeavour to carry out the Act, and consequently force us to surrender the trust committed to us seventeen years ago?—which is the only alternative left to my Council unless their Excellencies—or whoever else may have or assume the power—in some way or other, undoes the mischief which has been done.

I must, therefore, respectfully ask you to fully reply to the questions in my two previous letters, with the view to my Council at its next meeting coming to a decision what course is to be adopted.

I am, Sir, your obedient servant,
WILLIAM HAYES, President.

No. 8.

Dublin Castle, 24 Sept., 1892.

To William Hayes, Esq.,

President, Pharmaceutical Society, Ireland.

SIR,—With reference to your letter of the 20th inst., I am directed by the Lords Justices to acquaint you that their Excellencies are advised that no power exists of appointing paid commissioners to carry out the Pharmacy Act. And as regards the action in the case of Cosgrave, erroneously imputed to the Privy Council, I am to refer you to the correspondence already addressed to you on the subject.

I am, Sir, your obedient servant,
W. S. B. KAYE.

The *Medical Press*, commenting on the dispute, says:—"We entirely approve of the emphatic tone adopted by the Society, and we equally disapprove of the proceedings of the Magistrates and the Privy Council, who seem to have determined to render nugatory the powers entrusted by Parliament to the Society for the protection of the public against unlicensed and, probably, incompetent dispensers. If it appeared that the cumulative penalties were excessive for the offence, it was open to the delinquent to appeal to the Society to forego them; but it certainly was not for the Magistrates to adjudicate a compromise in defiance of the evidence, nor was it reasonable for the Privy Council to annul the penalty and render nugatory prosecutions adopted by the Society in the performance of public duty and for the protection of the community."

Irish Pharmaceutical Elections.

SIR,—Allow me to supplement Councillor Whitla's question by another. In what way can the interests of the pharmaceutical members be antagonistic to those of the retail associate? They are both equally interested in the conservation of the legitimate limits of the trade; they are both interested in pulling down false signs; they are both interested in stopping the illegal sale of scheduled poisons; they are both interested in excluding from the trade those who are incompetent and unqualified, and likely to bring odium on the body. In these matters they are both in the same boat, and the Pharmaceutical Council is as likely to benefit the druggist as any registered druggist is, as witness the Council's records.

With Councillors Whitla and Wells, I have no objection to the retail druggist having his full representation on the Council, and last year voted for seven of their number; but I do appeal to them to consider, Will their interest be as well taken in hand by wholesale traders, whose trade interest is to increase not so much the number of consumers of, or customers for, poison as the number of sellers, and where there is one to plant a second? And certainly if one or two exist in a town, and are good customers of Wholesaler No. 1, No. 2 and No. 3 will not be satisfied to let him have the whole of it if they can start or get on the register one of their customers to run in opposition and divide the trade. The retail druggists must either confide their interests to the pharmaceutical chemist and vote for the outgoing Councillors or come on the Council themselves; and I believe they would be welcomed, if it does not involve the sacrifice of our best working members.

I think it will be allowed no one has fought harder or done more in the interests of the chemists and druggists of 1875, their assistants and apprentices, during the last nine

years than I have, and if they value my advice they will act on it.

Yours,

R. J. DOWNES, M.P.S.I.,
Registered Chemist and Druggist.

SIR,—At the time of the passing of the Irish Pharmacy Act, 1875, you referred to it as being a first instalment or trial of Home Rule for Ireland. Should the greater trial of Home Rule come, I trust it will not be administered as the first instalment is now being. You were, at the time referred to, in favour of the British Pharmacy Act, 1868, being extended to Ireland, which I think would have been good for all concerned. Your article in THE CHEMIST AND DRUGGIST of September 10 shows you are not biased in favour of the P.S.I. I think the prosecutions carried on of late in Dublin and in other parts of Ireland by the Pharmaceutical Society should be enough to rouse members of the drug-trade in Ireland, who have had years of practical knowledge of dispensing, to strive for a repeal or amendment of the Act under which such injustice is being inflicted on them. Under the pretence of having a law passed for the better protection of the public, a party of men with interest enough to get the power put into their hands have taken away part of the trade rights of those they are now prosecuting—rights which should have been reserved to chemists and druggists at the passing of the Irish Pharmacy Act, as they were sensibly and justly under the British Pharmacy Act, 1868. Fine protection of the public, indeed, they are making! The funds of the Society in Dublin are getting raised by the fines inflicted on honest traders who have by the letter of the law been placed in the unmerited position of lawbreakers, for only exercising the knowledge they possess of their trade, and which has been exercised by them long before the passing of this unjust law. The reduction of the fine by the Lord Lieutenant in the case where he has been appealed to shows that he understands the spirit of law and justice. He sees there is no moral offence committed, no injury to the public. The sooner such a sham law is repealed the better for the druggists and for the public they have served, and are fit to serve still if this law were blotted out. The funds of the Society could be fairly and honestly filled by registration fees from chemists and druggists, who would willingly pay registration fees to be protected by their trade Society. The Society as at present constituted seems willing to stamp out the old servants of the public before a sufficient number of the higher grade are ready to serve in their places.

I am, Sir, yours respectfully,

AN UNWILLING LAWBREAKER. (123/43.)

September 17.

SIR,—Would you kindly permit me through the medium of your valuable journal to express my feelings with regard to the ungracious treatment meted out to the associate druggists by some members of the Pharmaceutical Council?

I have received a number of circulars during the past week from the outgoing members soliciting my vote. Some of them were of considerable length, elaborating upon their worthiness, and commenting strongly upon the dreadful conduct of the so-called representative druggists who have been using unworthy means for the purpose of creating a majority in the voting-power that they may return as members of Council the associate druggists they have nominated. If anything was wanted to alienate voters from the pharmaceutical members, this vituperation is sufficient; and I am sure many who, like myself, were inclined to record their vote in favour of some of them will think twice before they do so.

I am of opinion—and this is shared in by many others—that if the antagonism manifested by some of these pharmaceutical gentlemen towards the more recently created branch is continued, the Council may some fine day find themselves drifting to the old helpless condition they were in before the passing of the late Act.

I hope the associate druggists will not be caught napping this year, but that everyone who has a vote will exercise it.

I am, Sir, yours sincerely,

Dublin, Sept. 27. VOTER. (123/25.)

Another Law Threat for the Irish Council.

SIR.—Your issue of last week states that my nomination as a candidate for membership of the Council of the Pharmaceutical Society of Ireland was rejected by Mr. William Hayes, on the ground that my secondor had not paid his subscription for the current year.

As you will easily see by referring to the Calendar, it is only necessary that the names of the proposer and secondor should be in the list of the members or associates published for the year. There is no regulation requiring that they should pay the current year's subscription before nominating or seconding a person, and it is not competent for Mr. Hayes to make any such rule. Besides, Mr. O'Donnell has now paid his subscription to September 30, 1892.

I have laid the facts of the matter before Messrs. Crowley & Bolger, solicitors, of Sackville Street, Dublin, and am advised that my nomination was perfectly valid; that the objection could not hold good; and that I can have the election quashed if my name be not published in the list of candidates. Mr. Hayes has been given notice of this, and the responsibility of making the Society liable for the large costs which law proceedings would entail now rests with him.

Yours sincerely,

Dublin, September 27. JAMES C. McWALTER.

Circular Suggestions.

Mr. John Snowdon, Darlington, the author of the circular recommending "Taraden Bitters" which we mentioned in our "Commentary" last week, writes to thank us for the honour of the insertion. He asks, however, why we pay such attention to a few points in the circular. He seems to think we intended to allege inaccuracy. We did not wish to imply this. We merely quoted the remarks as specimens of a rather high-faluting style of pushing a medicine. We incorrectly quoted concerning sassafras that it was "an excellent skin-inhaler." We should have printed "exhaler." Mr. Snowdon adds: "We must be original. I hope other chemists may profit by my idea. The name is a good one, I think you will admit, for the title, and I think I may lay claim for praise in the transposition of the names of the ingredients in the recipe. Would be pleased to furnish any correspondent with one of the circulars upon notification." Mr. Snowdon concludes by offering the following for any body's use:—

For an appetite to gain
I'll make the answer straight and plain,
Use ——'s Orange Quinine Wine;
About an hour before you dine.

They Differ on Chutney.

SIR,—*Re* chutney sauce recipe, published in your issue of September 10, I beg to write a few words. I have made it, and found the cayenne pepper about eight times too strong. It is impossible to eat the smallest particle without burning the throat and mouth. I would advise your readers, should they desire an excellent relish, to substitute cayenne pepper 3*ij*. for 3*ij*.

Reading, September

Yours faithfully,

ERNEST ALDRIDGE.

SIR,—I made a little chutney from the recipe given in THE CHEMIST AND DRUGGIST on September 10, and it is very satisfactory.

Yours faithfully,

CARDUUS. (123/17.)

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-6. For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 161-9.

124/36. *Erica*.—Coroners have sometimes claimed that the exemptions of certain persons by statutes from jury service does not affect their juries. We published on

January 30, 1892, a very definite dictum from Mr. Justice Hawkins contradicting this assumption. A pharmaceutical chemist in actual practice as such may claim exemption from service on all juries whatsoever.

123/18. *G. C.*—We should be very much surprised to learn that the words you quote have ever been registered.

A London chemist (120/70) sends the following label, which he has adopted for his poisonous proprietary articles:—

In accordance with law this preparation can only be purchased from a qualified Chemist, and although its formula is unchanged and its use perfectly safe it must be labelled **POISON**.

Name and address.

125/35. *Nux* asks us if "the officials at Bloomsbury have ever had before them a case in which the applicant for examination had served his time with a limited liability company, and whether they recognised such apprenticeship as legal?" [We are not in a position to answer the first part of the question. At any rate, the Registrar, who is the person charged with the arrangement of the preliminaries as to examination, has only to see that each candidate for the Minor has fulfilled the conditions laid down in the by-laws, which in regard to this matter are, that he has "for three years been registered and employed as an apprentice or student, or has otherwise for three years been practically engaged in the translation and dispensing of prescriptions." That regulation does not exclude limited companies or anything else, but the declaration is required to be signed by a pharmaceutical chemist, or a chemist and druggist, or a medical practitioner.]

124/36. *Erica* asks, "Is it legal for me to send stock of a stamped medicine to be sold to chemists by my man who bills towns?"

[It would be illegal. Stamped medicines may only be sold at the premises specified in the licence; so if your man carries a stock to sell to chemists he would be selling at a place not specified in the licence, and to which, consequently, the licence does not extend, and he or you would be liable to the penalty imposed for selling without a licence.]

126/8. *J. H.*—We understand that the sale of the wine you name requires a licence.

126/34. *Cascara*.—The executors of a deceased chemist and druggist may carry on his business indefinitely. The widow's only right to carry it on is as executrix. Whoever the executors may be, they must employ a qualified chemist to manage. It would not be legal for the executors of the widow to continue the business.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

List of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

110/21. *R. Forde*.—Dressing for Brown Leather Boots. The reference should be July 18, 1891, p. 96.

117/5. *Pompeii*.—We are not familiar with any work on Chiropody.

116/8. *J. N. A. (Leeds)*.—Are you not aware that there is a formula for camphor mixture in the British Pharmacopœia?

117/24. *Subscriber*.—Your wine is undergoing acetous fermentation. The only way to stop that is to bring it to the boil, and bottle while warm. Five or ten grains of salicylic acid to the bottle would be an advantage.

117/3. *An Apprentice*.—Quinine Wine.—What you think is quinine is, most probably, citrate of lime; but why not allow the insoluble matter to settle, collect it, and rub up in a mortar with a few ounces of the wine? Quinine wine should be allowed to rest for three weeks before filtering.

116/71. *Slake*.—By Slake Varnish we understand polishers to mean the ordinary shellac varnish (shellac and sandarac in spirit).

117/56. *Boots*.—(1) If you omit the chlorate of potash from the saline you will find that it will not explode. You can retain the Epsom salts. (2) You may try an aniline orange for the egg-powder. The fact that saffron is used to colour one of the most popular powders is fair evidence that it is not too expensive.

117/69. *T. T.*—To Bleach Sponges, make a bath by dissolving 1 oz. of permanganate of potash in about 4 gallons of water, and adding 3 ozs. of strong sulphuric acid. Having washed the sponges, immerse them in the bath for about half-a-minute, then squeeze, wash with cold water, and dip in a potash-bath (4 ozs. of carbonate of potash to 1 gallon of water). Wash once more. The very bright yellow colour is done with a dye, such as orange aniline.

118/40. *Gentian*.—Seidlitz-powders at $\frac{1}{2}$ d. each are either not seidlitz-powders, or are sold at a low margin of profit. It is obviously undesirable that we should publish a formula for a weaker article than the official powder. Does another course not present itself to you? Is it worth your while encouraging the ha'p'orths? In our experience that kind of trade does not represent a sovereign of profit a year in an average working-class business.

118/19. *Equus*.—We do not undertake analyses for payment, and we only report upon matters of general interest to the trade, which your limestone is not.

118/13. *J. M. F.*—Elixir of Peptonate of Iron.—See the formula for liq. ferri albuminat, THE CHEMIST AND DRUGGIST, August 23, 1890, page 250. With every 3 parts of this solution mix 1 part of simple syrup.

103/31. *E. D.*—Your idea of a turnover percolator is ingenious; but it is bad in principle to pass the same menstruum through the marc more than once. We shall keep it before us.

109/11. *Alopec*.—The Ringworm Application is glycerine of borax.

* * * Pressure on our space compels us to hold over several pages of Miscellaneous Inquiries and Dispensing Notes.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

229/92. Address of makers of Bellamy's discovery for horses.

122/60. Ol. caoutchou: where obtainable.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1888,
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Summary.

THE Pharmaceutical Society have obtained a conviction against a woman at Birmingham for selling poison.

WE print the questions given in the physics part of the Major examination this month, and answers to them.

THE Royal College of Veterinary Surgeons has proceeded with success against three more persons for using veterinary titles.

THE second annual meeting of Sequah (Limited) reveals a serious loss in the year's trade. The directors give effective reasons to account for this result.

WE give extracts from the addresses delivered by Dr. Luff, Sir John Lubbock, Dr. Bowles, Mr. Hutchinson, and Dr. Mercier at the opening of metropolitan medical schools.

PROFESSOR HARVEY GIBSON opened the session of the Liverpool Junior Association of Pharmacy with an interesting address on the application of theoretical science, which we report.

THE Merthyr magistrates have refused to convict a publican who sold beer containing more than 50 grains of salt to the gallon. Dr. Moritz, Professor Atfield, and Dr. Luff gave evidence for the defence.

THE commercial position of ipecacuanha is considered in detail in our columns. The drug is dearer now than it has been for twenty-six years, although the supplies are much larger than they were at that time.

A MEETING of wholesale buyers of produce was held at the London Chamber of Commerce on Tuesday to form a Trade Protection Association as a counterpoise against the Association of Brokers already existing.

LETTERS have passed between Mr. Ernest Hart and the President of the Pharmaceutical Society, which have satisfied Mr. Hart that the Council are fulfilling their duty in regard to the sale of proprietary medicines containing poisons.

THE Pharmaceutical Council met on Wednesday forenoon for a short time, and in the afternoon the President delivered an address to the students of the School of Pharmacy on the occasion of its fiftieth anniversary. Prizes were also presented.

DR. ROBERTSON, of Anderston, Glasgow, who has established a sugar-coated pill business there, is suing the Caledonian Railway Company for damages in respect of disturbance to his business through railway-making operations beside his shop.

AT the annual meeting of the Pharmaceutical Society of Ireland, held on Monday, which we report fully, the retiring members of Council were re-elected. At the Council meeting held on Wednesday, Mr. Samuel Turkington was selected by the Council to fill the vacancy created by the death of Mr. Doran.

OUR Paris letter contains several interesting notes this week, information being given regarding the filing of prescriptions and the inspection of pharmacies in France. We also report the opening meeting of the Paris Society of Pharmacy, held on Wednesday afternoon, from which it will be seen that the purity of chloroform is troubling our French confrères.

THE CHEMISTS' AND DRUGGISTS' DIARY FOR 1893

is now being prepared. It will contain as a special feature a remarkable treatise on "Diseases and their Treatment," which has been written expressly for this work by a London physician. This will be found to be of great interest and of notable value, and it will render the 1893 DIARY one of the most popular of the long series. The author is one of the modern school of medical men, and in his advocacy of remedies is most eclectic. Advertisers will please

SEND IN THEIR INSTRUCTIONS

for the DIARY as promptly as possible. We make it a point to let our subscribers in all parts of the world have their copies of the DIARY in ample time to have it ready for use on New Year's Day. It is a very heavy work to produce, and to enable the printers and binders to do their work properly we must close for press on October 22. Our Australian copies (which form a very large consignment) will be despatched by the mail steamer

LEAVING LONDON ON NOVEMBER 4,

which could not be done if we kept open for press after October 22. As THE CHEMISTS' AND DRUGGISTS' DIARY is now so universally recognised as the chemist's desk-companion and reference-book, every firm having anything sell to chemists should be represented in its pages.

Next Week.

THURSDAY, OCTOBER 13.—*Dundee Chemists' Assistants' and Apprentices' Association.* Opening meeting in Gibb's Hall, at 9.15 P.M. Inaugural address by Mr. Charles Kerr, Hon. President.

THURSDAY, OCTOBER 13.—*Chemists' Assistants' Association, 103 Great Russell Street, W.C.* At 8.45 P.M. Musical and social evening.

English Notes.

Institute of Chemistry.

This body finds its present office accommodation at Adelphi Terrace inadequate, and is to meet on Friday, October 7, to consider whether premises in which the examinations may be held should not be secured. It is recommended to expend a sum not exceeding a fourth of the invested capital on the purchase of a lease.

Fatal Accident to a Retired Chemist.

An inquest was held on Friday on the body of the late Mr. Bine White Linging, a retired chemist, residing at 51 Carnac Street, West Norwood. The deceased, who was eighty-four years of age, fell in the High Street at West Norwood and broke his thigh, and this resulted in his death, which the jury found was purely accidental. The deceased, who has resided at West Norwood for about twelve years, was very highly esteemed.

Patent Fees.

The new regulations with respect to patents came into operation on October 1. Under the old rule the preliminary fee was 4*l.*, and the renewal fees 50*l.* and 100*l.* in the fourth and eighth years of the patent term, which sums, however, might be paid by annual fees varying from 10*l.* to 20*l.* Under the new rules these heavy instalments of 50*l.* and 100*l.* are abolished and the annual fees are reduced from 10*l.* before the expiration of the fourth, fifth, sixth, and seventh years to 5*l.*, 6*l.*, 7*l.*, and 8*l.*; from 15*l.* before the expiration of the eighth and ninth years to 9*l.* and 10*l.*; between the tenth and thirteenth years, to 11*l.*, 12*l.*, 13*l.*, and 14*l.*, whilst the fees of 3*l.*, 7*l.*, and 10*l.* for one or two or three months' grace for taking out certificates of renewal are respectively reduced to 2*l.*, 3*l.*, and 5*l.*

Chemists' Assistants' Association.

This Association commenced its sixteenth session on Thursday night, at the rooms, 103 Great Russell Street, W.C. Mr. Frank A. Rogers, manager of Corbyn's Bond Street shop, presided, and delivered the presidential address. The Council have prepared a good programme for the first quarter of the session. The following are the items:—October 13, musical and social evening. October 20, Paper: "The Chemistry of the Alkaloids," E. J. Parry, B.Sc., F.C.S. October 27, Discussion: "The Conditions of Labour in Pharmacy," opened by Peter MacEwan, F.C.S. November 3, Paper: "The Prevention of Voice Troubles and Sore Throat," William Hill, M.D. (Lond.). November 10, short papers by members. November 17, annual *conversazione*. November 24, Paper: "The Pharmacy of the Minor Syllabus," Joseph Ince. December 1, Paper: "Six months of Foreign Pharmacy," W. R. Mitchell. December 8, Paper: "Impurities and Mistakes," Dr. Lauder Brunton, F.R.S. December 15, musical and social evening. At the smoking-concert next week Mr. Martindale will preside. Mr. John C. Umney will be accompanist, and Mr. S. A. Walton will be stage-manager. There is a splendid programme for that night, and the chair will be taken at 8.45.

Stealing the Government's Camphor.

At the Woolwich Police Court, on September 30, before Mr. Kennedy, Thos. Martin, a labourer in the Woolwich Dockyard, was charged with stealing six cakes of patent camphor, value 2*s.* 9*d.*, the property of the Government. Chas. Tucker, a house-decorator, was charged with receiving the camphor. Jno. Carter, chemist, said that on Tuesday Tucker and another man (not Martin) brought four cakes of camphor to his shop in Cross Street and offered it for sale. The other man said they had bought it. Witness gave them 2*s.* 8*d.* for the four cakes. Again that morning Tucker came to his branch shop in Anglesea Road and offered more. Witness then communicated with the police. Hy. Jacobs, foreman in the dockyard, said the camphor was served out to keep moths out of the saddles. It was worth 5*d.* per piece. The Magistrate said Martin would lose his occupation.

Sergeant Gilham said Martin was also a pensioner. Mr. Kennedy fined Martin 3*l.* and Tucker 2*l.*, allowing seven days to pay.

Wine-licences.

A wine-licence has been granted to Mr. W. S. Howarth, 70 Herbert Road, Plumstead. A spirit-licence has been granted to Mr. Bryden, chemist, Barrow.

Messrs. J. Bibbings, Ellis, Jones, and Holloway, each carrying on business as a chemist in Newton Abbot, have all been granted licences to sell medicated wines.

The application for a licence made by Mr. Lawrence Robert Barnes, chemist, Petergate, York, at the Brewster Sessions of that city, on August 30, was adjourned on the ground that the notice had not been given in within the statutory time. The Licensing Committee was to meet again on September 26, but on that day only one member of the committee was present, and as it was necessary that three members should be present before a quorum was formed, no business was transacted. Mr. Barnes remarked that it was very hard on him after he had been put to all the expense of making the application. The one magistrate agreed, and a messenger was despatched in search of two magistrates. The quest, however, was unsuccessful, and Mr. Barnes was informed that his application could not be dealt with. The applicant asked what he could do in the matter? The Chief Constable: Nothing; you will have to wait till next year. [We think the Chief Constable is wrong. If Mr. Barnes can get two magistrates to support him the Board of Inland Revenue will grant a licence until the next sessions.]

A Chemist's Prescribing.

An inquest was held on Monday last, at the Westminster Workhouse, before Mr. Troutbeck, coroner, with reference to the death of Frances Asbury, aged six years, the daughter of a cabinet-maker, of 43 Brewer Street, W. The evidence showed that on last Saturday week the deceased was suffering from a cold, and the father went to a chemist in Wardour Street, and procured a powder, which was given to the child. The next day the child was attacked with severe vomiting and diarrhoea. The father went again to the chemist's on Monday, and having described the symptoms, the chemist gave him a mixture, which was administered to the child, who, however, died early on the Wednesday morning. Charles Cory, of 52 Wardour Street, chemist's assistant, deposed that he was a qualified chemist, but had no other qualification. He admitted seeing the child on the Saturday, and prescribing for it. He saw the father again on the Monday, and prescribed a mixture, the ingredients of which contained, amongst other things, aromatic sulphuric acid and tincture of capsicum. By the Coroner: He prescribed simply because he was asked to do so. The Coroner remarked that the witness must know that he was not allowed by law to prescribe, and it was most improper for him to do so. The witness answered that he gave the particular medicine as the best remedy for the complaint the child was suffering from. Dr. Edward James Nix, of 11 Weymouth Street, W., stated that he was called to see the deceased on Tuesday morning, and found her seriously ill. He prescribed for her, and next morning was informed of her death. He had made a *post-mortem* examination, and found the cause of death was acute peritonitis. Aromatic sulphuric acid and capsicum would only have accelerated the complaint, and no one would have prescribed this if he had known that the child had been suffering from peritonitis. He could not say, however, that the powder given by the chemist had produced the peritonitis, which might have been set up by a cold or by injury. The jury returned a verdict of death from peritonitis, the Foreman stating that most of the jury were of the opinion that chemists should not be allowed to prescribe in any case. The Coroner said that the jury followed his view of the matter, and he must say that he thought it a most improper thing for chemists to take upon themselves the responsibility of prescribing.

Drug contracts.

Mr. J. P. Leach, of Shoreham, has been selected by the Horsham Board of Guardians to supply expensive medicines to the Union Workhouse.

The contract for "drugs, chemicals, &c.," to be supplied to the Southampton Guardians has again been awarded to

Mr. W. Bates. Only two chemists tendered. A Southampton correspondent calls our attention to the eleventh "condition of contract" stipulated by the Southampton Guardians. It is as follows:—

All drugs and chemicals, or articles to be supplied, shall be of the manufacture of—

Messrs. Howards & Son, Stratford, London
 " Hopkin & Williams, Cross Street, London
 " May & Baker, Battersea
 " Horner & Son, Mitre Square, London

as per order (unless other firms are selected), in the manufacturers' capsules or sealed bottles. All drugs, chemicals, tinctures, infusions, powders, pills, ointments, plasters, extracts, roots, barks, leaves, and all articles or preparations ordered to be supplied to be of the standard strength and of the first quality and selected purity, and made in strict accordance with the formula of the British Pharmacopoeia, 1885. Each article supplied to be labelled and invoiced with manufacturers' names. All bottles, jars, boxes, or casks to be capped or sealed as above, and a label fixed across the top of the bottle or jar, and the weight of bottle or jar marked thereon, and the weight of article ordered. The quantity ordered not to be exceeded. All drugs, chemicals, and similar articles to be of the weight of 16 oz. to the lb. All other pharmaceutical tinctures, drugs, chemicals, articles, or preparations not included in this form of contract shall be supplied in accordance with the above conditions when ordered, at 5 per cent. above the current prices of the manufacturer selected. Goods to be packed in hampers, and all packages, bottles, or empties to be credited at the same rate as charged, when returned in good condition.

The tender of Mr. J. Griffith, Farnham, for drugs has been accepted by the Farnham Board of Guardians.

Mr. Timothy White, chemist and druggist, of Portsmouth, Southsea, and Gosport, has been selected by the Portsmouth Town Council for the supply of disinfectants.

Selling Morphia.

Mr. Troutbeck held an inquiry at St. George's Hospital on Monday concerning the death of Abobila Chakravarti, aged 21 years, an Indian law-student, who committed suicide in Messrs. Spiers and Pond's refreshment-room at South Kensington Station on Thursday last. Ernest James, chemist, of South Kensington, said that the deceased went into his shop adjoining the station between 6 and 6.30 P.M. on Thursday and handed to witness an order for 60 grains of morphia, saying that he required it for hypodermic injections. He told witness he was a member of the Royal College of Surgeons, and from his manner and conversation and the knowledge he displayed witness had no reason to doubt the truth of his statement. He appears to have gone with this to the refreshment-room at the South Kensington Station, and having had some brandy, asked for a glass of water, into which he emptied a powder. After stirring it up with a spoon he drank the greater part. A few minutes afterwards he fell forward on the table. The police removed him to St. George's Hospital, where he died. The jury returned a verdict of suicide while temporarily insane, and added an expression of opinion that the chemist had shown carelessness in selling the morphia.

About a Gout-specific.

Mr. Narcissus Pinch recently invented a gout-specific, and instructed Walter Alfred Barlow, a Chancery Lane patent agent, to protect the idea for foreign countries. There appears to have been a hitch somewhere in the patent agent's negotiations, for on Tuesday Mr. Barlow appeared at Bow Street charged with obtaining money by false pretences. Mr. Pinch said that this was not the first transaction he had had with the accused. He had agreed to pay accused 40% to take out the patents. He paid him 20% on account. He did not know what the accused had done towards getting the patents, nor whether he had had to make considerable disbursements. The false pretence was that the accused said that he would let him have the certificates in a fortnight. Mr. Vaughan thought it looked like a case of attempting to obtain a further payment by false pretences. He remanded the accused on bail, it being understood that arrangements should be made, if possible, to complete the patents in the interim.

A Dispenser's Salary

Dr. Hunter moved, at the meeting of the Holborn Board of Guardians, on Wednesday, that the salary of Mr. Herbert H.

Hewitt, dispenser, be increased from 100% to 125% per annum. The Local Government Board allowed 130% for such appointments, therefore he did not think the Guardians would object. Mr. J. F. Kelly seconded, remarking that it was little enough for a properly qualified man.

A Chemistry Lecturer.

In the Westminster County Court, on Tuesday, before his Honour Judge Bayley, Mr. Larnier applied for the committal of a Mr. Garson, who was said to be a medical man, carrying on business at Regent Street, Piccadilly. There was no reason, the plaintiff said, for the defendant not having paid, as he occupied expensive premises in one of the leading West-end thoroughfares, and, besides that, he had held a lucrative engagement as lecturer at one of the principal London hospitals. The defendant appeared in answer to the summons, and denied that he occupied expensive premises, or that he held a position as hospital lecturer. It was true he formerly held that appointment, but it had now ceased, and his business was such that it was really impossible for him to pay the money all at once. He would, however, do his best to pay a small instalment monthly, if such an order was made. The Judge made an order for payment of 10s. a month.

The Salford Analyst on Adulterated Drugs.

Mr. J. Carter Bell, the Salford borough analyst, reported on Wednesday that in the quarter ended September 30 he had analysed 198 samples. "The nine drugs consisted of six citrate of magnesia, and three of cream of tartar. The six samples were brought to me plainly labelled citrate of magnesia; no other marks or words were upon the labels, and my duty is to say that the contents of the packets did not correspond with the labels. The contents were simply made up of Epsom salts, sugar, tartaric acid, and carbonate of soda. It would have been far better if the vendors had labelled the samples magnesia mixture. One sample of cream of tartar consisted of sugar, tartaric acid, and carbonate of soda. This I do not consider a genuine case of adulteration, but only one which shows up the gross ignorance of the shopkeeper, in calling such a mixture cream of tartar. One could quite understand such a man giving oxalic acid for Epsom salts and laudanum for syrup of senna. Two of the cream of tartars were adulterated with sulphate of potash. I shall be told that this is not an adulteration, but when a foreign substance is deliberately added to a very pure article to reduce the quality, I can look upon it in no other light but adulteration."

Arsenical Ointment.

At the Portsmouth Police Court on Wednesday, William Bennett appeared to an adjourned summons for alleged cruelty to a mare belonging to a dairyman named Evans, by the application of a blister containing arsenic, which had caused painful sores. Mr. Clark prosecuted for the R.S.P.C.A., and defendant was represented by Mr. E. J. T. Webb. The adjournment had been made in order that an analysis might be made of the ointment supplied by the defendant, and of the soap which was afterwards used to wash the animal's back. Dr. B. H. Mumby, who had analysed the ointment, said that it contained about 8 per cent. of arsenic. Such an ointment, even if applied to a healthy skin, would cause severe blisters, and would greatly aggravate an old sore. The soap was ordinary yellow soap. The washing-off of the ointment would tend to relieve the horse. Defendant said he had no intention of committing an act of cruelty, and fully believed that the ointment would have a beneficial effect, as it had had in some similar cases previously. He did not profess to be a veterinary surgeon, but he supplied ointments and drugs for the use of veterinarians and others. The magistrates retired for nearly an hour, and on their return into court said they had decided to dismiss the case on the ground that the ointment was not supplied with any intent to do the animal harm. They observed, however, that the case was one which the Society were amply justified in bringing into court.

The Holborn Guardians' Drug Contract.

At a meeting of the Holborn Guardians, on Wednesday evening, the Clerk read the following letter he had received

since the last meeting of the Board, from the firm that supplied the drugs under last year's contracts:—

4 Jewry Street, London, E.C.,
29th September, 1892.

To the Guardians of the Holborn Union.

GENTLEMEN,—At your meeting for the consideration of the various tenders for the supply of your Union—amongst others the drug tender—certain statements were made at the Board detrimental to us. These appeared in the public papers, notably THE CHEMIST AND DRUGGIST, and one of the local papers, and we feel we should not be doing justice to ourselves without approaching you on the matter, trusting for similar publicity. We believed and hoped we had supplied satisfactorily, as we have always tried to do, and from the fact that there has never been a complaint, and also that your medical superintendent at Archway Road was quite satisfied, and expressed himself so, we feel very sorry that, because our discount was large, and we had worked at a smaller profit than some houses would have done, the stigma of "cheap drugs" should have been applied to us. We sincerely trust these facts will be remembered by you when your tenders appear again, and we may be privileged to compete. We have valued your confidence, and can conscientiously say have always endeavoured to deserve it.

Yours, &c.,

BAISS BROTHERS & CO.

Mr. Dixie moved, and Mr. Langley seconded, that the letter be received, which was adopted without discussion.

Scotch News.

A Fire

was found attacking the premises occupied by Mr. David Ritchie, chemist, Market Street, Aberdeen, early last Friday morning. A policeman gave prompt information, and serious consequences were happily averted. The premises were closed the previous night by Mr. Ritchie's assistant, and the origin of the fire is not known. The damage is covered by insurance.

Selling Methylated Spirit Without a Licence.

At Mid-Lothian Justice of Peace Court on Monday, Joseph Jacob Nelson, chemist, Canonmills Bridge, Edinburgh, was fined 30s. for having contravened the Revenue Act, 1839, by having on August 22, in his premises at Canonmills Bridge, sold a pint of methylated spirit without being duly licensed to do so. The defendant, we understand, had purchased a business the previous proprietor of which was licensed, but had not himself obtained the necessary authorisation.

Edinburgh Personalities.

Mr. J. Laidlaw Ewing, chairman of the North British Branch of the Pharmaceutical Society, is at present spending a holiday in Rome.

Mr. William S. Glass, chemist, 43 Clerk Street, Edinburgh, has taken Mr. George Innes, chemist, his brother-in-law, into partnership. Mr. Innes has been associated with Mr. Glass in the management of this business since Mr. Thomas Fairgrieve retired from it in 1838. The designation of the co-partnership will be Glass & Innes, manufacturing and dispensing chemists.

Mr. John Brown, who has been identified with pharmacy in George Street, Edinburgh, for a long period, first as an assistant in the late Mr. John Mackay's establishment, and for the last eleven years with Mr. Burley, has purchased the chemist's business formerly carried on by J. Robertson & Co., at 5 Alvanley Terrace, Edinburgh.

Mr. George Mackie, manager of the Scottish Drug Depot (Limited), Edinburgh and Leith, was on Friday evening, September 30, presented with a silver tea-service and reading-lamp by the employés of the firm, on the occasion of his leaving Edinburgh for Glasgow.

Mr. R. C. Cardno has taken over the business lately carried on by Mr. J. M. Grant, at 87 Lothian Road, Edinburgh, and which previously belonged for many years to Mr. D. Steel.

On Second Thought.

One night last week a cow, on the road to Bonnyrigg Slaughterhouses, entered a druggist's shop, and the pro-

prietor breathed a sigh of relief when it left without doing damage; but the cow took other thoughts, and, returning, smashed the glass door.

Dundee Assistants' Association.

The session of this Association will be opened next Thursday evening with an address by Mr. Charles Kerr, one of the principal chemists of the town, and a hearty supporter of the Association.

The Conference Photo.

The gentlemen who had charge of the photograph of the Killin excursionists undertook a big thing when they promised to supply a key with each copy of the photograph. This key is now ready, we understand, after infinite labour on the part of Mr. Rutherford Hill, and it will probably be one of the most valued records of the Conference.

Edinburgh Infirmary Pharmacopœia.

After an interval of nearly a century the Royal Infirmary of Edinburgh is this week supplied with a pharmacopœia. Mr. Charles Arthur, chemist to the Infirmary, is the author of it, and he has published the book in a style of sumptuous elegance quite unusual in books of the kind. Of the contents we shall have something to say later on.

A Doctors' Union.

It is announced that the medical men of Coatbridge, at a meeting held last week, unanimously resolved on a fixed scale of minimum fees to be charged except to club patients, and they are to issue quarterly among themselves a list of bad payers, so as "to prevent a certain class from going the round and choosing the cheapest as the best."

Ambulance Instruction for Glasgow Chemists.

A very successful ambulance class for Glasgow chemists, conducted by Dr. Lees, in his pharmacy class-room at 180 West Regent Street, was brought to a close on September 30, when fifteen students presented themselves for examination, and were highly complimented upon their efficiency. The class was generally held on Sunday afternoons, and was well attended by masters, assistants, and apprentices.

Ammonia-poisoning.

On Tuesday, October 4, a boy of 10 months, in Peterhead, while lying in a cradle, had administered to him by his sister, aged 2½ years, some ammonia from a bottle, and died shortly after in great agony.

Glasgow Chemists' and Druggists' Association.

A full meeting of the representative committee appointed in spring to promote the formation of the new Chemists' and Druggists' Association, was held last week. Office-bearers were nominated, and the names are to be submitted at a general meeting of the trade to be held next week.

Irish News.

Business Change.

Mr. James Michie, L.P.S.I., assistant to Messrs. Hayes & Co., Dublin, has purchased the retail drug and compounding establishment at Main Street, Blackrock, co. Dublin, which has been conducted for the past twenty years by Mr. R. Donovan, L.P.S.I.

The Reduction of Penalties by the Lord Lieutenant.

The question of the mitigation of fines inflicted on illegal compounders by the Lords Justices or the Lord Lieutenant will be brought before Parliament next session.

Methylated Spirit for Making Liniments.

Chemists throughout Ireland seem to be unaware that on application to the local Excise authorities they can obtain a special book of requisitions for methylated spirit suitable for making the following liniments:—Aconite, belladonna, camphor compound, and saponis. They must state the quantity they annually require and undertake to store it dis-

tinctly apart from their stock of ordinary or mineralised spirit.

Reporting a Contractor.

Dr. Jacob, of Maryborough, recently reported Messrs. Leslie & Co., the contractors for medicines, to the Board of Guardians, for delaying to supply medicines and disinfectants urgently required. Messrs. Leslie proved to the satisfaction of the Guardians that they had despatched the goods on the day they received the order, and that Dr. Jacob had refused to accept delivery from the railway company, as the hamper was addressed to Dr. Jacob himself, instead of to the Guardians.

The New Council's Rules.

The October meeting of the Council of the Pharmaceutical Society was held on Wednesday, October 5. There was a large attendance. Mr. Hayes and Mr. Beggs, the President and Vice-President during past year, were unanimously re-elected to those offices. Mr. Hodgson was re-elected Treasurer. Mr. Samuel Turkington, chemist and druggist, Cookstown, Co. Tyrone, was co-opted a member of the Council to fill the place of Mr. Doran, pharmaceutical chemist, deceased. Mr. Turkington is a retail druggist. Notice of motion was given relative to paying the travelling expenses incurred by country members attending Council meetings.

French Pharmaceutical News.

(From our Paris Correspondent.)

STATISTICS OF STUDENTS.—The last yearly census of students in the schools and faculties of "superior learning" in France shows a total of 22,323, as against 20,785 last year. These figures apply to the seats of learning governed by the State. Those under Catholic control show 1,022 students, as against 931 last year. The faculties of pharmacy and medicine belonging to the State have 4,500 adherents in Paris, as against 3,549 in the provinces.

THE INOCULATED CORRESPONDENT of the *New York Herald* arrived in Paris last Sunday evening, having apparently exhausted his fields for experiments. After leaving Hamburg he visited Berlin, but there he found himself in the position of the uninvited visitor—most welcome when he had left. The representative of THE CHEMIST AND DRUGGIST had a few minutes' conversation with Mr. Stanhope last Tuesday. The experience he has undergone in "Ward F" has left him looking more aged than when he left Paris a fortnight ago. He speaks without reserve of the tests he made in the Hamburg Hospital, and certainly considers he has served the cause of science.

THE PRESERVATION OF POTATOES.—The Société d'Encouragement has awarded a prize of 2,000f. to M. Schribaun for his discovery of a method for preserving potatoes. The process is to plunge the vegetables in water containing $\frac{1}{2}$ per cent. of commercial sulphuric acid. For potatoes with thick skins he uses a solution of 2 per cent. and allows them to remain a few hours longer. After the immersion the potatoes should be allowed to dry thoroughly before packing; they will keep for more than a year. Analysis has proved that the concentration of the liquid remains the same however frequently it may be used. Any kind of tub or receptacle may be utilised for the treatment without there being any fear of affecting the wood. An oak plank has been allowed to remain nine months in a solution of sulphuric acid of 2 per cent. without presenting any trace of change. [This is old.—ED.]

PHARMACY AND PARIS CITY DUES.—M. Ch. Buchet, of the Pharmacie Centrale, has commenced a campaign against the Paris octroi. For some time past there has been a considerable divergence of opinion amongst the excisemen at the various gates of the city as to the definition of medicaments. Such substances pay no dues. M. Buchet has addressed a memorial to the Prefect of the Seine in the hope of getting the matter settled in a satisfactory manner. He traces the history of the octroi as applied to pharmaceutical preparations, and shows that for more than a century it has

been customary to allow free entry to all products used in therapeutics. Certain articles, especially those containing alcohol, have given rise to frequent causes for law-suits, but such trials before the Paris law-courts have generally ended favourably for the manufacturers. It is anticipated that a deputation of Paris pharmacists will shortly have an interview with the Prefect, as the most simple means of settling the questions in litigation. The memorial adds that it was originally intended to bring up test-cases for trial, but such a course was abandoned in the hope that the Administration would meet pharmacists in a reasonable spirit.

THE PROPERTY OF PRESCRIPTIONS.—M. G. Bogelot, the lawyer of the General Association of the Pharmacists of France, advises that the pharmacist has no interest to keep prescriptions, his responsibility being better covered by a copy in his prescription-book. In reviewing the French law on the subject, M. Bogelot finds the first reference to the matter in art. 6 of the Law of October 29, 1846. Therein it is laid down that pharmacists must copy in a special register, kept for the purpose, all prescriptions containing poisonous substances, and must stamp them with name, address, date, &c. The book has to be kept during at least twenty years, and must be produced at any requisition by the proper authorities. The new Law on pharmacy now before the French Parliament, which has already passed a first reading, contains the following references to recipes: (1) "If pharmacists retain a medical prescription they must, in case of request, deliver a proper copy." (2) "A medical prescription prepared in a pharmacy must only be returned after the pharmacist's name has been stamped on it." M. Bogelot points out that neither the Law of 1846 nor the proposed new one is particularly clear on the subject.

INSPECTION OF PHARMACIES IN FRANCE.—"Once a year," writes an Anglo-French pharmacist, "usually in the month of July, we are accustomed to receive the visit of the inspectors appointed by the Prefect of the department to report on the management of the pharmacy, to investigate the quality of all chemical and galenic preparations in stock, and also to see that all the precautionary measures enacted by law respecting the storage of poisons have been duly complied with. The 'membres du jury' comprise a doctor of medicine, a pharmacien, and a professor of chemistry. Legally, the pharmacien appointed should hold a diploma of the first class. We know of an instance, however, where the influence of the mayor has prevailed on the Prefect to select a *confrère*, who does not possess the higher qualification, although a strong supporter of our chief magistrate at electioneering periods. The inspection, which one would be apt to consider a formidable affair, is a pure formality, and altogether a farce, having no practical use whatever. The public, for whose benefit the law was made, derives no advantage from the Act, the inspection, as carried out by those appointed, affording no protection. After a few minutes' conversation with the proprietor of the establishment on matters foreign to pharmacy, one of the inspectors writes out a document, certifying that the undersigned members of the Hygienic Committee, having carefully examined the officine of M. —, found it scrupulously clean and well supplied with drugs, all of which are prepared in strict accordance with the Codex. If all our preparations were made according to the Codex, we should be unable to dispense either English, German, or Russian prescriptions. The International Pharmacopœia, which we have been threatened with, having not yet made its appearance, we are naturally compelled to keep a stock of medicines prepared in accordance with the Pharmacopœias of their respective countries. The authorities are well aware of this, though they pretend to ignore the fact. The fee imposed is 6f. This sum is collected with the annual taxes."

PATENT-STOPPERED BOTTLES AND CHOLERA.—The Hamburg papers call attention to the danger which, they allege, lurks in the use of so-called patent-stoppered beer and mineral-water bottles. The space between the indiarubber ring and the neck of the bottle, it is averred, affords especial facilities for the shelter of disease-germs, and provides them with a safe breeding-place. For this reason the use of corked bottles only is recommended.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

ON Wednesday forenoon, at 11.25, the Council resumed public business after a two months' interval. There were present—Mr. Michael Carteighe, President, in the chair, Messrs. Abraham, Allen, Atkins, Bottle, Cross (Vice-President), Greenish, Grose, Hampson, Hills, Johnston, Leigh, Martin, Martindale, Newsholme, Richardson, Schacht, Southall, and Storrar.

The proceedings lasted exactly an hour, and were exceptionally dull. First the PRESIDENT had something to say about the

FLÜCKIGER TESTIMONIAL.

As we have already reported, he had received from the German pharmacognosist a bronze replica of the medal which had been presented to him, and which, said Mr. Carteighe, is a most beautiful work of art. The professor proposed to invest the money in Switzerland, as being a neutral country, and to give it in charge of Swiss trustees. He did not like the scholarship idea, and would rather devote the revenue to paying for an international trip to deserving students. All this was set forth in a letter which the President read, and he concluded by formally presenting the replica to the Society. There was some applause, and after the election of a few members, &c.,

THE FINANCE REPORT

was read by the SECRETARY. The income since the end of July has been 1,850*l.* 2*s.* 6*d.*, of which 111*l.* 6*s.* was for penalties and costs paid by infringers of the Pharmacy Act, 13*l.* 16*s.* 6*d.* for subscriptions, and 1,725*l.* for examination fees. These sums, with the balance in hand, made 2,542*l.*, and of this 2,415*l.* was wanted for accounts and October expenses; 103*l.* was received in August for the Benevolent Fund, and 235*l.* in September. The expenses and accounts above mentioned were mainly for printing, salaries, research, and current expenses—700*l.* for London and 200*l.* for Edinburgh. The PRESIDENT had little to say about the report in moving its adoption. The penalties were obtained, he remarked, in July, and there were a good many more to come from the solicitors.

BENEVOLENCE

was the next theme submitted for consideration. The committee had eight cases to settle, and only one of them did they not entertain. Of the rest one got a grant of 13*l.*, to give 5*s.* weekly for a year, five got 10*l.* each, and one 5*l.* The name of one applicant was placed on the provisional list for annuities. The Secretary was authorised to attend the election of applicants for admission into the Wanstead Orphan Asylum—this on behalf of a boy Wilkinson. A report of the present condition of the fund and the number of annuitants was submitted, which showed that during the year nine receiving the charity have died, leaving forty-two annuitants. The committee proposed to have an election of four annuitants on December 8 next, and for these the names of eight candidates were submitted in committee. The report was a long one, and was adopted on the motion of the VICE PRESIDENT, who specially appealed for votes on behalf of the boy Wilkinson. This is the last time he has a chance of getting into the Wanstead Asylum, and it is urgent that those who can give votes, either direct or for exchange, should send them into Mr. Bremridge. Whether there should be

FOUR OR SIX ADDITIONAL ANNUITANTS

was a matter which was separately discussed.

The VICE-PRESIDENT, having submitted the formal motion to elect four.

Mr. BOTTLE expressed his regret that the committee did not recommend a larger number. Six it should have been, as it generally had been, unless on a few occasions when the committee, as now, were frightened. He was sure that if they adopted the larger number there would be sufficient sympathy with them to provide the money. (Hear, hear.)

Mr. HAMPSON said they must be prudent. They gave

more money to the annuitants now, and the fact that they only proposed to elect four showed that they wanted more money. With a very little help they could elect six, and as this was a very happy time for people to become subscribers, he trusted that 500*l.* more would be forthcoming. He again protested against what he called the pharmaceutical benevolent race. It was too bad, disgraceful, to set these poor old people to climb over each other's shoulders into an annuity, when they could settle it as nicely by a committee of the subscribers.

Mr. HILLS said that when the proposal for increased annuities was under discussion he was assured that the number would not be reduced. The committee's proposal now showed how far that was correct.

Mr. ATKINS, much as he sympathised with Mr. Bottle, saw no alternative to the committee's proposal, and he regretted also that all the eight cases were equally strong cases, and that only four of them could be satisfied now. The facts were that they had now thirty-six annuitants at 50*l.* and six at 40*l.*—altogether, 2,040*l.* With the four to be elected the expenditure would be 2,240*l.*, and they could not venture to increase that without suppressing casual grants. None would agree to that. They had just voted about 100*l.* on that account, which showed that there was a way of relief which was always going on, and which was good for the poor people although not permanent. He hoped that the trade would now respond generously to this appeal for more funds.

Mr. STORRAR said the position of affairs was this. In 1893 they would require 2,040*l.* for the present annuitants. Casual grants would bring the sum up to 2,500*l.*, and the four new annuitants to 2,700*l.* In 1891 their income was 2,500*l.* and up to date 2,130*l.* had been received this year. So they were really going 200*l.* beyond their income, and an appeal to their constituents became highly necessary. (Hear, hear.)

Mr. SOUTHALL thought the committee lacked courage, and that they ought to be ashamed to go to the country with an election of four. He was sure if they put on six they would get the money.

The PRESIDENT thought that the committee was a little bit weak. They seemed to forget that the principle of having the money in hand for the annuities was departed from long ago, when it was resolved to pay them out of subscriptions as well as interest. The Council had resolved to increase the annuities, but they had not paid a bit of the money away yet, and on the very threshold of the new régime the committee began to look frightened. He would be disposed to go as far as could be done, for his experience was that when you help a man, then pass round the hat, you get the money. He said, as President and as a man of business, that that was the principle for the Benevolent Fund.

Mr. RICHARDSON was surprised at the President. It was not sound finance to spend your money and then go and collect it. He had heard Mr. Sandford condemn that principle. He protested against Mr. Hampson bringing up again the subject of election, which had been debated over and over again. It was extremely regrettable, he continued, that the chemist and druggist element contributed so little to the fund, although they took so large a share of its benefits. Three or four that very day were relieved who were not connected with the Society. It was hard that those who do the toil and work should have to contribute to the support of those who did not subscribe to the fund. He hoped that this would be made the occasion of beating up the country for subscriptions.

Mr. MARTIN maintained that the committee had acted wisely; they were prudent.

Mr. SOUTHALL: Yes; but you have 1,000*l.* to begin with.

The PRESIDENT: And if you spend the money you can get it.

Mr. SCHACHT suggested that each of the twenty-one members of Council should undertake to collect 20*l.* by personal appeal.

Mr. HAMPSON: That plan would have to be kept up every year.

Mr. SCHACHT: Not necessarily. Once people subscribe they generally continue.

Mr. HAMPSON: I would rather have the President preach a sermon on benevolence. (Laughter.)

The PRESIDENT: I don't agree with that. (Renewed laughter.) The result would be that we should get donations, and what we want is subscriptions. Donations have to be invested. We want each generation to support their own poor, and I am confident they will if you trust them, and approach them in the proper way.

The motion was then agreed to, a few minor resolutions were passed, the PRESIDENT read his correspondence with Mr. Ernest Hart, and the reporters left the Council considering "general purposes," which covers a multitude of things.

OPENING OF THE SESSION.

THREE o'clock on Wednesday afternoon was the hour fixed for celebrating the fiftieth anniversary of the opening of the School of Pharmacy. Mr. Carteighe was punctual, and when he came in with Professor Dunstan, Dean of the School, a splendid audience faced him. Councillors, examiners, professors, members, students, were there to the repletion of the benches, and there were ladies galore. What more was wanted to cheer the men who did well last year, and to enthuse the striplings who are beginning now? If anything, it was there in Sir Richard Quain, the President of the General Medical Council, Sir George Buchanan, ex-Chief of the Medical Department of the Local Government Board; Professor Armstrong, Hon. Secretary of the Clinical Society; Mr. Ernest Hart, of the British Medical Association, and several other notable outsiders. The PRESIDENT at once set to business by

CALLING UPON THE DEAN.

Professor DUNSTAN accordingly read his report of the past session. It was interesting. There were 94 students at the school, a number above the average of the last ten years, and 17 above 1890-91. There had been increased accommodation in the pharmacy department, and the lectures in chemistry had been supplemented by a course delivered by Mr. T. S. Dymond. Thirty-six attended this branch. The work was excellent, the conduct good, and the Bell Scholars had carried off both medals, Gane taking the bronze, and Jowett the sessional silver medal. In practical chemistry there were 66 entries, and 6½ months with four hours work per day was the average put in by each student. Jowett took the bronze, and Shaw the silver medal. In botany there were 43 students, and here Jowett gained both the bronze and silver medals. Pharmacy and dispensing were patronised by 35 students in the winter months, and 33 in the summer. Shaw came out best for the bronze medal, and Gane the best possible (100 per cent.) for the silver. *Materia medica* had 37 students, and Gane secured both the medals. The Dean then referred to the fact that the Bell Scholars had singularly distinguished themselves in the open competition, and Jowett had been awarded the Redwood Research Scholarship. Reference was also made to the loss of Emeritus Professor Redwood, the last of the group of professors appointed when the school was founded, fifty years ago. That fact was further alluded to, but it was lightly touched, as it was to form "the theme of the address by the distinguished former student of the school, now President of the Society." (Applause.)

PRESENTATION OF PRIZES.

The DEAN then called upon the students who had distinguished themselves, and as he went from the modest man with the single certificate to him who was loaded with bronze, silver, and parchment the acclamation ranged from piano to the wildest fortissimo.

The "Herbarium prize" competition next came before the President, and he announced the successful competitors to be:—Mr. W. J. Brown, of Dover (silver medal); Mr. G. T. Branch, of Cambridge (bronze medal); Mr. Sidney Davis, of Gloucester (certificate of honour); and these gentlemen came forward to receive their prizes and the usual applause forthwith.

The PRESIDENT then presented Mr. Thomas Hanbury's prize of books to Messrs. Jowett, Shaw, and Gane, the silver medallists.

Mr. W. A. SHENSTONE, as one of the examiners for the

Pereira and Council medals, reported that as regarded the quality of the work done, both Mr. Druce and himself were exceedingly gratified with what they saw of the work of the school through the examination. The marks in botany, *materia medica*, and chemistry, were very considerably above the minimum. It had occurred to him when setting the papers, that it was almost a pity that such an important prize should require such a short examination, and he suggested that, if possible, the candidate should be examined in practical as well as theoretical chemistry, even if they had to extend the time. The Pereira medal had been awarded to H. A. D. Jowett, and the Council prizes to E. H. Gane and George Baxendale.

The PRESIDENT then presented the prizes to Messrs. Jowett and Gane amidst renewed applause, Mr. Baxendale being absent.

Mr. DAVIES, one of the examiners for the Jacob Bell Scholarships, reported that 27 candidates competed for the scholarships, and the minimum number of marks was 267, or about two-thirds of the maximum standard. The successful candidates were Thomas Tickle and Ernest Goulding. Those students were shortly afterwards called up by the President, and received the Hills gift of books amidst loud plaudits.

The PRESIDENT then reported, as Chairman of the Research Committee, that the Redwood Scholarship had been awarded by the Council to Mr. H. A. D. Jowett, who would be required to work in the Research Laboratory next session. The Council, he thought, had made a good choice.

THE ADDRESS.

The PRESIDENT, who was received with loud applause, after rearranging the audience and settling down the hitherto somewhat demonstrative students, said that in a weak moment he had yielded to the request of the staff of the school that he should deliver the introductory remarks usual at the commencement of the session. He was described in the invitation as an "old pupil." He thought that the term indicated slightly a form of reproach, and, to his mind, "former pupil" would have been better. (Laughter.) He had learned, as everyone knew who got to 50 years of age, that the older one became the more and more one became a student. (Applause.) Probably there was no one in the Society who knew more of the ways and doings of everything educational in that house than the old pupil who was now addressing them, and it was necessary for him at the outset to answer the question, "Who founded the School of Pharmacy fifty years ago?" The men who founded the School of Pharmacy were the men who founded the Pharmaceutical Society a year before. They conceived the notion that the best defence against any aggression from without in future to the young chemist and druggist would be to educate him; and so they applied for a Royal charter, and claimed that their objects were to protect the interests of the chemist and druggist, and to advance chemistry and pharmacy. He claimed that in the charter, and in what the founders did at that time, they exhibited a knowledge of the future wants of the trade in a manner that many of those present had lost sight of. There were amongst them some eminent men. William Allen, for instance, was a man of very considerable parts; Jacob Bell himself, Peter Squire, John Savory, and a number of others, all of them men of very great knowledge and eminent in regard to pharmacy. They felt that, if pharmacy was to stand before the public and before the medical profession in the future as a distinct calling, it was essential that everyone connected with it should be educated. They secured the services of the most eminent men that could be obtained at that time in the respective

SUBJECTS TAUGHT IN THE SCHOOL.

Anthony Todd Thomson came from Edinburgh, the cradle of scientific medicine then as it is probably now; Pereira, who had already made a name in *materia medica*, was the first professor of that subject; Fownes, the chemical genius, who would have been one of the most brilliant philosophers of the century had he lived, was the first professor of chemistry. Redwood belonged to themselves, and he was appointed professor of pharmacy. It was no discredit to Redwood to say that he was not then a profound chemist. He had been brought up very nearly as an apothecary, and he had, up to

the foundation of the Society, not had many opportunities of acquiring chemical knowledge. He succeeded Fownes as professor of chemistry, with pharmacy attached. Pereira was undoubtedly the most enthusiastic man in connection with *materia medica* that ever lived, and, moreover, he had the courage to enforce upon his audience, wherever they were, the importance of the purity of that class of drugs which were difficult to identify by chemical analysis. He really was a crusader against adulterations, and, backed by the Council of that Society, he succeeded in ten years in practically getting rid of a number of spurious drugs and of adulterated drugs which had been common in the London market, and the London market in regard to drugs was the market of the world. (Applause.) The recognition of his services took the form of the Pereira medal which they had just been awarding. He was succeeded by their dear friend Professor Bentley, whom he saw smiling over there in the corner—(loud applause)—and as Anthony Thomson died about the same time Bentley became joint professor of botany and *materia medica*. As to Redwood, who died only last year, he was the continuous hard-working professorial *attaché* of the Society for very nearly fifty years, and as such his services were very nearly indescribable, and the Council could never pay him for those services. He was a hard-headed Welshman, and his best points were that when he was placed in a difficulty, when he really had some difficult problem to solve, then he was at his best. He was essentially a physicist, and in that respect of very great service, again, to the Society. His powers of devising physical apparatus were considerable, and the chemical laboratory they now possessed was devised by him. That was his strongest point, and if he had to lecture upon a subject which was partly physical and partly pharmaceutical he was *facile princeps* on such a thing.

At that time the subjects taught in the school were botany, *materia medica*, chemistry, and pharmacy. In due course a chemical laboratory was adapted in one of the kitchens of the house not far from where he now stood. (Laughter.) It was the first public laboratory open to students for the teaching of practical chemistry in London. After a time Jacob Bell saw the importance of having a good laboratory, and some considerable time before his death he made arrangements that in the event of that occurring a sufficient sum of money should be placed at the disposal of the Society to build a proper chemical laboratory. In 1860, after his death, when the legacy was handed over, the laboratory now under the direction of Professor Attfield was built.

THE PHARMACY ACTS.

Previous to 1860, and, in fact, from the first foundation of the school until the year 1852, Bell and others had been working to attain powers by which either there should be a restriction in regard to the name or the title or as to the carrying-on of business by pharmacists—a restriction imposed by statute. In 1852 an Act was passed throwing on the Council of the Society all the important duties in regard to education, and limiting the title of "pharmaceutical chemist" to certain persons who should pass the examination.

In 1868 an Act was passed by which certain further powers were entrusted to the Society, some of which were of a penal character, and which for the first time practically made it impossible for anyone to be registered in future as a chemist and druggist or pharmaceutical chemist without having passed through certain examinations and gone through a certain course of study. In 1868, when the Act was passed, the condition of the school had to be considered in various ways. They were confronted by the difficulty of a short-time system. A certain number of men wanted to pass the Minor examination—he did not think they wished to do any more—and in a weak moment the Council assented to a proportion of the staff to have short sessions. That experiment, however, was given up not long ago, and coincidentally certain improvements in the school had been made, which he thought rendered it probably the best equipped School of Chemistry and Pharmacy in the kingdom. In the first place, they had added a practical pharmacy laboratory; they had also added practical work in the teaching of botany, by the use of the microscope; this had also been done in the teaching of *materia medica*. Lastly, they had

established a research laboratory, about which he need say no more than that as a place for the continued education of students there could be no better. The object of starting the laboratory was to encourage advanced education, and he maintained that they now had in that house a complete system of education which fulfilled the spirit of the founders of the school. It was now

A PATTERN SCHOOL

for the study of science in its relation to pharmacy. In thus fostering technical education their object was to teach men the principles upon which their work was done, not exactly to perfect them in the mechanical processes thereof. They did not say, did not undertake, that the men whom they trained would pass the examination; what they did aim at was to place them under the most favourable conditions for developing the intellect—to foster intelligent work, not to make machines. (Hear, hear.) He pointed to the

ROLL OF PAST STUDENTS

as a proof of the school's worth. There was Emeritus Professor Bentley, the first prizeman in botany fifty years ago, whom he saw before him. (Applause.) They deplored that he was not there as a live professor, but they were glad to have him an Emeritus one. (Hear, hear.) He was the first of a long line of men who were old students of the school and still officials of the Society. In that connection he mentioned the names of Dr. B. H. Paul, Joseph Ince, Professor Attfield, E. M. Holmes, Professor Dunstan, T. S. Dymond, H. G. Greenish, Mr. Short, Frank Brown, E. H. Harrison, and H. A. D. Jowett, and each name was punctuated with more or less hearty applause. Then followed the names of the departed—*i.e.*, those who have stepped from pharmacy into other professions, which course of conduct the President was prepared to defend. There were Francis Corder Clayton, several times Mayor of Birmingham, and partner in Sturge's Citric-acid Works; Dr. Langdon Down, Bernard Dyer, D.Sc.; William Foster, a professor of chemistry; Dr. W. A. Gostling; David Hooper, the quinologist; Dr. Walter Ince; Dr. A. P. Luff; F. J. M. Page, chemistry teacher at the London Hospital; Professor A. Pedler, of Calcutta, son of Mr. Pedler, the Fleet Street pharmacist, whom many eminent lawyers had regarded as being better than their own doctor; Sydney Plowman; Mr. Pochin, deputy-chairman of several railways; W. A. Shenstone; E. C. C. Stanford; Professor Tilden; John Watts, M.A., D.Sc., and many more. Half of the Council was made up of old students, and the school was particularly strong in auditors—Frank Lescher, Charles Umney, and Francis Yates were auditors, and old Square men. Then examiners, past officers, local secretaries, divisional secretaries, young pharmacists unofficially connected, all yielded names to the roll of fame, and that showed that the school not only taught men to use their brains, but that when they left it they devoted their talents to the service of pharmacy. But he

KEPT THE BEST TO THE LAST.

Men had done their share for the school, and so had women. In his own student days the first one came and stayed for two sessions; that was Miss Garrett—(applause)—who became Dr. Garrett-Anderson, and whose example had been followed by other ladies who had entered the medical profession. In later days they had Miss Boole, who was distinguishing herself in research, and Miss Margaret Buchanan, who nearly got the Pereira medal, and took the Council silver medal. (Applause.) The President then proceeded to discuss the relative merits of

PRIVATE AND SCHOOL STUDY.

He considered that private study was not a desirable form of education for the chemist's apprentice, because it did not widen his mind, and tended to send him out a learned prig rather than an educated man, whereas the school taught him temper, tact, and human nature. There he was taught to work systematically, and to take a reasonable amount of leisure. . . . So far the address might be divided into two parts—a brilliant and interesting opening, and a long and very thin tail. For the sake of diversion, the speaker now told his audience how he had gone once to the theatre when he was a student, and after that he spoke of some of the

DEFECTS OF THE EXAMINATION SYSTEM.

There were a few things which he would like to see reformed. First, the Preliminary examination is now unfit for the purpose for which it was devised. It is an examination of forty years ago, which does not represent present-day education. Its defects are twofold—it is not wide enough, and the examiners have not the power to insist upon it being a test of schoolboy knowledge, because they have not the power to fix an age at which it should be passed. He deplored the defects of the apprentice system, under which men take apprentices who have not passed the examination, such as it is, and who, consequently, have not the opportunities of acquiring that technical knowledge which is necessary for the business and required by the examiners. It is on that account mainly that students wish to get through their examination in as short a time as possible, and the custom has arisen of throwing away examination-fees every three months with the object of tiring out the examiners. Another defect of the examinations is that they are partly oral. This gives rise to the feeling on the part of candidates that the examiners are adverse to their interests—that they are bent upon plucking as many as they can. (Laughter.) He maintained that it was not so; and as one with exceptionally long experience as an examiner he said that the view which an examiner should take, and which the Board did take, was to regard the candidate as one who ought to pass. (Hear, hear.) As to the reforms which he would like to see, he said he would abolish the Preliminary examination altogether, and should accept a recognised minimum of education as shown in an examination passed before the maximum age of 17. (Hear, hear.) It was a vicious system which accepted proofs of preliminary education at the ages of 21, 23, or 24. (Hear, hear.) Next, about two years after the pupil had entered his apprenticeship he would like to see an intermediate written examination, which would count when the candidate came up for the Minor. That would have the effect of keeping up the interest in the technical studies. Then he would have students come up to the school for a year and pass the Minor; then to come back for another year—(Oh! oh! and laughter)—and get a further knowledge of physics, practical physics, and organic chemistry, and go in for the Major. That was what he regarded as the typical form of education for the pharmaceutical chemist of the future. Men educated on these liberal lines would be fit to associate with medical men; they would never be interfered with for prescribing—the best-educated pharmacists never did that sort of thing—and now that botany, chemistry, and *materia medica* had in a large measure been cut out of the medical curriculum it was their duty to take up the study of these subjects (“Hear, hear,” from Sir Richard Quain.) They might ask him—was this standard of education likely to be reached? He asked them to look around. The merest Board school was taught elementary science now; some of them knew more chemistry than many of their Minor candidates. (Oh!) He maintained that the pharmacist must be well up in all departments. He must not be contented with the minimum of education. He must be competent to know what he is selling, competent to analyse it, and competent to ask sufficient remuneration for it. One of the good signs of the times was that young pharmacists are alive to that view of the matter.

THE WORD DIRECT.

The speaker next wished to make some observations to the students now entering the school. It was usual to put such observations at the beginning of addresses, and to make them pegs upon which the speakers should hang their pet theories. He had talked to them as an old student, and he believed that he had expressed the views of those who were in the front ranks of pharmacy. They did not want to make the pharmacist ashamed of his business. He wanted everyone to say to himself that he had come there to be educated. The man who came there to diddle the examiners deserved not to succeed. (Laughter.) They should set to work as if they liked the business. They should be diligent, loyal to themselves, and behave as men. If students did not, they did not want them to belong to the school. If they were in trouble, or should go wrong, he wanted them to

make a clean breast of it to the Dean, the professors, or the senior students. The fifty-first session was now beginning, and at the end of it he trusted to have a good report of them. To the old students he said that they had now to prove their fitness before another tribunal—the public. They should be true to the dignity of pharmacy. The record of the school showed that dignity fifty years ago, and it did now. There was dignity in all labour. Let their acts be those which in a pure profession would be called professional, and let them ever carry that in mind. (Great applause.)

VOTE OF THANKS.

Mr. ERNEST HART was called upon to move a vote of thanks to Mr. Carteighe. He said the address was one of the most remarkable which he had ever heard. It was an address, an essay, a lecture, an oration. It was critical, ethical, and even sometimes ethnographical. From beginning to end it was touched with hero-worship—one of the most desirable qualities. One of the greatest men had said that one thing that he enjoyed to the utmost was to know how to admire men. What would they, their heroes, say of the school now? They would recognise that it had made a great progress. There were a good many developments in pharmacy since Pereira and Todd Thomson's day, and one of them he thought they would not approve of. That was the development of wholesale specialism, whereby pharmacists became mere agents, and the art of prescribing was reduced to such a low level that the art of dispensing was seriously threatened. So far as the educated pharmacist and the educated doctor encouraged that specialism, he believed that it would tend to retard pharmacy. He could not help thinking that if pharmacists became the mere agents for handing special preparations over the counter they would be less entitled to the remuneration which their education deserved. (Hear, hear.) He thought that by the concerted action of pharmacists and medical men something could be done to stop the evil. The whole thing was a development something like ladies' trains—a development of woman which hindered the progress of man. (Laughter.) He was pleased with the President's remarks regarding examination. Alone it was not a sufficient test of fitness. He thought Sir George Buchanan would agree with him that examination was very much like water-analysis. (Laughter.) Analysis did not always tell them what was in it, nor what was not in it, how it got there, or how long it would stop. By examination they might get to know what was in a man, but they could not tell how long it would stop, or what was not there. (Laughter.) He heartily agreed with the curriculum which Mr. Carteighe had sketched, and hoped it would have legislative sanction. It was a pity that they should have to fix upon the minimum of education. He would rather have it as Socrates had said, “When I see a young man turning to philosophic study I am hopeful of him, but when he turns away from philosophic study and seeks rather the pleasures of life I know that he would have done no good for the world or for himself.” He had pleasure in moving that the thanks of the meeting be given to Mr. Carteighe.

Sir GEORGE BUCHANAN seconded the motion. He said that he was personally gratified that he had had the opportunity of working with the Society, and particularly with the president. Pharmacy and medicine must and would, he considered, work together for the good of mankind. (Applause.)

Sir GEORGE then put the motion, which was carried with acclamation.

Mr. CARTEIGHE, in replying, tendered to Sir George Buchanan the congratulations of the Society on the dignity he had attained. He was sure that University College men were proud of the position which Sir George Buchanan had attained, and of his resolution to devote himself to important questions affecting public welfare.

This closed the proceedings.

FAT PEOPLE who have a wish to become thin should take their baths warm, 95° F., aromatic, and remain in the water for half an hour. A Russian medical man finds that this increases fat assimilation. Rosemary, mint, and lavender amongst the herbs, and *ol. pini sylvestris* always increase the assimilation.

MAJOR EXAMINATION.

Questions set by the Board of Examiners for England and Wales to October candidates, to which are appended model answers.

PHYSICS.

(Time allowed: Three hours.)

Question 1. Give an account of dialysis and its use. Can the process be explained?

Answer. Dialysis has been defined as "the separation of dissolved substances from each other by taking advantage of the different rates at which they pass through moist diaphragms or septa." A classification of soluble substances has been devised based on the greater or less readiness with which they pass through a diaphragm of parchment paper or other similar material. Those which pass through with facility are called "crystalloids" because the majority of the members of this class are capable of assuming the crystalline form. Those which refuse to pass or pass very slowly are called "colloids," a term literally meaning "glue-like" because gelatine is the most perfect example of this class. In order to apply the process of dialysis the liquid containing the substances to be dialysed is placed in a dialyser, an apparatus consisting of a hoop of glass or guttapercha over which a piece of parchment paper is tightly stretched and secured in this position by tying or otherwise. The dialyser is next floated or suspended in a vessel of pure water and the process commences. The crystalloid substances pass through into the water, whilst the colloid bodies remain in the dialyser. As one illustration of the use of the process may be mentioned the preparation of the *Liquor Ferri Dialysatus* of the B.P., in which the colloidal portion is retained. Again, in the analysis of complex organic mixtures the process is often used. Crystalline poisons, for example, are by this means separable from inert and indefinite organic matter. Attempts have been made to explain the phenomenon by supposing that the molecules of a dissolved body have a motion of their own amongst the molecules of the solvent somewhat analogous to that of the molecules of gases. By the further supposition that this molecular motion varies in velocity in the cases of different substances—that it is rapid with highly crystalloid bodies, and becomes more and more sluggish as we advance towards the typical colloids—the process of dialysis receives a, at least, provisional explanation.

Question 2. A beaker containing water at 15° C. with a thermometer in it, is placed in a freezing-mixture at -5° C. Follow the indications of the thermometer and the other physical conditions in the water, up to the time when it reaches the temperature of the freezing-mixture.

Answer. The water in the beaker would at once commence to cool, as would be rendered evident by the steady fall in the thermometer, and this cooling would be accompanied by a diminution in volume. At a temperature exceedingly near 4° C. this contraction would cease and the water would begin to expand, whilst the thermometer would still continue to fall until the temperature of 0° was reached. At this point congelation would probably commence, and the thermometer would remain stationary until this congelation was completed. The water in the act of conversion into ice would undergo a large and sudden increase of volume, not to be confounded with the slow and comparatively insignificant one taking place between 4° and 0° . The water once entirely frozen the thermometer would again begin to fall, and would fall more rapidly than whilst the water was still liquid. The fall would continue till the temperature of the freezing-mixture was attained, the ice at the same time contracting slowly and slightly in volume. It might, however, happen that the temperature fell below 0° without freezing-occurring, especially if the liquid were kept quite free from agitation. A slight stirring of the water, or the dropping in of a minute ice crystal, would at once determine the congelation of the water. The thermometer would in this case rise to 0° and remain there till solidification was complete; the remaining phenomena would then take place as before described.

Question 3. Define specific heat, and give a process by which it may be determined. What is its relation to atomic weight?

Answer. The specific heat of a substance may be defined as the ratio of the heat required to raise the temperature of unit mass of that substance through unit interval of temperature to the heat required to raise unit weight of cold water through the same interval. Of the methods employed in determining the specific heat of substances the following is, perhaps, the most generally useful. A known mass of the body, which we will presume to be a solid, is heated to a known temperature and then plunged into a known mass of water at a different, but also known, temperature, and contained in a calorimeter. Time being allowed for a common temperature to be reached, this is carefully taken by a delicate thermometer, and the specific heat may then be easily calculated. For it is evident that the heat lost by the body is equal to that gained by the water, and, again, the heat lost by the body is the product of its mass into its specific heat into its fall in temperature, whilst that gained by the water is equal to its mass multiplied by its specific heat (*i.e.*, by unity) and by its rise in temperature. We thus obtain an equation from which the specific heat of the body is readily obtained. In actual practice it is necessary to take several other data into account—for example, allowance must be made for the heat absorbed by the calorimeter, the stirrer, and the thermometer, as also for that lost by radiation during the experiment. It will be scarcely necessary to add that modifications in the process are rendered necessary when a liquid or a gas is to be experimented upon.

The curious relationship existing between the specific heat and the atomic weights of the elements was discovered by Dulong and Petit, and may be expressed as follows:—"The product of the specific heat of an element into its atomic weight is an approximately constant quantity, the mean value of which is 6.4." At first several elements were considered to exhibit exceptions to this law, but subsequent researches have shown most of these exceptions to be apparent rather than real.

Question 4. Describe the construction, use, and principle of the electrophorus. What is meant by an "influence machine"?

Answer. The electrophorus consists of a cake of resin or guttapercha resting on a metallic base, called the sole and provided with a metallic cover fitted with an insulating handle. Before using it care should be taken that all its parts are dry and moderately warm. The cake is excited by rubbing or striking it with fur or flannel, and the cover placed upon it. If the insulating handle be now grasped by one hand whilst a finger of the other is placed for an instant upon the upper surface of the cover, on lifting the latter by its handle a spark can be obtained by approximating the finger or other conducting body to the edge of the disc. Replacing the cover upon the cake, again touching with the finger, and removing as before, a second spark may be obtained, and this may be repeated a great number of times. The theory of action is as follows:—The resinous cake becomes charged with negative electricity as a result of the friction with the fur, and when the cover is touched with the finger, and so connected with the earth, an opposite charge is induced in it. Another way of expressing the same thing is to say that the negative electricity of the cake attracts to the under-surface of the disc positive, and repels to the upper surface negative, electricity. This latter is conducted away through the finger whilst the former remains "bound." The energy manifested in the spark has its origin in the excess of the muscular effort required to raise the cover against the attractive power of the cake, over that which would be needed were there no electrical excitation. An influence machine is a species of revolving electrophorus in which an electrified body acts by induction upon a revolving system and gives rise to a continuous electrical production. One of the best is that of Wimshurst.

Question 5. Give a short account of (a) the arc lamp and (b) the glow lamp, and trace the transformation of energy exemplified in the production of the electric light by the usual method.

Answer. (a) In the arc lamp electric discharge takes place between two pieces of hard conducting carbon separated from each other by an interval which, by various ingenious devices, is kept as nearly as possible constant. An arc of light of intense brilliance is thus obtained called the voltaic arc. The carbons, being raised to an exceedingly high temperature and exposed to the air, suffer waste by combustion, and hence require renewal. There is also a transference

of particles in the direction of the current, the negative carbon increasing at the expense of the positive one. With the view of obviating inconveniences arising from this cause arrangements are often made for alternating the direction of the current. A globe of ground glass serves to diffuse the light and to lessen its otherwise painful intensity.

(b) In the glow lamp a filament of carbon enclosed in a globe exhausted of air by a mercury pump is interposed in the path of the current. The resistance experienced in passing through this filament is sufficient to raise it to incandescence, and a light is thus obtained more suitable for domestic purposes and the illumination of interiors generally than that afforded by the arc lamp.

The energy manifested in the electric light as usually produced is derived from the heat generated by the combustion of coal or other fuel. This is transformed by means of a steam-engine into mechanical power, and this again into electricity by the dynamo-electric machine. The current is again converted into heat when it meets with resistance in its path, and thus the excessively high temperature of the carbon in the previously-described lamps is produced. The radiation from this heated carbon constitutes what we call the electric light.

Question 6. *What is monochromatic light? Show how it may be obtained, and name some of its uses in physical investigations.*

Answer. Absolutely homogeneous or monochromatic light would be composed of light-waves all possessing the same wave-length. In practice the name is given to any light which closely approximates to this condition. It differs from compound light in being invariably coloured, which compound light may or not be, and in being unable to be split up into constituent lights of different colours. A ready and convenient method of obtaining a monochromatic light is by burning alcohol impregnated with sodium chloride in a suitable lamp. Monochromatic light is used in determining the rotatory power of optically active bodies, and also in investigating refractive indices.

OPENING OF THE MEDICAL SCHOOLS.

AMONG the addresses at the medical schools one of the most interesting was that delivered at St. Mary's, London, by Dr. A. P. LUFF, B.Sc., whose former connection with pharmacy will be remembered. Dr. Luff had a large and enthusiastic audience, and Sir Edward Sieveking was in the chair. After welcoming the students, Dr. Luff said that though only average mental power and ordinary ability are requisite for passing the medical examinations, and for the after practice of the profession, yet the one thing indispensable is industry. Medicine is a laborious career. There is no place now for the Bob Sawyers; the days of walking the hospitals are over and past; these are the days of study. At the outset students might be surprised, and perhaps alarmed, at the diversity of the subjects with which they have to form some acquaintance, and with the wide range of medical education of the present day. The relationship of some of these subjects to their future work, and their direct or indirect utility in the practice of the profession, may not at first be apparent. But the curriculum has been mapped out with much forethought and care, and though the relationship may not at first be apparent, yet eventually students will surely recognise the mutual connection existing between the various branches of their professional studies. The study of physics, chemistry, and biology prepare the way for and lead up to the study of physiology. Our forefathers adopted an entirely different system of medical training; with them a period of pupillage with a medical man preceded the studies of the medical school, so that the student of those days was first brought face to face with disease before he had learnt the facts and phenomena necessary for the comprehension of it. That was building the house on the sands of empiricism, instead of on the rock of scientific knowledge. The new five years' curriculum should prove a boon. It will enable students to do thoroughly what it was almost impossible to accomplish under the four years' curriculum. With the exception of biology, no new subject is interpolated into this extended

curriculum; but one most important and useful reform has been introduced, and that is that a certificated course of study at a fever hospital is now insisted upon as part of the curriculum. One other reform is sorely needed as a matter of justice and equity to the majority of London medical students, and that is the establishment of a University in London where the degree of Doctor of Medicine will be within the reach of all medical students, and where it can be obtained by a less rigorous series of examinations than the present somewhat exclusive degree of the University of London. Dr. Luff recommended that studies should not be restricted to purely professional subjects and books. "Let your reading be general, and through books cultivate the acquaintance of great minds. Fill up the leisure left by graver occupations with the different forms of lighter and pleasurable occupations, with the perusal of the works of novelists, of poets, and with music. Do not crush beauty and poetry out of life. Allow the imagination and the emotions fair play. You will not be efficiently equipped for the discharge either of your professional or social duties if the acquirement of deep information on medical matters has been obtained at the cost of general culture. And however engrossed you may become in your studies, never lose sight of the necessity of carefulness of your health, and of the need for daily recreation. The first requisite to success in life is a healthy body, and the best brain is of little service unless there be sufficient vital energy to work it. Remember that success in the medical profession depends much on energy, not altogether on information." The lecturer earnestly urged a right moral training, and, after pointing out the growing importance of chemistry as an aid to the medical art, concluded with a bitter attack on the "hysterical antivivisection movement."

* *

Sir JOHN LUBBOCK opened the session at St. Thomas's. He urged his hearers to arrange their work so as never to waste a moment. A certain amount of amusement was most desirable; regular exercise was absolutely necessary to all ordinary constitutions. But a great many people, for want of a little forethought, lost a great deal of time in what was neither work, exercise, nor amusement. This was the waste of time against which he would caution them. In reading much time was sometimes squandered. He would not urge them to read nothing but learned or professional works. On the contrary, it was important to keep up general reading. Novels were very instructive, and after a hard day's work a little nonsense was very refreshing. But he was often astonished at the want of care with which many persons selected their reading. The fact that they had so little time for reading made it all the more desirable to make the most of what they had, and many of the great standard books of the world could be read even during a very busy life, if time were properly used. He also urged the importance of cultivating habits of business. Sir James Paget had given some interesting statistics, which showed that out of 1,000 medical students whose career he had followed rather more than 200 left the profession or died early; more than 600 attained fair, some of them considerable success. Out of the whole number, only 56 entirely failed. Of these 56, 15 never passed the examinations, 10 failed through ill-health or accident, and 10 through intemperance or dissipation, and about 20 left the profession. In medicine, as in other professions, if a man made himself useful he would certainly be used.

* *

The address at St. George's was delivered by Dr. BOWLES, of Folkestone. The lecturer commenced by welcoming the new students, and urging them all to preserve the tradition that "a St. George's man is expected at all times and under all circumstances to be a gentleman." The apprenticeship system was announced to be dead—defeated by the rapid march of science. This led to the main subject of the address, "the application of physics to physic." It was pointed out that all changes occurring in physiological and pathological processes, formerly supposed to depend on that unknown quantity, "vital force," were really nothing more than the action of the recognised forces of Nature on the organs and structures of the body. Coughing, sneezing, snoring, &c., were all shown to have immediate origin in

physical conditions. Surgery is the proper application of the laws of physics; injured parts and broken limbs are kept at rest, dislocated parts are placed in their natural positions, redundancies are removed, and natural deficiencies often well supplied; crooked paths are made straight, and blocked and narrowed ones made patent; stiffened joints are made to move, crooked limbs put into shape, eyes are made to see that would not, and ears to hear that could not. Surgery is a department of physics—a physical art. Medicine, formerly the region of the unknown and the happy hunting-ground of quacks, is rapidly following in the same lines. The so-called practical man and the believer in dogmas and nostrums are rapidly giving way to minds trained in the laws of physics. Physiology, medicine's forerunner and its handmaid, is steadily, step by step, and without prejudice, elucidating the ways and doings of animal life. By instruments of the most elaborate and delicate nature, by patient and continuous observation, by anatomical and histological searchings, and by the application of the laws of gravitation, chemistry, heat, light, and electricity, always by ways and means connected with physics, we are getting to understand better and more surely the movements and functions of respiration, of circulation and digestion, of secretion and excretion, and finally we hope to understand the most subtle and mysterious of all functions—the operation of the nervous system. The lecturer then reviewed the rapid progress made in late years in the studies on which the medical art is based. Schroeder in Germany and Pasteur in France, by their investigations on fermentation and putrefaction, and Chauveau on the particular nature of contagia, have opened up an entirely new world. We have now not only to study the causes as well as the changes of the disease in the body, but also the doings of the bacteria outside the body and within it. In view of the more scientific methods of modern pharmacology and therapeutics, students were cautioned against long and complicated prescriptions. Not a single drug ought to enter the body except under clear intention of what object it is to fulfil there. Compounds may be good cookery, but do not form scientific medicine. Finally, students were warned against mistaken views of materialism. The students of the physical and biological sciences are emphatically the servants of Nature. The man of science interprets the physical laws, and equally with the teacher of religion tells us of the greatness and grandeur of the Creator. Every discovery of the scientist can only tend to increase our wonder at the omniscience and perfection of the ways of God.

* *

Dr. MERCIER, who delivered the introductory address at the Westminster Hospital, reviewed the altered relations of the medical profession to the public. The intercourse of doctor and patient had become less oracular and more confidential. The doctor no longer contented himself with administering two tablespoonfuls of physic three times a day, but sought to take the whole mode of life of the patient into his hands, and to modify and regulate it in accordance with the new conditions that the malady required. The old view of disease that was now passing away regarded the patient as a body, some organ of which was deranged in its working. The new view regarded the patient as an acting, thinking, feeling man, whose power of acting, thinking, and feeling was impaired, and needed to be restored. Altered views, too, began to prevail with regard to diseases of the body politic—crime, pauperism, and insanity. Different as these conditions were in superficial features, they exhibited upon close investigation such substantial similarity that they might be regarded as several branches of one stock. The pauper, the criminal, and the lunatic were alike in being stragglers from the great army of civilisation. It has been established beyond cavil by Lombroso and the school of criminal anthropologists that the criminal man is of a different physical organisation from the normal man, and resembles the lunatic in many respects. The same remedial agent—compulsory employment—was found efficacious in each of the three disorders.

* *

At University College the address was delivered by Mr. S. J. HUTCHINSON, the dental surgeon to the hospital. He dwelt largely on the stock grievances of the medical men.

It was, he said, a glaring anomaly that a London medical student who has gone through a five years' curriculum, has passed many severe examinations in medicine, surgery, and midwifery, and whose opportunities for clinical studies are unequalled, should not, after all this, be able to style himself legally by the title "Doctor." The State insists upon the medical student undergoing a five years' curriculum of severe study in all sorts of subjects; it compels him to pass difficult examinations at all periods of his career, and then, when he has done everything and satisfied everybody, and got his degree or diploma, what does the State do for him? Does it protect him in any way against the bone-setter, the herbalist, the medical electrician, the mesmerist, the midwife, or the prescribing chemist, or the legion of American and other foreign gentlemen with a maybe bogus degree? Does it give him one single advantage over these gentlemen beyond allowing him the privilege of suing for his fee in the county court, of being exempt from juries, of being placed on the medical register, of holding certain public offices, and—most glorious privilege of all—of signing the death-certificate, when, "at the last stage of all," he is called in with the forlorn hope of restoring new life to the victim, maybe, of one or other of the practitioners named above? He expressed the opinion that the day is not far distant when it will be impossible for any of the gentry referred to to practise any form of the healing art unless they are entitled to be registered.

THEORETICAL SCIENCE AND ITS APPLICATIONS.

THE Liverpool Pharmaceutical Students' Association have made a step upwards, having on Thursday of last week held the first meeting of the new session in the Botanical Lecture Theatre of the University College, where henceforth they will meet. Mr. Harold Wyatt, jun., President, occupied the chair, and introduced Professor R. J. Harvey Gibson, M.A., who delivered an inaugural address, taking as his subject, "Theoretical Science and its Application." Professor Gibson had a hearty reception. He referred at the outset to the circumstances under which the meeting was held, and held out the hope that "the coalescence of the Pharmaceutical Society and the Botanical Department of University College would result in added usefulness and vigour to both." He spoke of the gradual emancipation of science from its Cinderella-like position, compared with its classical and literary sisters. Speaking of biology, he showed that, while it is the science which deals with the matter and energy of living things, the study of it involves the application of the laws and principles of chemistry and physics, which is true also of other branches of science—even psychology. From this point Professor Gibson dealt with the more general biological principles, this section enabling him to speak of the delicate organism which constitutes man, and how, when that organism or machine is not working properly, repair or a remedy is sought by the use of an antidote. He then came to speak of

THE ORIGIN OF MEDICINES.

It is only natural (he said) that man should come to believe that for every ailment, whether in his own body or in those of the plants or animals in whose welfare he is interested, there should exist some antidote—some cure; and when the great balance that exists between the animal and the plant world became almost unconsciously felt, rather than understood, what more likely than that the latter should be looked upon as the legitimate source of these palliatives? We have nowadays widened our conceptions considerably, and extract our drugs from things the herbalist of the middle ages would have termed unclean. The authors of the oldest herbals, even as late as the sixteenth century—such as Brunfels, Fuchs, Bock, Mattioli, and others—regarded plants mainly as vehicles of medicinal virtues. To them plants were the ingredients in compound medicines, and were therefore by preference termed *simplicia*—simple constituents of *medicamenta*. Hence, too, the specific name "officialis," applied to so many plants, all of them at one time or another employed in the ancient Pharmacopœia. From such empirical and practical in-

vestigations, indeed, the sub-science of botany originated. Bock, Brunfels, Baulim, L'Obel, and Cæsalpinus were the first to extend and classify the catalogues of the herbalists, and from such humble beginnings arose the modern science of botany. Nowadays we are working backwards from the plant to the fundamental *simplicia*. Many and great have been the discoveries that have been made in the course of that research. Think merely of the list of valuable alkaloids that have taken their place in the British Pharmacopœia during the last half-century, almost all of them vegetable in origin. The classic researches of Gomes in 1812, and of Pelletier and Cavenou in 1820, to whose exertions we owe quinine, have been followed by equally brilliant investigations by Winckler, Pasteur, Hesse, and many others.

TRAVEL AND MEDICINE.

By the laborious inquiries of travellers we are obtaining a more intimate knowledge of the herbal decoctions employed by savage tribes. Numerous plants which had once a most evil reputation, and were shunned on account of their virulent poisonous properties, have of recent years been made subservient to the wants of man. The umbuli, a species of strophanthus which yielded the well-known South African arrow-poison, has been found of incalculable benefit in cardiac disease. Urari, another arrow-poison, obtained from *Strychnos toxifera*, a native of the Orinoco and Amazonian forests, probably mixed with the juice of other species, is one of the most valuable of the drugs used in physiological experiment. The celebrated ordeal bean of Old Calabar, *Physostigma venenosum*, a plant so deadly as to be ordered to be destroyed by a thoughtless Government, has yielded, under careful research, a powerful sedative to the spinal cord and valuable agent in ophthalmic cases. Another African ordeal poison was yielded by *Erythrophloeum guineense*, the sassy of the Gambia and casa of the Congo. The bark on infusion yields "red water," the material used in the ordeal. In medicine casa is useful in the treatment of cardiac dropsy and hæmorrhage. One of the most deadly plants of the West Indies, formerly a stock poison of the Obeahs, and probably still in use in Hayti, is *Urechites suberecta*. Now this plant is recognised as a cure for yellow fever. Jamaica dogwood (*Piscidia erythrina*), used by natives as a fish-poison, appears in the United States Pharmacopœia as an anodyne and hypnotic. These are only a few of many instances in which plants formerly used destructively against human life have now become subservient to its preservation and resuscitation. Then, again, to glance at

THE COUNTER SIDE OF THE POISON QUESTION,

consider the number of plants from which we may now obtain antidotes to both vegetable and animal poisons. A cucurbitaceous plant of the West Indies (*Fevillea cordifolia*) will expel the poison of the cacao. The juice of *Ovalis corniculata* relieves the intoxication produced by datura-seeds. Even Calabar bean is said to be an antidote to strychnine-poisoning. The machioneel-tree, more deadly than the famous upas, grows side by side with its antidote—white-wood cedar, a species of Tecoma. Not content with extracting and analysing natural *simplicia*, we actually venture to compete with Nature, and enter the lists against her as manufacturers. Indeed, chemists confidently look for the day when all alkaloids will be artificially synthesised, and anticipate the time when medical diagnosis will have only to tell us just what is the matter, and chemistry will straightway answer, "Here is the requisite cure manufactured to suit the case." One point Professor Gibson desired to emphasise—viz., that all progress which will not be mere oscillation must be accomplished, on the one hand, by a union of practice and theory, and, on the other, by a co-operation of the sciences. Theoretical chemistry has become a prophetic science, and every weekly journal announces the successful accomplishment of some prophecy made in the previous week's issue. Biology must not lag behind. Advance in this science must depend on the advances made in other sciences on which it is dependent. Advance depends on the co-operation of other sciences. Pharmacists, as concerned with the manufacture and production of such vegetable and chemical products as are required by the medical man, and he, therefore, gladly welcomed the Association that night. They had thus forged one more link in

the chain which will more and more firmly, as years go by, bind together the *practik* and the *theoretik*.

On the motion of Mr. J. R. Johnston, seconded by Mr. T. H. Wardleworth, a hearty vote of thanks was accorded to Professor Gibson.

A PRODUCE-BUYERS' DEFENCE ASSOCIATION.

MEETING AT THE CHAMBER OF COMMERCE.

ABOUT forty gentlemen interested in the produce trade assembled at the offices of the London Chamber of Commerce on Tuesday, at 2 P.M., in answer to a circular from a firm of exporters convening a meeting "to discuss the question of forming an Association of general produce-buyers, for the protection of their interests, and of enforcing redress in all cases where it could be proved there had been loss in weight or any irregularity in the description of goods."

Mr. Harvest, of the firm of D. W. Harvest & Co., took the chair, and made a short statement to the effect that there had lately been a great many instances in which wholesale buyers of produce had had to complain of not getting the proper weight of goods they had bought, and were expected to pay for; hence it would be for the benefit of the wholesale dealers to pull together and form an Association in defence of their interests.

Mr. Ziegele followed. He spoke in the main as a dealer in shellac, but pointed out that the same abuses of which he complained in the trade in that article existed in many others also. Mr. Ziegele adduced several instances of purchases made by his firm in which it was found that the actual weight of the goods received did not correspond with that invoiced. The documents relating to one particularly flagrant case he held in his hand, and pointed to them repeatedly as he unfolded his story. The transaction related to twenty cases of shellac, which he declined to accept on account of ascertained deficiency in weight. "Oh!" said the broker, "don't make a bother about that; the market is going up, and you can sell with a profit as it is"; but Mr. Ziegele did not see things in that light, and submitted the matter to arbitration. The two arbitrators (brokers) appointed under the rules of the London Produce-brokers' Association found that there was under-weight, one case (of a supposed weight of 1½ cwt.) being 90 lbs., and another 40 lbs. short, but they referred the matter to an umpire, who gave his verdict against Mr. Ziegele. The latter then appealed to the Brokers' Association, a committee of which investigated the matter and upheld the umpire's decision. The costs of the arbitration, however, were thrown upon Mr. Ziegele's opponent. The brokers, Mr. Ziegele continued, admitted that the accuracy of weighing left much to be desired in Calcutta; but they maintained that as a rule the aggregate weight of a parcel would tally fairly well, some cases being over, and others under weight. "But that," said the speaker, "is no satisfaction to our customers, among whom we have to distribute our purchases, and who insist upon having the precise weight they are charged."

A wholesale dealer connected with the home trade confirmed Mr. Ziegele's complaints, and stated that, with an experience extending over many years, he could affirm that shellac did not lose weight during storage; hence the excuse that the shortage occurred during the journey from Calcutta, which was sometimes heard, did not hold good.

Mr. Otto Bruckmann related a case which had occurred to him recently, and in which, out of a parcel of ten cases shellac bought by him from a firm of brokers, two cases alone showed a deficiency of 160 lbs. upon the Calcutta weight. He also appealed to arbitration, but was non-suited, the arbitrator, however, expressing the hope that the importers "would see their way to compensate the buyers"—a proposition which these gentlemen politely but firmly declined to entertain.

The succeeding speakers dealt mostly with short weights in spices, and ultimately a resolution that an Association for the protection of produce-buyers be formed was carried *nem. con.*, about half of those present handing in their names as members. One or two gentlemen, however, urged the necessity of caution, suggesting that, in the event of payment according to actual weight being made the rule, the importers might retaliate by abolishing "treth," "draft," and other allowances now existing.

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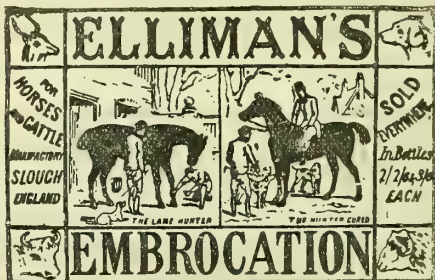
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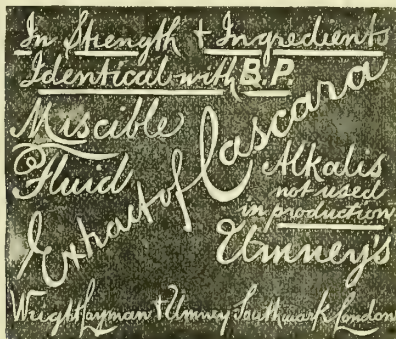


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Editorial Comments.

RESTRICTING THE SALE OF PROPRIETARY MEDICINES CONTAINING POISONS.

SOME correspondence is published in a medical journal between Mr. Ernest Hart, on behalf of the Parliamentary Committee of the British Medical Association, and Mr. Carteighe, President of the Pharmaceutical Society, in reference to the sale of proprietary medicines containing poisons.

I see it stated (writes Mr. Hart on September 13) in certain journals connected with pharmacy, that the Council is thought to be indisposed to take action, though there are persons ready to contest the further application of the decision arrived at, and to defend any charges brought against them under the above-mentioned section of the Act. It will be important for my committee to be informed of the present position of the case, as they would desire to make the salutary results of the late decision, and of the action thereupon by the Pharmaceutical Society, as far-reaching as possible, and so extended in area as effectually to protect the public against the evils involved by disregard of the law.

To this Mr. Carteighe replied on September 26. He informed Mr. Hart that in July last the Pharmaceutical Council authorised legal proceedings to be taken for the sale of chlorodyne against several of the largest retail dealers of proprietary medicines in the metropolis, one of whom has a number of branch establishments throughout the country. These all (he adds) paid the penalties claimed without going into court, and undertook not to sell proprietary preparations containing poison in future.

This accounts, he suggests, for the circumstance that little publicity has been given to the action of the Pharmaceutical Council in this direction. Mr. Hart appears to be perfectly satisfied. Elsewhere he writes: "We are enabled to state that there is no foundation whatever for the suggestion that the Council of the Society is in any degree indisposed to enter upon the task of enforcing the provisions of the Pharmacy Act, in accordance with the decision in the chlorodyne case, as expressly urged by the Treasury and by the British Medical Association. That suggestion in a trade journal was perhaps based upon nothing more substantial than the non-appearance of cases of prosecution by the Council." He adds further on his assurance that "the statement which has been made that there are defendants ready to dispute the decision in the chlorodyne case and contest the action of the Council of the Pharmaceutical Society is obviously erroneous."

We do not perceive the purpose of this sneering allusion to THE CHEMIST AND DRUGGIST, which is "the trade journal" referred to. It is made to appear that this journal is seeking to hinder the beneficent labours of Mr. Hart and of the Council of the Pharmaceutical Society towards the enforcement of the poisonous regulations in the Pharmacy Act. The truth happens to be entirely the other way. We have persistently, and often apparently to the offence of a considerable section of the trade, urged on chemists the strict observance, and on the legally constituted authorities the rigid enforcement of the requirements of the law as regards the sale of poisons. We have advocated this when it has pleased some of the gentlemen in authority to allude contemptuously to "that wretched Poisons Act." We have helped largely to create the opinion in the trade which has made the Pharmacy Act really effective in the past few years, and with that policy in view we heartily welcomed Mr. Hart's interposition in regard to poisonous proprietary medicines a few months since; but, having some claims of our own to look after, we are not disposed to give him the exclusive credit which he seems determined to insist upon.

It is, no doubt, the fact that many unregistered persons have been threatened and have paid penalties for selling proprietary medicines containing poisons. Our report of the proceedings of the Pharmaceutical Council on Wednesday shows that over 100% has been paid into the Bloomsbury exchequer as the result of such proceedings in July, "and there is much more to come," said the President. That is well. At the same time it is not—or, at any rate, was not—"obviously erroneous" to state that there were defendants ready to contest the action of the Pharmaceutical Council in

this matter. The assertion was based on a letter which we published, authorised by the Association of Owners of Proprietary Medicines. The firms represented in that Association are very well known. They are not men of straw, and, so far as we know, they are not given to "bounce." If they meant what they said it would be easy for the Pharmaceutical Council to arrange an action for the decision of the High Court which should establish finally the interpretation of the Pharmacy Act as it relates to this question. The advantages of obtaining such a decision now that public and medical opinion seems to demand it are considerable; the disadvantage of letting the opportune time slip by seems equally evident. For a time, perhaps, a larger harvest of penalties can be raked in by the guerilla warfare at present adopted; but for the sake of the public, as well as for the interests of the trade at large, a pitched battle, if it can be secured, is both fairer and would be more effectual. We claim to have brought about such a result in the unqualified-seller matter, and it does not need demonstrating that the judgment of Mr. Justice Hawkins on that point was one of the most valuable gifts the Pharmaceutical Society has ever received. We are not so sure as Mr. Hart seems to be that the best means are being taken for the accomplishment of the object which he and we, from different standpoints, have in view.

THE POSITION OF IPECACUANHA.

At last week's drug-auctions ipecacuanha-root, as imported—i.e., intermixed with a certain proportion of wood, dust, &c.—realised 9s. per lb. That is the highest price obtained at the London auctions for Brazilian root in this condition for very many years, though it has been surpassed more than once within the recollection of even the present generation of druggists. In July, 1866, for instance (as a reference to a number of THE CHEMIST AND DRUGGIST of that date shows), good ipecacuanha fetched 14s. per lb. at the London drug-sales.

A noteworthy coincidence in connection with the present rise in the market, however, is that our imports of ipecacuanha this year have been much larger than in any previous season. Until 1889 the arrivals rarely reached more than 700 bales a year, but in that year they amounted to 1,101 bales, in 1890 to 1,349, and in 1891 to 1,297 bales. During the first eight months of the present year we have already imported 1,041 packages, so that 1892 bids fair to beat the record, unless, indeed, the hint recently thrown out by one or two importers that there will be no further arrivals for the next three months should prove correct. At the same time the consumption of the drug has grown in almost the same proportion as the supply, and this is undoubtedly a very important factor in the situation. The influenza and cholera epidemics account to a large extent for the growing use of ipecacuanha as a medicinal agent; but, apart from these abnormal factors, there is a noticeable tendency to resort to ipecacuanha preparations much more largely than in former years. It may be remembered that in the early part of 1886 we asked our subscribers to name the drugs most frequently mentioned in prescriptions dispensed by them. We tabulated over 10,000 out of a total of some 13,000 prescriptions dissected by our readers in reply to our question. Ipecacuanha-wine (not to mention other preparations of the drug) was named in 696 of these, and proved to be the third in point of popularity among the remedies prescribed by medical men in this country. That was before the influenza was heard of, and it is not at all improbable that a similar plebiscite, if carried out at this moment, would show ipecacuanha to be

absolutely the most frequently prescribed drug. And if the large quantities of the root known to be purchased for export to the Continent and the United States at our drug-auctions are taken into account, it is not too much to assume that the employment of ipecacuanha has progressed abroad as much as it has at home. There does not seem to be any reason why that movement should not continue in the same direction, and unless, therefore, the supply of ipecacuanha also keeps on increasing, it seems likely that the price will, at any rate, not sink below the average of the last three years, or, say, about 7s. 6d. per lb. for fair natural root.

It is, unfortunately, almost impossible to estimate what our future supplies are likely to be. The import trade in the drug is in the hands of three or four firms, and they are not likely to disclose whatever special information they may possess on this point, though most probably they know very little more than anyone else who has taken the trouble to follow the course of the market for a number of years. Until a few years ago the formation of an estimate of the position was simplified by the fact that Brazil was the only country of production worth considering. That is no longer so now. In May, 1883, a small consignment of ipecacuanha cultivated in the native State of Johore, in the East Indies, reached our market, and, though unimportant from the point of view of the hand-to-mouth buyer, it was large enough to demonstrate that the drug can be successfully grown in Asia. In the three following years there were further small shipments from the same source, and although, up to the present, no genuine East Indian root has been offered at our auctions this year, the official reports of the managers of the Botanical Gardens in the Straits Settlements and Southern India point to the probability that before long our Eastern possessions will take a not unimportant share in the production of the drug. So much for the East. The South American Republic of Colombia, too, has this year taken firm foot in our market with constant supplies of the so-called "Carthagena" root, and so long as there is no serious falling-off in the price of the drug, these consignments will, undoubtedly, increase. Carthagena ipecacuanha, which was formerly only seen sporadically in the market, has been offered regularly at almost every drug-auction since October of last year—on one occasion to the extent of 42 packages at a single sale—and as its average value is only from 15 to 20 per cent. less than that of Rio root, it may be assumed to leave a handsome profit to the exporters, and it is very probable that we shall receive several hundred packages of it in the course of next season. A railway-line has recently been opened in South America, tapping that department of Colombia where the so-called Carthagena root is produced, and the increased facility for export afforded by the construction of this line is probably one of the principal causes of the increase of our supplies of this variety of the drug. This theory is supported by the fact that nearly all the recent arrivals have come to us *via* Panamá instead of by way of Carthagena or Savanilla, as formerly, for the terminus of the new railway is the port of Buenaventura, on the Pacific Ocean, and from there the shortest way to Europe lies over the Isthmus of Panamá. It is notorious that in the case of products from the interior of South America facility of transport is almost the principal factor in successful competition. It is certain that there is plenty of ipecacuanha growing wild in Brazil and Colombia to keep us supplied for years and years. The main difficulties have always been the want of cheap and expeditious carriage and of labour, and whenever these difficulties are removed we may be sure that supplies will increase much faster than we can absorb them. Dr. Rusby, the American pharmacognosist, who travelled throughout

South America in 1886, states that in Brazil the ipecacuanha shrub has been practically exterminated in all the easily accessible localities, and that our supplies are now derived mainly from the States in the far interior of the country. In these districts, at the time of his visit, labour was so scarce that employers willingly offered a premium of 60% for every man that could be procured, the work-giver taking his chance of retaining the labourer's services. The only product at that time which could bear this high price of labour was indiarubber, and every available man was therefore employed in the collection of that material. It was only when the value of ipecacuanha on the European markets rose to 7s. per lb., or thereabouts, that the collection of that drug again became profitable, and at the time of Dr. Rusby's visit the London value was only from 3s. to 3s. 6d. per lb. We do not know whether labour has since become more plentiful in Brazil, but communication, both by rail and river, has undoubtedly become easier, and the frequency with which large consignments of ipecacuanha have followed each other this year, together with the exceptionally high prices realised, seem to indicate that the time is not far off when the increased demand will be more than overtaken by the growth in the production.

COMMENTARY.

AN AMERICAN DEFENCE.—Professor Chas. O. Curtman, of St. Louis, Mo., has replied through the *Pharmaceutical Record* to the comments made in this journal on August 13 upon the paper on amyl nitrite which he had read before the American Pharmaceutical Association. As that paper met with the special appreciation and thanks of the Association, we thought it right to point out that the author had traversed ground which had already been efficiently explored by English workers—Allen, Williams, Dunstan and his colleagues—and that sufficient reference was not made to their work. Professor Curtman's reply is lengthy, but the following paragraph contains the essential facts:—

The main aim and object of my paper (he writes) was to report, in answer to query No. 15 of the question-sheet published by the committee, the result of an extended examination of the quality of amyl nitrite found in our markets. Based upon this examination are certain recommendations for the introduction of a uniform standard of strength and cautions for keeping the product from decomposition; all of which is evidently no "venerable chestnut," as the reviewer styles it, but information recently obtained by means of considerable labour in analysing numerous specimens collected from various portions of the United States. To give an intelligible account of the methods employed to reach my results, I had to give not only a short description of amyl nitrite and its properties, but also of the special mode of analysis used. As this was Mr. Allen's method, I briefly described his apparatus and the manner of using it, but so far from showing discourtesy to him, I not only distinctly stated on page 3: "For the examination of a number of specimens . . . I have adopted the method devised by Allen . . ." but also on page 4 gave an illustration of his apparatus, distinctly marked "No. 3, Allen's nitrometer."

Due acknowledgment of these facts was given in our report (August 6) of the Association meeting, but Professor Curtman referred to the nitrometer as having been used by Allen for estimating spirit of nitrous ether, which fact, we presume, accounts for the ellipsis in the above quotation. Professor Curtman disclaims any want of courtesy to Mr. Allen, whose paper on amyl nitrite he has only seen short extracts of, and in his defence he does not mention at all the other work referred to in our criticism. The inference is that we hit the mark pretty exactly.

THE AMERICAN VIEW.—It is thus that the *Western Druggist* replies to our comments, taking the British Pharmaceutical Conference as its text:—"Our British brethren seldom essay to contribute anything of practical value to retail pharmacists. This is especially the case in their reports upon galenicals, which reveal a degree of ignorance of which a tyro in America would be incapable. Messrs. Farr and Wright, for instance, reported separately two years ago upon menstrua for tinctures, and now make the astounding revelation that 'aqueous [spirituous, rather] preparations of cinchona do not represent the full alkaloidal value of the bark, but that 70 per cent. alcohol and macero-percolation give the best results'! The learned gentlemen should have consulted the U.S.P. for a correct menstruum for tincture of cinchona, as did Mr. Hodgkin in the case of purified animal charcoal, only to discover that the B.P. process was decidedly inferior to that of the U.S.P. Mr. Davis should also have consulted American literature with reference to 'Ung. Hyd. Nit. Oxyd.' and discovered the real objection to the use of a mixture of paraffin and paraffin oil as a 'basis' (vehicle) for ointments. In fact, our British brethren may well consult American literature when they desire to take up pharmacy. They have a few learned chemists who read lengthy papers 'on our defunct alkali industry,' &c., but when it comes to simple, pure, practical pharmacy, they are—to use a popular but very un-British and consequently thoroughly vile Americanism—"not in it."

EMETINE ESTIMATION.—Messrs. Cæsar and Loretz publish the result of a series of examinations, made with the object of ascertaining the proportion of emetine in various parcels of ipecacuanha imported by them from London. The test of nine samples was as follows:—No. 1, Rio root, best natural commercial quality, 1.45 per cent.; No. 2, good ditto, 1.05 per cent.; No. 3, Rio root, of characteristic but somewhat thin appearance, offered at the drug-auctions as "picked" root, 0.65 per cent.; No. 4, Rio root, ordinary lean quality, 0.53 per cent.; No. 5, Carthagena root, fine picked plump quality, 1.85 per cent.; No. 6, best natural commercial Carthagena root, 1.4 per cent.; No. 7, ordinary lean and woody Carthagena root, 0.9 per cent.; No. 8, Singapore root (imported in December, 1891), 0.54 per cent.; No. 9, the woody heart portion of Carthagena root, 0.23 per cent. The analyses were made by Kremel's test, which the investigators think far superior to Flückiger's. But even by Kremel's test no perfectly pure emetine is obtained; in fact, sample No. 5, which, by Kremel, gave 1.85 per cent. of emetine, yielded only 1 per cent. of emetine when tested according to Podwysotszki's method. The low average percentage obtained by Messrs. Cæsar and Loretz is remarkable.

IODIDE OF STRONTIUM.—French physicians are recommending iodide of strontium for the treatment of heart-affections in the place of iodide of potassium, because it is tolerated by the system longer and its action appears to be more specific. The only trouble is the difficulty of preparing it. Dr. A. Malbie states in "Nouveaux Remèdes," that the following are the most suitable methods:—(1) Saturate hydriodic acid with strontium hydroxide; (2) decompose a solution of strontium sulphide by agitating with iodine, sulphur is precipitated and strontium iodide remains in solution; or (3) first make ferrous iodide by adding an excess of iron filings to a mixture of iodine and water, then decompose the ferrous iodide with strontium hydroxide or strontium sulphide. Filter the solution in an atmosphere deprived of oxygen, press the iron precipitate, and evaporate the filtrate to the point of crystallisation. The iodide is obtained in hexagonal crystals. It contains 6 molecules of water of

crystallisation, is soluble in less than its own weight of water, and decomposes very readily in the air absorbing oxygen, giving off iodine strontium, oxide remaining. It can be dehydrated by fusion in a stream of nitrogen. The salt may be given in the same doses as iodide of potassium, the physiological actions of both being closely allied.

Legal Reports.

MORE VETERINARY COLLEGE PROSECUTIONS.

JAMES COLEMAN, of Dublin, has been fined 2s., and 2l. costs, for describing his establishment as a "Royal Veterinary Forge."

Counsel for the defence urged that no offence against the Act had been committed, but the magistrates convicted. They moderated the fine on the ground that the decided case (*R.C.V.S. v. Robinson*) was only reported last month in Ireland.

Robert Watts, of Llangollen, unqualified, had on his door-plate, "Robert Watts, veterinary surgeon." Fined 1l., and 1l. 1s. costs.

James Kirkman, of Accrington, was summoned at the Accrington Police Court on September 28. The representative of the College pointed out that the defendant had given a receipt containing the words "veterinary establishment." He had also given a card containing the words "James Kirkman, son of the late James Kirkman, veterinary surgeon." It was contended that the card was calculated to lead people to believe that he was a qualified veterinary surgeon, which was not correct. Mr. Sandeman apologised on behalf of the defendant, and the case was withdrawn on the defendant promising to pay costs.

THE MEDICINE-STAMP ACT—EXCISE PROSECUTION.

At the Stratford Petty Sessions on Saturday, October 1, James James, chemist, of Woodford, was summoned for exposing for sale and selling a bottle of mixture and a packet of powder, under the title of "James's Mixture," without having the medicine-stamp attached. The offence was admitted.

Mr. R. Tozer, Supervisor of Excise, who conducted the prosecution, said he sent for a bottle of mixture and a packet of powder, and found the duty-stamps were not attached.

The Bench imposed a fine of 2l., and 10s. costs. The money was paid.

SALT IN BEER.

TWENTY innkeepers were summoned before the Merthyr magistrates on Saturday, at the instance of the Glamorgan-shire County Council, for selling beer which contained more than 50 grains of chloride of sodium to the gallon. Mr. Abel Thomas, M.P., prosecuted, and Mr. John Plews, barrister, defended.

The case of William P. Shoot, of the Cardiff Arms Inn, Merthyr, was first taken.

Mr. Thomas said the proceedings were instituted under section 6 of the Food and Drugs Act, 1875, which declared that no person should sell, to the prejudice of the purchaser, any article of food or any drug which was not of the nature, substance, and quality of the article demanded. On July 29 Superintendent Thorne purchased three pints of beer from the defendant. One bottle was sent to Dr. William Morgan, the county analyst, who found that it contained 45½ grains of chlorine to the gallon, which was equal to 75 grains of common salt. Defendant said that he obtained the beer from the Taff Vale Brewery, who, at the request of the police, furnished a gallon of their water for analysis. Dr. Morgan submitted this to the usual tests, and ascertained that it contained 1½ grain of chlorine. The hops and malt might yield from 6 to 8 grains per gallon, so that the highest amount of chloride of sodium reacted should not have amounted to more than 10 grains per gallon, instead of 75.

In cross-examination, Dr. Morgan said the quantity of beer at his disposal was not sufficient to admit of a complete analysis. Moreover, it was not necessary to do more than ascertain the amount of chlorine. Asked whether, if the Somerset House authorities could make a distinction in the chlorides in a certain quantity of beer, there was any reason why he should not do so, Dr. Morgan said there were instances in which he very much questioned the accuracy even of the Somerset House authorities. He ventured to think that he knew his work quite as well as they did.

Mr. Plews: You said that anything over 50 grains of salt would be adulteration.

Witness: I say that 50 grains is an ample margin, and that anything beyond that is certainly excessive.

That is your individual opinion?—That is my individual opinion, and one based upon experience for the last eighteen years in this county. It is not my opinion only, but my experience and reading.

Do you know, as a fact, if any other county analysts have taken that standard?—Yes, I believe it is accepted by every analyst under the Food and Drugs Act. I do not know of any exception. There were exceptional cases in which water contained in itself 50 grains of chlorides, but such water would not be recommended by anyone for brewing. He had no practical knowledge of brewing, but he knew that it was quite unnecessary to use even 50 grains for brewing a good commercial beer.

Dr. Thomas Stevenson, the senior scientific adviser of the Home Office, supported Dr. Morgan's views, while for the defence, Dr. E. W. Moritz, consulting chemist to the Country Brewers' Society, and author of a work on scientific brewing, said he had made a complete analysis of the beer. He knew of no such standard limit as 50 grains to 1 gallon. He agreed with Dr. Morgan's estimate of the quantity of chlorides, and found that the salt present was 63 grains to the gallon. Professor Atfield had found a similar result. He said beer containing 63 grains of sodium chloride would quench thirst, not provoke it. A man would eat at his dinner from 50 to 100 grains of salt, and in a day a quantity ranging from 200 to 300 grains. Before the chlorides in this beer could affect a man he would be drunk; in fact, he did not know that a man could drink enough beer to be affected by the chlorides.

Dr. Arthur Pearson Luff, of St. Mary's Hospital, London, said that in his opinion any quantity of chlorides in 1 gallon of beer up to 125 grains would not be prejudicial to the consumer. With respect to what Dr. Morgan had said as to a glass of beer containing chlorides in the proportion of 75 grains to the gallon creating thirst, he considered it absolutely impossible, and such an answer could only have been given by one entirely unacquainted with the elements of physiology.

Dr. Charles T. Vachell, of Cardiff, also gave evidence for the defence.

In the end the Stipendiary said the magistrates had come to the conclusion that the beer was of the nature, substance, and quality demanded by the purchaser, and, therefore, they dismissed the summons.

LINCOLNSHIRE SHOPKEEPERS AND THEIR TINCTURE OF RHUBARB.

At the Boston Police Court, on September 28, Edith Martin, shopkeeper, of Sutterton, was charged with having, on August 31, sold tincture of rhubarb containing (according to the report of Mr. Southwell, public analyst) not more than 50 per cent. of the quantity of saffron ordered in the official formula. Defendant said she sold the tincture just as she found it in the shop. Her father had the business previous to her taking it. Superintendent Crawford said he believed that statement. He was served in a very courteous manner. He did not know whether the house had been opened by her or not. The Chairman said he had no doubt the ingredients had been left out by the manufacturer. Withdrawn on payment of costs.

Thirza Waite, shopkeeper, Sutterton, was charged with a similar offence. In this case (according to the report of the public analyst) not more than 25 per cent. of the amount of saffron ordered in the official preparation had been used, and turmeric had been added, which is not an ingredient of the official preparation. Defendant admitted the offence,

stating it was as she purchased it. Withdrawn on payment of costs.

At Spalding Petty Sessions, on Tuesday, Richard Crosby, grocer and draper, Fleet, was charged with selling 4 oz. of tincture of rhubarb which was not of the quality demanded by the purchaser. Defendant admitted the charge. Superintendent Jarvis proved the purchase and the report of the public analyst (Mr. C. H. Southwell, F.R.M.S., Ph.C.) was put in, stating that the sample was a compound instead of the genuine article. Mr. Crosby was questioned as to where he obtained the article, and he replied that it was purchased from Mr. Robert Donington, chemist, Spalding. In the course of further conversation, however, it transpired that there had recently been some little alteration in the law, in consequence of which Mr. Donington asked the defendant to send back the supply he had then in order that he might be furnished with a fresh lot. This he did, but, through some mistake, the tincture of rhubarb received was returned again. A fine of 5% and costs was imposed.

H. V. Fletcher, grocer, Gedney, was charged with a like offence. The tincture was similar to the previous sample. Mr. Fletcher said he obtained his tincture of rhubarb from Messrs. Shadford & Co., chemists, of Spalding. He was asked to return his old supply, but did not do so, and continued selling from the bottle. In reply to the Bench, Superintendent Jarvis said he had obtained samples from the chemists for analysis, and they had always been found to be correct. The Bench imposed a fine of 10% and the costs.

GLASGOW PILL-MANUFACTURER'S CLAIM FOR COMPENSATION.

In the Glasgow Sheriff Court, on October 1, a petition was presented to Sheriff Spens by Andrew Malloch Robertson, surgeon and chemist and druggist, 27 Main Street, Anderston, Glasgow, asking his Lordship to determine the amount of compensation which the Caledonian Railway Company should pay him for disturbance to his business. The petitioner stated that he occupies a large corner shop, with a room behind and three rooms below, on the south side of Main Street, Anderston. In these premises he carried on business as a wholesale and retail druggist and manufacturer of sugar-coated pills for the wholesale trade, besides having a medical practice there. For some time past operations in connection with the new Central Railway (an underground line running below the principal thoroughfares), of which the Caledonian Railway Company are the promoters, have been going on throughout the city, and, in connection therewith, they erected close to his door a huge pile-driving machine with engines and machinery, and laid down plant. In the course of the pile-driving operations carried on there continuously from July, 1891, to July, 1892, large quantities of smoke, dust, and dirt were thrown up and became mixed with the drugs and other articles in the shop, and rendered them worthless. The value of the drugs, pills, and herbs so affected he estimated at 50%. He had found it impossible during the operations to manufacture sugar-coated pills, because of the smoke, &c., and he had to suspend the manufacture of them for eleven months, thereby losing 110% of profit. Ultimately, in July last, he obtained new premises for the manufacture of his pills, and he charges a further sum of 15% for that in name of rent. Owing to the barricades he lost business, and claims 100% for that. Altogether Dr. Robertson claims 340%.

The defence is a general denial of pursuer's statements. The defenders further aver that the Corporation gas and water people had workings at this point, and that they were for the most part to blame for any loss which the pursuer has suffered.

Evidence in the case was led before the Sheriff on Saturday.

Dr. Robertson in the course of examination stated, and produced his books in support of his statements, that for the year 1888 his profits from the manufacture of sugar-coated pills were 55%; for the year 1889 they were 115%; for 1890, the year immediately prior to the commencement of the railway operations, they amounted to 192%; while for the year during which the operations went on they only amounted to 18%. The shop drawings, apart entirely from the manufacture of the sugar-coated pills, the books showed

were—in 1889, 861*l.* 10*s.*; in 1890, 790*l.* 16*s.*; and in 1891–92 (the year of the dust) they only came to 640*l.*

Several other witnesses having been examined, the Sheriff took the case to *avizandum*.

PROSECUTION UNDER THE PHARMACY ACT.

At the Birmingham County Court on Thursday, the Pharmaceutical Society brought an action against Alice Ada Young, Potter's Hill, Aston, to recover three penalties of 5*l.* each for selling poisons without being duly registered as a chemist and druggist. A penalty of 5*l.* was agreed to in regard to one of the poisons. It was stated that two of the articles supplied, oxalic acid and belladonna, were not genuine, and the cases in regard to these were adjourned.

Pharmaceutical Society of Ireland.

ON Monday, October 3, the seventeenth annual meeting of this Society was held in the Society's House, 67 Lower Mount Street, Dublin, at 7.30 P.M. Mr. William Hayes (President) was in the chair.

The minutes of the last annual meeting were read by the Registrar (Mr. Arthur Ferrall) and confirmed.

On the motion of the PRESIDENT the following gentlemen were appointed scrutineers of the ballot for the election of seven members of Council, all of whom offered themselves for re-election: Mr. John Evans and Mr. Downes, pharmaceutical chemists; and Mr. Maxwell and Mr. Harty, associate druggists.

MR. MCWALTER'S NOMINATION.

Mr. O'DONNELL asked why a nomination paper putting forward Mr. McWalter as a candidate for one of the vacancies had not been received.

The PRESIDENT said because it was found that Mr. McWalter's seconder had not paid his subscription for the current year, and under the rules was consequently incapacitated from either acting or voting as a member.

Mr. O'DONNELL said he would move that the nomination of Mr. McWalter was in order.

The PRESIDENT: I cannot receive that resolution.

Mr. O'DONNELL said the matter appeared to him to be a personal one.

The PRESIDENT: I must ask Mr. O'Donnell to withdraw that. I am sure the meeting will understand that I would not allow anything personal to be mixed up in the matter. (Prolonged applause.) I would not under any circumstances have rejected a candidate who was entitled to be put forward.

In reply to a question, the PRESIDENT said the seconder paid his subscription after the nomination-paper was sent in.

Mr. MCWALTER contended that the nomination-paper should have been received.

Mr. HODGSON rose to order. The President had made his ruling, and there should be an end of the matter.

THE PRESIDENT'S ADDRESS.

The PRESIDENT then delivered his address. He said:—My regret at not being at my post of duty last year to bid you welcome to our new home, is very much minimised when I remember how admirably Mr. Wells—the then Vice-President—did his own and my parts in not only giving you a hearty *œd mille faillite*, but treating you also to a most exhaustive and exceptionally interesting history of the year's working and the sixteen years' struggling. Though not in my place as President here, I was in another very distinct path of duty this time last year. I visited a region perhaps the most wonderful on the face of this globe—the hot spring country of New Zealand, with its innumerable geysers, diversified hot mineral lakes, and white and pink terraces—a place like an ideal paradise, until that dreadful night, when, through the eruption of Mount Tarawara, it underwent a transformation, and was burned beneath ashes, mud, and dust, to a depth of 30 feet near the terraces, and several inches hundreds of miles away.

It is with sincere regret we have to note the blanks in our midst. The name of Henry Napier Draper cannot be mentioned without feelings of reverence and respect for his memory and of pride for being able to think of him as a friend who was uniformly gentlemanly in his manner and kind and courteous towards every one. A chemist of high attainments, he was an ornament to our Society and Council, of which he was Vice-President for many years. Many of you will also remember him as the first examiner of the Society in chemistry. Alexander Elliott Doran has also passed from our midst, and leaves a vacant seat on our Council. Attacked early last year by influenza, his constitution was gradually undermined, and, though his friends hoped that he would have rallied with his change to the South of France, it was evident from the time of his return that he was too far gone for permanent cure. He was a man of the highest rectitude, with more than ordinary business qualifications. A kind and loving husband, a good and generous father, a sincere and faithful friend, and a devout and constant Christian. I do not speak without knowledge, for we were friends of over thirty-five years' standing. We have lost on the Council a useful and respected member whose place cannot be easily filled.

The President next alluded to the Trinity College Ter-Centenary celebrations in July.

Our licentiates, he said, are privileged to act as pharmaceutical chemists in most of the Australian Colonies, Victoria, New Zealand, and, if also members, in New South Wales, in many of the Canadian provinces, and in about half the States of America. Within the last few weeks we have got a similar concession from the Pharmaceutical Society of Cape Colony. Whilst in Melbourne, the Victorian Board of Pharmacy kindly entertained me at a dinner—not, of course, as William Hayes, but as the President of the Pharmaceutical Society of Ireland. A nicer, pleasanter, and better educated set of gentlemen I have not met anywhere. I had the pleasure of being shown over the city of Sydney by one of our licentiates, Mr. William Stewart Park, who occupied a most important position there.

Notwithstanding the order issued by the Local Government Board in 1877 that "a pharmaceutical chemist may hold the appointment of compounder for workhouses and dispensaries," it was found in some cases that this was not understood and acted upon, and that consequently our licentiates missed appointments through the ignorance of the official guardians or committees. A deputation waited on Dr. Mooney, the Secretary of the Local Government Board, with the happy result that he stated that whenever any vacancy occurred for a compounder of medicines in any dispensary, his Board would issue an order that the office might be filled by either a duly qualified pharmaceutical chemist or by an apothecary, according as the committee thought fit.

The establishment of a materia medica museum has been long under consideration, but the Council's hands being so full of other matters, it was not possible to mature it. In June last however, Dr. Valentine Ball, director of the Dublin Science and Art Museum, asked the Council to contribute from time to time specimens of vegetable drugs and economic botany. This brought the matter to an issue, and in July the Council affirmed the principle and asked the school committee to report on the subject. We may therefore look forward to this year entering upon a course of very practical education in that direction. Would that our Government was as liberal in such matters as the Colonials.

Examinations are the real test of the Society's advancement not only in numbers but in quality. We could very easily have a very much larger number on our registers if we were willing to admit them on a low educational standard, but I think most of you will agree with me, that our real stability and success depend on our fully keeping up with the necessity of the times. In the higher departments of medical science the licensing and educational bodies are seeing the necessity for a higher standard all along the line, and we who are co-workers with them, must also bear our part in this advance, for our work is the complement of theirs. Our Preliminary examinations this past year have been on the whole satisfactory, notwithstanding the controversy with our Government visitor. We considered that some of his criticisms were unjust, and that some of his suggestions, if carried out, would be unwise and unfair, such as the exclu-

sion of a young man from presenting himself a third time for examination, if he twice failed to pass. On this subject Mr. Hayes read the Visitor's recommendation and his reply (See THE CHEMIST AND DRUGGIST, April 9, 1892).

Of 81 Preliminary candidates who presented themselves, 51 passed. These figures compare favourably with those of any previous year. For the License candidates were fewer than in the previous year—31 against 43—but the passes were exceptionally high, there having been only 4 rejections, which was, I think, the highest proportion of passes since the foundation of our Society. For the Assistant's Examination there were only 4 candidates, of whom 2 passed. Now as to the Druggists' Examinations. The Modified Examinations properly closed last year, but grace was properly extended to some unsuccessful candidates, 13 of whom again presented themselves, of whom 12 passed. This department is now closed. For the Registered Druggists' Examination, 91 candidates came up for examination, of whom 71 passed, against 61 last year, of whom 44 passed. Of course, this examination, though very elementary compared with any of our pharmacy examinations, even the Preliminary or the Assistants', is at the same time searching, and fully tests the qualifications of the man or woman to be a seller, not only of the scheduled poisons, but of many other chemicals and drugs which are quite as dangerous to the public.

It may interest you to know the state of our register now. One apothecary registered as a pharmaceutical chemist, having satisfied the Council not only that he had the Apothecaries' Hall diploma, but also that he had put in his four years' practical work in a *bond fide* pharmacy, and that it was not merely a three-months' course in class or hospital, which is now under the conjoint scheme looked upon as sufficient to qualify. Pharmaceutical chemists number 406 against 389 last year. There were three deaths, and seven whose existence could not be ascertained by registered letters. The chemists and druggists and the registered druggists have advanced in numbers considerably, the former being 310 against 227 last year, and the latter 286 against 182. The associate druggists, I regret to find, still consider their interests antagonistic to ours. It must continue to be so if, as has been too much the case, many of that class think they have a perfect right to break the law and defy the Act, if they can do so with impunity. Some of them have even had the audacity to openly deplore the fact that the Council is so hard-hearted as to refuse to wink at their little peccadilloes. However, to come to figures, our members now number 178, and our associate druggists 162, against 157 and 71 respectively last year. So that you see the two camps contain nearly an equal number of fighting men, but I trust with all sincerity that, from this night forward, both parties will bury the battle-axe and the sword, and unite under the olive-leaf, all of us working heart and hand to faithfully and energetically carry the important work committed to our trust, so that if there should be found any to break the law or defy the law, we may be found a strong and united phalanx ready and able to purge our register of the name or names which are a disgrace to a respectable trade and profession. Two kinds of cautionary notices have been printed and issued, plainly setting forth the law and indicating what is unlawful, one to registered druggists, against infringing the Act by dispensing or in any way misleading the public by style or title, and the other to grocers, seedsmen, &c., against the sale of scheduled poisons, or any preparation that may possibly contain them.

There is yet one important subject to be noticed. I refer to the prosecutions. If last year marked the new era under the conjoint scheme secured by the Amendment Act of 1890, this year just ended must ever be memorable in the annals of our Society as the great era of the prosecutions. It is a very painful thing to have to deal with those who have been friends, and who have sat at this Council table with us, in the same way as if they were strangers, but we had no alternative but to act towards all alike, and so we issued our favours right, left, and centre. I do not intend to refer to any individual cases, all having been noticed in the trade journals very fully, and having been brought under the notice of the Council by me at each meeting after the prosecution. The public press also took its share in making known the determination of the Council to stop illegal compounding. No doubt the Council has been met by a very determined effort on the part of the law-breakers to thwart and defeat us, if pos-

sible, by devices of various kinds—partnerships, limited liability companies, shops within shops, and making use of legally-conducted houses to do the compounding while a non-legalised house did the dispensing. These devices have all or nearly all been overcome and dissipated, but we had to meet the immense difficulty of local influence which was brought to bear on the magisterial bench to try and get the magistrates to take a lenient view of the transgressions brought before them. I regret to say there have been a few exceptions to this general rule, and the consequence is that it has imposed on us greatly increased law costs; but, though justice is sometimes in those ways hindered, it is not turned back, and in the end it must and will prevail. Neither the Council nor its law committee desire to be harsh, and there have been cases in which the delinquent has appealed to the Council in a proper way and the memorial has been met in a merciful spirit. At our last Council meeting we had such a case, and were unanimous in remitting the half of a fine of 10*l*. But, on the other hand, when, after a wrong course had been taken, the Council was thrown overboard and not even a word of advice or information sought from us, we naturally felt indignant at the authorities, who ought to have been the upholders of law and order, condoning the offences and stultifying the Council in their endeavour to uphold and carry out the Act. You have already seen the correspondence which I have had with Dublin Castle published in THE CHEMIST AND DRUGGIST, and I think you will have remarked that their Excellencies must have felt themselves entirely in the wrong, for "they answered not a word," and I hope by this time they feel thoroughly ashamed of themselves, and if they don't they ought. But unless we get a due acknowledgment from them of their error between this and the opening of Parliament, they may expect to hear something more about it then. (Applause.)

TREASURER'S REPORT.

The PRESIDENT said that since the foundation of the Society they had had but one treasurer—Mr. Edward Mathew Hodgson. (Applause) He now called upon that gentleman to submit his financial statement.

Mr. HODGSON said he had a prosperous state of things to report. He freely admitted that the present strong position of the Society was largely the result of the Amendment Act of 1890. (Hear, hear) They had been particularly fortunate in the selection of the house which they were now occupying. It contained all they required, it was paid for, and it would be theirs for a long period. The cost of purchase went into the account of last year. The income of the Society having increased, this year, at his suggestion, stock to the amount of 257*l* 7*s* 5*d*. was purchased. That made their total funded capital 505*l* 10*s* 6*d*. When their books were last balanced they had to credit in bank 164*l* 16*s* 7*d*. The expenditure of the year included sums spent in the fitting up and furnishing of their house, and which would not appear in the accounts again. The total of these items was 209*l* 5*s* 5*d*. Since the balancing of the books other funds had come in, which would go into next year's account, and at present they had in bank 262*l* 9*s* 7*d*. He had also to lay on the table a list of the members of the Society, and associate druggists, who had paid their subscriptions; and, in conclusion, he begged to say that he felt deeply indebted to the Society for their continued confidence in him. (Applause.)

On the motion of Mr. HOLMES, seconded by Mr. SIMPSON, thanks were voted to Mr. Hodgson for his statement.

Mr. HODGSON, in responding, said that the credit of keeping and making out the cash account belonged to their Registrar, Mr. Ferrall. (Applause.)

THE SOCIETY'S SCHOOL.

Dr. BURNES said that when the Society was constituted two functions were entrusted to it, one being administrative and the other educational. These were twins, and should have grown up together; but during the Society's seventeen years of existence not a penny had been spent on the educational twin. Not a penny had been voted by the Society for the purpose of teaching. No doubt their school of pharmacy was allowed a room in the house. He trusted that the promised museum would be established, and that the

walls of the room they were in would be decorated with glass cases containing specimens. As Secretary of the school he had to announce that five lectures had been promised for the forthcoming season. These would be delivered once a month, alternating with meetings for discussion. The result of last session's work was the receipt of 130*l.* 14*s.* 6*d.*, of which 108*l.* 18*s.* 9*d.* went in fees to the professors, leaving a balance of 21*l.* 15*s.* 9*d.* The greater part of this balance had been expended in chemicals, &c., for the use of the students, and there remained to credit 3*l.* 14*s.* Last year they started with a deficiency of 1*l.* 5*s.* 3*d.* All the old debts upon the school had been cleared off.

Mr. BOYD moved the adoption of Dr. Burnes' report, and said that the Society's thanks were due to him for what he had done for the school. Mr. GRINDLEY seconded the motion.

Professor TICHBORNE expressed the hope that the evening meetings would be revived, and Mr. Boyd's motion was carried.

THE PRESIDENT'S SERVICES.

Mr. CHARLES EVANS proposed a vote of thanks to the President. Few of them had any idea of the amount of time and trouble that the discharge of the duties of the office of President involved. They were greatly indebted to Mr. Hayes for his efforts to maintain the dignity of the Society, and he hoped that they would be able to maintain him in his present position.

Dr. BURNES seconded the motion, which was unanimously carried.

The PRESIDENT in acknowledging the vote said he was proud of being President of the Society.

REGISTERED AS CHEMISTS AND DRUGGISTS.

Mr. HINCHY, of Kilmallock, said he had travelled 124 miles to ask some questions, and to lay before the Society some matters of the greatest importance to the working chemists of the South of Ireland. He found that by the calendar 311 persons had been admitted as chemists and druggists without having passed an examination. Some of these had no right to style themselves "chemists and druggists"; they were in reality hardware men, grocers, timber merchants, &c., who had never traded as chemists and druggists.

The PRESIDENT: We were bound to register them when they proved that they were carrying on business as chemists and druggists prior to 1875.

Mr. HINCHY: Is a man who styles himself a "tea-importer and hardware and general house-furnishing ironmonger" and sells "bedsteads, palliasses, trunks, carpet-bags, boots and shoes, hats and caps, ready-mades, iron, coal, timber, glass and china, leather, shoe-fittings, hams and bacon, cheese, biscuits, pickles, sauces, seeds, and manure," to be registered as a chemist and druggist? (Laughter.)

Mr. WELLS: Can you prove that he was not selling scheduled poisons before 1875?

Mr. HINCHY: I don't make that statement.

Mr. WELLS: The Council are as anxious as you are to protect both the registered druggist and the chemist, and they have spent months and months in going into these declarations. If you won't undertake the onus of proving that these people are not entitled, we cannot do so.

Mr. HINCHY: I have reported cases, and have never refused to carry on a prosecution and to give evidence.

Mr. WELLS: I don't know to whom you refer; but if you will give the Law Committee proof that the party or parties were not selling poisons prior to 1875 I will undertake—and I am sure the President will do the same—to do my utmost to have their names removed from the register. (Hear, hear.) We have also power to give anyone who has got himself registered by fraud twelve months' imprisonment—that is, if we can get the magistrates to give it to them. A great many applicants were rejected because they did not give us sufficient evidence that they sold poisons before 1875.

Mr. CUNNINGHAM: A great many persons have been registered who, in the opinion of those who know them best, should not have been. Many men who sold all the things that this gentleman has mentioned used, in years gone by, to have a little corner at the end of their shop in which they used to keep a few things in the chemist and druggist's line. I myself saw a man cut a piece of opium with a tobacco

knife, over a vessel containing sugar, and then weigh it in the same scale in which he weighed tea, and wrap the opium in a piece of paper and sell it without a label. It is hard lines on the genuine honest druggist of the country to have such men competing with them.

Mr. WELLS: Our Registrar has reams of documentary evidence, and if Mr. Hinchy can give us evidence to upset it, we will upset the cases. We all know that persons have been registered who ought not to have been; but the Council did their best to keep them off.

Mr. HINCHY gave particulars of one or two cases.

The PRESIDENT: Any case that you bring before us will be thoroughly investigated. You little know the amount of trouble that the Law Committee and the Declarations Committee have taken about these matters. In one of the cases that you brought before us a fraud was detected, and the person was rejected.

Mr. HINCHY asked what course was to be taken with respect to illegal compounding and dispensing by companies.

The PRESIDENT: That matter is at present under consideration, both by the Council and their legal adviser. We cannot give you any further information at present, but you may rest satisfied that the Council will do their utmost to carry out the law.

Mr. HINCHY: A short time ago I gave 10*l.* for the prosecution of an illegal establishment. I am open to do the same thing again, and any time that the Council want 10*l.* towards expenses it will be there for you. (Applause.)

The PRESIDENT: If all our members were as earnest and determined as Mr. Hinchy we should have little trouble in carrying out prosecutions.

ELECTION OF COUNCIL.

The PRESIDENT then announced the result of the ballot as follows:—Hayes, 186 votes; Montgomery, 161; Wells, 152; Grindley, 150; Conyngham, 142; Merrin, 142; and Gibson, 135. The foregoing he declared duly elected for three years. The voting for the other candidates was as follows: Hazlett, 117; Hanson, 113; Turkington, 112; Moore, 112; and Healy, 105. He (the President) thanked the Society for placing him at the top of the poll. He believed that a large number of chemists and druggists had voted for him. Mr. Montgomery and Mr. Wells, he believed, had also secured the confidence of the registered druggists. Mr. Wells and Mr. Grindley had been the very backbone of the Society for years. The result of the election was that all the outgoing members of the Council had retained their seats on it.

Mr. WELLS, who on rising was applauded, said he felt very much obliged to those who had voted for him. He was glad to know that he had the confidence of a good many registered druggists. He had been favoured with letters from some of them whom he had never seen stating that they felt it their duty to support him, as they thought that their interests were safer in his hands than in those of others on the Council.

THE EXAMINER IN PRACTICAL PHARMACY.

Mr. MCWALTER, pursuant to notice, called attention to the circumstances under which Mr. T. W. Robinson had been recently elected the Society's Examiner in Practical Pharmacy. His object was not to cast any personal slight on Mr. Robinson, but to lay down the principle that the best persons should be elected. An advertisement in THE CHEMIST AND DRUGGIST stated that the election was to take place at the Council meeting of August 3, and that the applications of the candidates should be in before July 27. According to a rule in the calendar no member of the Council was eligible for the appointment of examiner. There were eight other candidates. In the official organ of August 6 it was announced that Mr. Robinson, having resigned the office of vice-president of the Society and his seat on the Council, had been elected to this examinership. From the detailed report in the next issue of the same journal it appeared that Mr. Robinson, in order to make his candidature legal, had sent in a letter of resignation to the Registrar. But he (Mr. McWalter) submitted that that letter was not sufficient to divest him of his responsibilities as vice-president and member of the Council. At the Council meeting of August 3, at which the election took

place Mr. Robinson was still, he contended, vice-president of the Society and a member of the Council. According to the report of the proceedings which appeared in the journal, Mr. Robinson's letter of resignation addressed to Mr. Ferrall had no date. The election was reported to the Privy Council, who sanctioned it, but their assent was only given subject to the provisions of the Pharmacy Act. He (Mr. McWalter) hoped he was not going too far when he said that the unanimous election of Mr. Robinson was to some extent due to the feeling of friendship which his long connection with the Council had engendered in the minds of his colleagues. (Cries of "No.") He submitted that Mr. Robinson's case was not legally on the agenda-paper for the meeting of August 3, because he had not then ceased to be a member of the Council, and that his election was at all events a violation of the spirit of the rule which was intended to prevent such elections. He had never heard of any services rendered by Mr. Robinson to practical pharmacy that justified his election in preference to the eight other candidates.

Mr. WELLS: I think the speaker is now going into personalities.

Mr. McWALTER: It is not a personalty to say that he has no monopoly of pharmaceutical knowledge.

The VICE-PRESIDENT: Mr. Robinson had the unanimous confidence of the Council when he was elected, and of a very large number of licentiates.

Mr. McWALTER: My point is that his reputation did not justify it, and that his election was due to the personal friendship that members of the Council had for him. ("No.")

The PRESIDENT: You had better keep to the law of the case. If you can convince us that we have done an illegal act we'll try to undo it.

Mr. McWALTER moved the following resolution:—

That no person shall be elected to an examinership by the same meeting of the Council which accepts his resignation as a member of that body.

Mr. WELLS contended that, according to the Act, when Mr. Robinson sent in his resignation he ceased to be a member of the Council. ("No.")

Mr. McWALTER: My point is that it was a mean evasion. (Cries of "Withdraw.")

The PRESIDENT: Mr. McWalter must not use scurrilous language.

Mr. McWALTER: The words, "mean evasion," were used by Mr. Wells in reference to some prosecution in this city.

Mr. BERNARD said he could speak independently in the matter, and he affirmed that the qualifications and capabilities of other candidates were thoroughly thrashed out before the Council gave the unanimous vote in favour of Mr. Robinson.

Mr. JOHN EVANS said there were always two members of the Council, and also the Government Visitor (Dr. Duffey), present at the pharmaceutical licence examinations of the Society, which were superior to those of the Apothecaries' Hall and the College of Surgeons. (Applause.) The Society ought to be extremely glad to have a man of Mr. Robinson's experience as an examiner, and he (Mr. Evans) was quite sure that he would make as good an examiner as ever they had. (Applause.)

Professor TICHBORNE said he desired to state the reasons why he supported Mr. Robinson. There were seven other candidates, many of them excellent men. Two of these were personal friends of his own, whom he should have had great pleasure in voting for, as they were very good men. Mr. Robinson was for many years a practical compounder in connection with establishments in the city, and from his connection with the Council he had considerable knowledge of the business of the society. He (Professor Tichborne) believed that their examiners should be specialists, and for that and the other reasons he voted for Mr. Robinson, although he was not a personal friend of his.

Dr. BURNES, Mr. WELLS, and Mr. CHARLES EVANS explained the reasons which had influenced them in voting for Mr. Robinson, and the motion of Mr. McWalter was then put and negatived, it appearing by a show of hands that 9 were for and 21 against it.

The PRESIDENT said Mr. Robinson's character spoke for itself. He was quite satisfied that the Council had acted legally. Mr. Robinson's letter of resignation was dated

July 25, although the date was omitted from the report of the proceedings at the Council meeting of August 3 after the reading of the minutes. Mr. Robinson's resignation was duly accepted. His successors as member of the Council and Vice-President were then appointed. After that the election was proceeded with, and the result of full consideration was that members who supported other candidates withdrew them, and the final vote was given in favour of Mr. Robinson. The Council did not act from favour, but did the best they could for the Society.

A WORD FOR THE REPORTER.

On the motion of Dr. BURNES, a vote of thanks was passed to Mr. Macartney for the careful and accurate manner in which he had reported the proceedings of the Council and Society.

Personalities.

MR. WILLIAM OPPENHEIMER left on Wednesday on a business-visit to the United States.

MR. LUDWIG MOND, the well-known chemist, is a warm patron of art, and has one of the finest collections of Old Masters in this country. It is Madonnas that he particularly favours.

CHEMISTS may claim a distinct relationship with the late famous Poet Laureate. Lord Tennyson's great-grandfather, Richard Tennyson, was an apothecary at Stainton, in Lincolnshire.

THE proprietor of Kop's Ale, Mr. Loewenfeld, has become the proprietor of the *Pall Mall Gazette*. The anti-Radical rival of that journal, the *St. James's Gazette*, is owned by Mr. Steinkopf, the head of the Apollinaris Company. Such are some of the effects of drink.

PROF. HANKIN, B.A., who has been appointed bacteriologist, chemical examiner, and analyst to the North-West Provinces and Oude, before leaving for India last week swallowed some of Haffkine's "virus exalté"—that is, cholera germs twenty times as virulent as the ordinary thing—without any other consequence than that of a slight diarrhoea. He had previously been treated with the Haffkine protective virus.

MR. WILLIAM JOHNSTONE, whom the Council of the Institute of Chemistry have recently ejected from that society, has his revenge upon them. He calls himself "Emeritus Fellow of the Institute of Chemistry," and this is a distinction which no other shares with him. The Registrar of the Institute points out in the *Chemical News* that "no such title as Emeritus Fellow of the Institute exists," and that Mr. Johnstone agreed in Court not to use in future the title of Fellow or Member of the Institute.

Gazette.

PARTNERSHIPS DISSOLVED.

Bonsor, R., Bonsor, R. C. H., & Bonsor, M. W., under the style of J. & R. Bonsor & Co., Bradford, manufacturers and merchants of dyes; as far as regards R. Bonsor.

Clayton, J., & Garbutt, J. H., under the style of Barclay, Clayton & Co., Gervase Street, Old Kent Road, S.E., mineral and aerated water manufacturers.

Galer & Taylor, King Henry's Walk, Ball's Pond, N., glass-blowers and bottle-manufacturers.

Hollingworth & Pickard, Sheffield, chamois-leather manufacturers.

Horsfall & Ewbank, Pontefract, liquorice-cake manufacturers.

Martin, J., & Glover, W. C., under the style of Martin, Glover & Co., St. Leonard's-on-Sea, drug and drysalters, mineral and aerated water manufacturers.

PARIS SOCIETY OF PHARMACY.

The first meeting of the winter session of this Society was held on Wednesday, September 5. The proceedings opened with an attendance of fifteen members, which later on increased to twenty-two. After some time had been passed in conversation, this being the first reunion since the holidays, the minutes were duly passed, and M. Portes, the President, who occupied the chair, provoked some amusement by relating that he had received another letter from the irrepressible M. Boulé concerning

THE PRESERVATION OF CHLOROFORM.

The tenor of the letter read by the President was to reassert the claims of the Algiers pharmacist to the invention of the idea, while at the same time he thanked the Society for its courteous consideration of the matter. The good-natured tone of the epistle led to its being patiently heard by the meeting, and M. Portes humorously refrained from reading the latter portion, which was supposed to contain a flattering reference to himself. MM. Leidié and Bürker having expressed their ideas on this fertile subject, the Chairman went on to announce that communications have been received from various pharmacists desirous of being elected as

CORRESPONDING MEMBERS.

These were handed to the committee for consideration, as customary. One of these gentlemen, M. Vizern, of Marseilles, had accompanied his application with a list of his contributions to pharmaceutical literature, which are numerous, and by a treatise which M. Portes promised to read later on. In reference to this subject M. Portes asked if the committee for the election of corresponding members would also consider the applications for titular membership; but the general feeling seemed to be that a separate committee should deal with the latter subject.

POISONING BY MUSHROOMS.

M. Bourquelot made some remarks on his inquiry into the cases of mushroom-poisoning that have occurred near Angoulême. It seems that this active pharmacist, combining autumn holiday with scientific research, attended at Pau the recent annual meeting of the Association Française (the Gallic equivalent of the British Association). On his return from the South, M. Bourquelot, accompanied by another pharmacist, visited Angoulême, with a view of finding out the exact species of mushrooms which had caused the deaths. These gentlemen endeavoured to follow the very paths which had been taken by the persons who picked the mushrooms. They were baffled again and again by the inexactitude of the people in the district, but by perseverance they finally discovered a young lady of sufficient intelligence who was able to indicate the spot where the fatal fungi had been gathered. M. Bourquelot found three sorts, and after minute inquiries discovered that it was the *Amanita phalloides* that caused four out of the five fatal cases. Having subjected this to analysis he found it to be of the most deadly character. M. Bourquelot pointed out that its distinguishing characteristic was a silky shining appearance; it was this which finally secured its identification by the country people. Some of the fibres, which are friable in the ordinary *amanita*, were tough and elastic. Death was speedier than is usual in cases of mushroom-poisoning. An animated discussion ensued upon the rapidity toxicity of the fungi, and it was stated that with other species the poisonous symptoms do not appear within twelve hours.

M. Portes then read a paper by M. Vizern on

BICARBONATE OF SODA,

in which the writer criticised some of M. Patein's conclusions on the subject. M. Patein replied with some warmth, the gist of his remarks being that the object of his (M. Patein's) paper was to show that phenolphthalein immediately showed the presence of carbonate. M. Grimbart presented the results of his experiments on the quality of the

CHLOROFORM

supplied by the Pharmacie Centrale, which has been lately the subject of some discussion. After keeping for two

months he found it perfectly good. M. Bürker said the same attacks were made some years ago, and in his official capacity at the Val de Grâce Military Hospital he made the same experiments, and was convinced of the high quality of the chloroform. An enormous amount is kept in that establishment for the army medical service. He had left it in different places and without any precautions for six months, and found it pure; it did not spoil. Rectified alcohol is used. "Of course," said he, "we needn't expect it to keep for years." (Laughter.) M. Viron said pure alcohol should be used—not alcohol at 85°, for example; that would not keep it pure. M. Grimbart said he had added water to his. M. Bürker: You only left it two months (which remark induced laughter that had to be silenced by the President). M. Leger said five or six years ago it was not rare to find the chloroform containing foreign substances, but at present it left nothing to be desired as to quality. M. Bürker said that was so; years ago they had to change their stock constantly, but now never—"or, at least, hardly ever."

The President of the Society announced that he had been recently making researches as to certain microscopic forms which he had found in

ALGERIAN FIG-WINE.

His conclusion had been that the star-shaped bodies were a sign that the wine was not the juice of the grape. But a friend of his in Algeria had given him his solemn assurance that a certain wine was the pure product of the vine, and yet he found the same forms. His curiosity being aroused, he analysed certain grapes, and found his friend's assertion confirmed. His numerous researches led him to the idea that a bacillus similar to the "microbe de Latour" was to be found. He had studied the Italian translation of a German paper on the subject, and intended to push his inquiries further.

Some formal business as to the election of committees and the admission of new corresponding members terminated the meeting about 3.20 P.M.

BANKRUPTCY REPORTS.

Re JONATHAN STEPHEN, Devonport, Chemist.

At the Stonehouse Bankruptcy Court last week, this debtor came up for adjourned public examination. Mr. J. G. Jackson, solicitor, appeared for the debtor, and produced elaborate accounts as to his dealings. The Official Receiver remarked that debtor's business accounts appeared to have been well kept, and it was his private transactions which had brought him to his present position. Mr. Jackson made an application to the Registrar for an allowance for assistance with the accounts, but this was refused. Debtor was allowed to pass.

Re SAMUEL HERBERT FRY, 5 Chandos Street, Charing Cross, and Southsea Road, Kingston-upon-Thames, Dry-plate maker, trading as the Fry Manufacturing Company.

THIS debtor attended last Tuesday's sitting of the London Bankruptcy Court, before Mr. Registrar Brougham, for his public examination. The accounts show total liabilities, 3,509*l.* 14*s.* 8*d.* (unsecured, 2,938*l.* 11*s.* 10*d.*); and assets expected to realise 2,618*l.* 3*s.* 1*d.* Replying to Mr. H. Brougham, the Official Receiver, the debtor said he commenced business in July, 1890, as a dry-plate manufacturer, under the style of the Fry Manufacturing Company. Previously he had been manager to a limited company, and he then arranged to purchase the business for 1,500*l.*, the company being wound up by a liquidator. He was joined by a partner, who provided one-half of the purchase-money. The partnership was continued for six months, when the partner, being unable to introduce further capital as a ranged, withdrew from the firm, receiving 800*l.* in cash, that being the amount he had paid in. The assets and liabilities were taken over by witnesses, who continued the business under the same style as before. He borrowed the 800*l.* to pay out the partner, and this was included in the liabilities. Prior to the dissolution the trading had resulted in a small profit, but shortly before the present proceedings witness became aware that a loss was being made. The greater portion of the present debts was for moneys

lent for and expended in the business. A sum of 1,250*l.* included therein had been advanced by the mother of witness. The assets certainly ought to produce sufficient to pay 10*s.* in the pound. Some three months before purchasing the business witness executed a post-nuptial settlement, under the terms of which his wife became possessed of the household furniture. He was then perfectly solvent, and did not contemplate any future difficulties. This was his first failure.

There was no opposition on the part of creditors, and the debtor was allowed to pass.

Trade Notes.

A PATENT for Chinnery's aerated-water apparatus has been granted in the United States.

THE "ÉLITE" TOILET LANOLINE-CREAM, which is the latest novelty introduced by Messrs. Burroughs, Wellcome & Co., is an extremely pleasant and useful salve for toilet use. As a lanoline preparation it will keep indefinitely. It is particularly noticeable from being put up in aluminium cases—very light, incorrodible, and of silvery appearance.

IN our Summer Special Messrs. Fletcher, Fletcher & Stevenson advertised a prize competition in connection with their concentrated liquors. Competitors were to send in formulæ for and specimens of mixtures for cough, diarrhoea, fever, indigestion, liver, and tonic medicines, to be made from Fletcher's concentrated liquors. We nominated pharmaceutical and medical experts to judge these mixtures, and on their markings Messrs. Fletcher, Fletcher & Stevenson have awarded the prizes. They announce the result in their advertisement this week. Two competitors get 3*l.* 10*s.* each, and two others take 1*l.* 15*s.* each.

TASMANIAN EUCALYPTUS OIL.—It is now some years since we mentioned the fact that the distillation of eucalyptus oil was to be undertaken in Tasmania on a commercial scale. That island colony is peculiarly fortunate in the matter, as there, it is said, the *Eucalyptus Globulus* is the only species growing. From the leaves of these trees the Tasmanian Eucalyptus-oil Company distil the "Platypus" brand of oil, which is now being offered in this country. The oil has a specific gravity of 0.9125, and its characteristics generally are those of a pure eucalyptus oil of good fragrance. It is put up in bottles ready for retailing, the company having the intention of making it a popular medicine; and to aid in making it known Dr. Benjefield, of Hobart, has written a terse essay on "Eucalyptus Globulus," which is worth reading. The company's office in London is at 138 Leadenhall Street, E.C.

Business Changes.

Mr. P. HOLMES, chemist and druggist, has purchased the business of Mr. McCreach, carried on at 39 High Street, Margate.

THE business until lately carried on by Mr. W. Wyles at New Bridge, Dover, has been purchased by Mr. T. Long and his brother.

THE partnership which has existed for nearly nineteen years between Charles Symes and Joseph Hallawell has been dissolved by mutual consent. Mr. Symes continues the wholesale and manufacturing business at Pilgrim Street and the retail pharmacies at 14 Hardman Street and 58 Bold Street, under the style of Symes & Co. as heretofore. Mr. Hallawell continues the export business at 63 Wood Street, under the style of J. Hallawell & Co.

PATENT MEDICINES.—The revenue from medicine stamp-duty for the year ending March 31, 1892, realised 240,062*l.* In the previous year the amount obtained was 225,701*l.* The number of licences issued in the year was 26,597 in England and Wales, and 2,412 in Scotland, or 28,746 (in the whole of Great Britain) against 27,295 in the previous year.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

ARTHUR—CLEMO.—At the parish church, Camborne, October 3, 1892, Samuel Arthur, chemist and druggist, Lostwithiel, to Lillie Clemo, of Camborne, Cornwall.

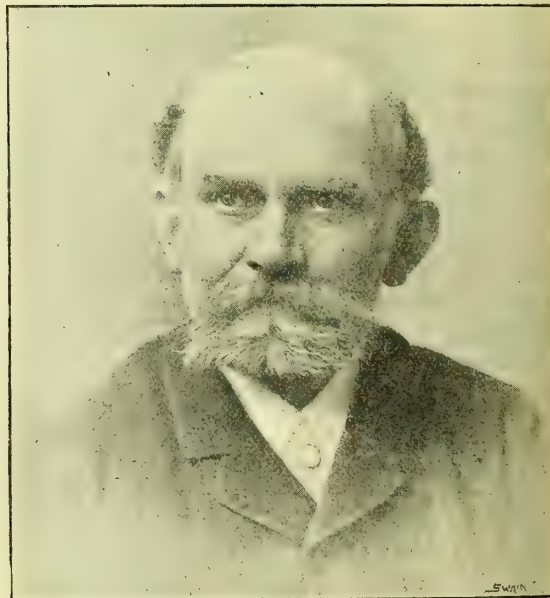
GRIFFITHS—HARDEN.—On September 24, at the Wesleyan Chapel, Cotham, Bristol, Mr. H. T. Griffiths, chemist, Clifton, to Miss Florence Mabel Harden, of Bishopston, Bristol.

MOSS—HUMPHREYS.—On September 28, at the parish church, Westbury-on-Trym, by the Rev. J. Hamlyn Hill, Frank, third son of Joseph Moss, of Nottingham (late with Messrs. Giles, Schacht & Co.), to Kate Minnie, youngest daughter of George Humphreys, of "Darnley," Carnarvon Road, Redland, Bristol.

DEATHS.

CLARK.—On October 2, at 11 The Square, Portsoy, N.B., George Alexander, eldest son of James Clark, chemist and druggist. Aged 25.

CYRIAX.—We regret to have to record the death of Mr. Julius Cyriax, of the firm of Burgoyne, Burbidges, Cyriax & Farries, wholesale druggists, of 16 Coleman Street, E.C. Mr. Cyriax, who had been suffering from heart-disease for three years, started on a continental holiday-tour about two months ago, feeling then comparatively well. After visiting Bayreuth for the purpose of attending a Wagnerian celebration he went to Sweden, and there, at Sanna, he was seized about four weeks ago by what proved to be a fatal attack of his complaint. He succumbed on Thursday last, September 29. The deceased, who was in his 53rd year, was the son of a wholesale druggist in Gotha, Germany, and



came to London about thirty years ago, his first engagement being with the now extinct drug-firm of H. C. Schneidt & Co., then located at 12 Mark Lane, E.C. Subsequently he started business on his own account in Basinghall Street as a general commission merchant, one of his agencies being that of the Hunyadi Janos waters, and there, about the year 1874, he was joined by Mr. Thomas Farries, a pharmaceutical chemist, who had been for some years with the firm of Burgoyne, Burbidges & Co. Two years afterwards the two partners in the latter firm retired from active commercial life, and Messrs. Cyriax and Farries then amalgamated their business with that of the old firm, which from that date assumed the style it now bears, and has grown to be one of the largest concerns of its kind in the world. Mr. Cyriax leaves a widow and a family of six

children. Apart from the druggists' circles, where he was very popular, Mr. Cyriax was a well-known figure in the musical world, and ranked among our best non-professional musicians. He was an ardent follower of Richard Wagner, whose acquaintance he made in 1877 when the composer paid a visit to this country, and became one of the founders of the London Wagner Society, in the transactions of which he took an active interest until his death.

DAVIES.—On October 3, Mr. William Davies, of Llandilo, chemist and druggist. Aged 60. About twenty-five years ago the deceased was very popular in Eisteddfodic circles as a successful competitor in Welsh poetry, and as an adjudicator under the Welsh name "Gwilym Teilo." Mr. Davies has left behind him a large number of manuscripts of his unpublished compositions, both in prose and poetry.

KIRKLAND.—Mr. John L. Kirkland, a son-in-law of Mr. John McKesson, junior, and a member of the firm of McKesson & Robbins, and also the leading spirit of the New York Quinine and Chemical Works, of which he had been secretary since 1885, died suddenly (says our New York correspondent) on September 25, within half an hour after his return from Montreal, where he had been in attendance upon the annual meeting of the National Wholesale Druggists' Association. Mr. Kirkland will be remembered in London and on the Continent as having made one or two trips abroad with a view to affecting an arrangement somewhat in the nature of a pool among the various manufacturers of quinine. Efforts in this direction, however, were fruitless. The cause of Mr. Kirkland's death was heart-disease. The deceased, who was originally in business as a stockbroker in Wall Street, was 50 years of age, and leaves a widow and four sons.

LEAROYD.—On Monday, October 3, at London Road, Lowfield, Mr. E. R. Learoyd, surgeon-dentist, suddenly, aged 49. The deceased gentleman for many years carried on business as a chemist and druggist and surgeon-dentist in Washington Road, Sheffield, and afterwards at London Road, and was, some years ago, President of the Sheffield Pharmaceutical and Chemical Society. Mr. Learoyd leaves a widow and one child.

LONGSTAFF.—On September 23, at his residence, Butterknowle, Wandsworth, George Dixon Longstaff, M.D., in his 94th year. The deceased was an original Fellow of the Chemical Society, and founder of the Longstaff medal which that Society presents periodically to the members most distinguished in research. He graduated in 1828 M.D. at Edinburgh, at which University he was for some time assistant to Dr. Hope, Professor of Chemistry, and in that capacity is believed to have been the first teacher of practical chemistry to medical students in this country. He practised for some years as a physician at Hull. After spending some years in America he engaged in commercial pursuits, and was chairman of Blundell, Spence & Company (Limited) for many years, and a director of that company till his death.

COMPANY MEETING.

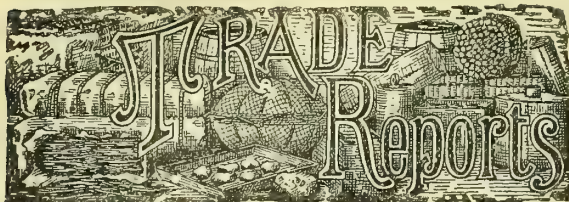
SEQUAH (LIMITED).—The second annual meeting of this company was held on Wednesday. The report and balance-sheet showed a loss 24,050*l.* 4*s.* 5*d.* of which 6,153*l.* 6*s.* 11*d.* is set down as depreciation of plant, 4,500*l.* being a reserve, and 1,002*l.* 13*s.* 8*d.* being for income-tax, previous dividends having been paid free of income-tax. Past advertising accounts also come into this year's accounts. The "stock of drugs" figures in the balance-sheet at 2,403*l.* 2*s.* 7*d.* in England, and 8,980*l.* 1*s.* 5*d.* abroad and afloat. "Goodwill and trade-marks" appear as an asset to the amount of 238,947*l.* 7*s.* 10*d.* Mr. Oliver, who occupied the chair, said the directors regretted to have to submit such an unsatisfactory report, but he thought they could explain it. Two years ago they were doing a marvellously good business. Their remedies were finding great favour in every town they went to, and marvellous cures were effected. But the backbone of the business depended on their method of introducing the remedies to the public. They had gone to large expense in outfits for this business, and Mr. Hartley had secured some twenty or more able representatives, who made remunerative sums for themselves, and at the same time

brought in very good results for the company. Suddenly they had notice from the authorities giving them fourteen days in which to discontinue selling the medicines from waggons, and stating that it was illegal by a recent Act to sell medicines in that manner—that they could only be sold through the medium of a duly qualified practitioner, and from a shop, and not from a waggon. They tried to get over the difficulty by engaging chemists and getting them to go round with the waggons, but even that was not allowed. They went to the best barristers of the day, and had interviews with Somerset House, pointing out to the authorities that the thing was doing good, and that the public were suffering from not having these remedies. In spite of all, however, some influence was at work, though they did not know whence it came, and they had to discontinue the sale in England. They then resolved to make up if possible for the loss of trade here by sending representatives abroad. They did well in South Africa. Mr. Hartley himself went to Spain, and found that the Imperial laws of the country allowed the remedies to be sold in the manner found so successful in England, and they, therefore, thought they were justified in opening a factory for the manufacture of the medicines in Spain. They met with great success there. The people saw marvellous cures performed before their eyes which they had not imagined to be possible before, and they bought the medicines readily. But later on, when the medical men found their business falling off, they used their influence with the mayors of towns, who were able to put such obstacles in their way as to make the Spanish trade of no profit. In India they had suffered from the depreciation of the rupee. In Belgium they had been for a time very successful, but then through the influence of the medical men the king had been induced to sign a decree giving them forty-eight hours' notice to quit the country. Similar results followed in France. They had introduced their remedies into Burmah, the Straits Settlements, and Japan, and in those countries the business was proceeding satisfactorily. Mr. Hartley gave an account of his experience in the United States. He educated two men in his business, spending three weeks in a room with them. He had waggons built and spent something like 4,000*l.* Then laws were passed preventing anyone except qualified physicians or chemists from selling medicines. Many of these laws were passed after the company's representatives had arrived. Some of the shareholders present commented rather bitterly on the result, and ultimately, on the suggestion of Mr. Stuart Cumberland, a committee was proposed to confer with the directors. The directors refused this, and by means of proxies that proposal was defeated by a large majority. The report and balance-sheet were adopted. Mr. Hartley was re-elected a director, but Mr. Ridsdale, the chairman of the company, was rejected. Mr. Oliver announced that a reconstruction-scheme would shortly be submitted.

NEW COMPANIES.

GLASGOW NERVETONINE.—Registered in Scotland to purchase from Mark Foggitt Thompson, homœopathic chemist, Gordon Street, Glasgow, the whole rights of compounding or otherwise manufacturing or selling or otherwise disposing of the compound drug or medicine known as "Nervetone," together with the goodwill of the business and all rights and interests connected therewith, and to undertake the burdens and obligations appertaining to the manufacture and sale thereof. Capital, 5,000*l.*, in 1*l.* shares. First subscribers: Mark Foggitt Thompson, chemist, 17 Gordon Street, Glasgow; Selina Thompson, wife of Mark Thompson, 7 Royal Crescent, Crosshill; Robert G. Morton, accountant, 179 West George Street; William Forbes Robertson, 146 West Regent Street; Robert Knaggs, jute manufacturer, 363 Sauchiehall Street; Joseph Knaggs, jeweller, 363 Sauchiehall Street, Glasgow; and Emmanuel Thompson, chemist, 97 Princes Street, Edinburgh.

The following have also been registered:—Cleansing Syndicate (Limited), capital, 10,000*l.*; New Sulphur-recovery Syndicate (Limited), capital, 10,000*l.*; Norris Magnetic Embrocation (Limited), capital, 20,000*l.*; and the Western Infirmary of Glasgow.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 6.

London. We are pleased to be able to report a considerable improvement in the drug and chemical markets this week. Many articles have advanced in price, and there is a strong current of orders for *bonâ-fide* consumption. Speculative buying, however, is limited to one or two articles, of which quinine is the most important. In the department of drugs, raw camphor fully maintains its position, while senega, cascara sagrada, and ergot of rye have been dealt in at improved prices. Russian anise, canary-seed, cumin-seed, caraway, and coriander are all higher in value. The new crop of orris is coming in and prices remain firm; opium is also at full prices, but there is not much stirring in this article. Some foreign agents, on the other hand, report improved values for insect-flowers. Valerian-root has been slightly advanced both for French and Belgian, while clove and caraway oils have risen in sympathy with their raw material. Tinnevely senna is in very short supply and likely to be dearer; American oil of peppermint is offering at lower rates; ordinary kinds of sarsaparilla are giving way; and the high values which have long ruled for star-anise are apparently breaking down, though there is no supply offering on the spot as yet. Eucalyptus oil continues in good demand, and there has been a strong inquiry for ipecacuanha, of which prices show a fresh advance of 3d. to 4d. per lb. since last auctions. The principal feature of the week in fine chemicals has been the sudden rise in quinine, which has advanced fully 10 per cent. in the course of twenty-four hours. The business, however, appears to be of a speculative character. American bromide of potassium is dearer, chloroform has been advanced in price, and German refined camphor is also quoted a little higher. Citric acid maintains its value without difficulty, and lower prices are given for carbolic acid, tartaric acid, oxalic acid, and chlorate of potash. In outside articles the only decline worth recording is in nutmegs, but apart from this there has been an excellent tone for all spices, with rising values for cloves, chillies, pimento, ginger, black and white pepper, and mustard-seed. Linseed is also much dearer, with a heavy business; shellac has advanced; for Jamaica wax higher prices are asked; and cocoa butter sold dearer at the monthly auctions. Ceylon cocoanut oil, cotton-seed oil, linseed and rape oil are also higher; gum olibanum brought better prices to-day, and the tea market is generally better.

New York. Our correspondent states that on September 27 the New York drug and chemical markets were quite active, while the majority of changes that had occurred were toward a higher plane of prices. The meeting of the National Wholesale Druggists' Association in Montreal took several well-known members of the trade out of town, but their absence did not affect business. Sales of some 16 packages of Central American *Balsam Copaiba* are reported at 34c. The market in Angostura and other grades of balsam is quiet but steady at unchanged prices. *Cascara sagrada* is being inquired for, and 5½c. to 6c. has been paid for large lots, and 6c. to 7c. is asked for further supplies on the spot, though for lots now under way for this port something

less would be accepted. The market in Mexican *vanilla beans* continues very strong, though without quotable advance. *Angostura tonquin beans*, though less active than vanillas, are almost as strong. *Oil of peppermint* remains practically unchanged, and holders are not in unison on quotations, which vary with each one—a pretty good indication that not much buying is going on. The latest arrivals of *Jalap root*, some 28 bales, are said to be not of desirable quality. Quotations range from 30c. to 42c. as to quality, holder, and size of lot wanted. Still further arrivals of Mexican *sarsaparilla* have had the effect of bringing the price of Tuxpan down to 9c. The liberal buying orders from England have about cleared the market of Tampico root and, for the present at least, averted any further decline. No Western *Senega* is offering at the moment, and the tone of the market is very strong. *Tartaric acid* has advanced to 24½c. for crystals, and 25½c. for powdered. *Acetic acid* is quiet at 160c. to 165c. *Oxalic acid* is in good demand, and stocks are being lightened; prices range from 6½c. to 6¾c. The export demand for *Acetate of lime* is better, as shippers want to avail themselves of the present freight-rate, an advance having been announced in freights for October. The demand for *Opium* is fairly satisfactory, and \$160 is the quotation for case lots. *Morphia* is in rather better demand at unchanged prices. *Quinine* improved somewhat during the latter part of last week, 18½c. to 19c. being required, though no large volume of business is reported. *Ergot* has been advanced to 57½c. to 60c. for German, and 65c. to 70c. for Spanish, but there is no demand. *Lycopodium* has further advanced to 50c. to 55c. under the influence of an active consumptive demand. *Menthol* is somewhat stiffer at \$3.05. *Camphor* has also advanced, and 43c. to 49c. is now wanted for refined, the change being in sympathy with market for crude. *Shellacs* are strong and active.

ACID (CITRIC).—Makers still ask from 1s. 6½d. to 1s. 7d. per lb., but there are second-hand holders willing to accept 1s. 6¼d. per lb. The tone of the article is not altogether so firm as it has been. For concentrated juice 21½. 15s. f.o.b. is the latest quotation. The following are the exports of citric acid from the port of London:—

	1892	1891	1890	1889
	Cwts.	Cwts.	Cwts.	Cwts.
September	786	437	546	341
First nine months ..	6,008	3,579	4,917	4,259

The imports of concentrated juice have been:—

	1892	1891	1890	1889	1888
	Pipes	Pipes	Pipes	Pipes	Pipes
January 1–September 30 ..	1,976	1,521	3,242	3,554	3,199

ACID (OXALIC) is lower, and may be had on the spot at 3d. per lb.

ACID (TARTARIC).—Flat and easier in second-hand. The makers of English (B.P.) acid require 12d. per lb. still, but foreign brands may be had from 11d. to 11¼d. per lb.

ANISE.—The new *Russian* crop, though of fair quality, is said to be one of the smallest on record. The price asked for good new seed is 23s. per cwt.

ANISE (STAR).—It is said that a fair amount of business has been done in this article for arrival at somewhat better prices, viz., 76s. to 78s. c.i.f. for October shipment. Fifty piculs of new crop star-anise had arrived on the Hong-Kong market on September 1, but the quality, as is usual with the first arrivals of the season, was too poor to suit for export.

BROMIDE OF POTASSIUM.—The American agents issued a notice this week quoting the revised price of 1s. 1d. per lb., c.i.f. terms, and adding that this advance probably marked the close of the "war." To this the representatives of the German combination have replied to the following effect: "We are able on the best authority to declare that there is neither the chance nor, at present, any attempt on the part of producers to come to any agreement whatever. So far as we can judge from information to hand the (American agent's) remarks were nothing more or less than the expression of a personal opinion, entirely unauthorised and unwarranted by circumstances."

CAMPBOR (CRUDE).—The only sale reported this week is one of 100 piculs September-October shipment at 142s. 6d. c.i.f. terms. The market remains very firm, and 160s. per cwt. is asked for *Japan* on the spot, while for October shipment 150s. per cwt. c.i.f. is quoted for *Japan*, and 137s. c.i.f. for *China* camphor.

CAMPBOR (REFINED).—No change in *English* brands. *German* has been raised $\frac{1}{2}$ d. per lb. by the makers, who now quote 1s. 7 $\frac{1}{2}$ d. per lb. net for bells.

CANARY-SEED.—On Friday last *Turkish* seed sold at 80s. to 82s. 6d., and the former figure is still the lowest quotation to-day. *Spanish* seed is firm at 85s., and there has been a good trade in *Barbary* kind at 77s. 6d.

CARAWAY-SEED.—A parcel of 90 bags old crop *Dutch* seed sold at 21s. 6d. per cwt. at auction. That, however, was "without reserve," and one cannot buy at the price in the open market.

CASCARA SAGRADA.—The rise has not been quite checked, but the first rush of prices has given way to a slow and steady advance. From 44s. to 45s. per cwt. has been paid this week, and 50s. is now generally asked; but we think that there are still one or two holders who would not refuse 45s. now.

CHLORATE OF POTASH.—The market is somewhat easier. The Union ask 8d. per lb.; second-hand holders quote 7 $\frac{1}{2}$ d. to 7 $\frac{3}{4}$ d., f.o.b.; and for delivery over next year 6 $\frac{1}{2}$ d. per lb. would be accepted.

CHLOROFORM.—The price of methylated was raised by one of the Scotch makers to 1s. 6d. per lb. last week, and of pure, from rectified spirit, to 4s. 3d. per lb. It is probably possible to shade these quotations slightly for contracts.

CINCHONA.—The auctions held here on Tuesday were very small in extent, and consisted principally of Ceylon bark. The catalogues comprised:—

	Packages	Packages
Ceylon cinchona	937	of which 804 were sold
East Indian cinchona ..	74	" 74 "
Java cinchona	30	" 30 "
West African cinchona ..	277	" 277 "
South American cinchona ..	456	" 200 "
	1,824	1,385

The assortment was very poor; no yellow, and few grey barks of Eastern growth, being offered, but there were some very fine parcels of red chips and shavings, both original and renewed, from Ceylon. At first the prices appeared to show a lower tendency, but the competition gradually improved, and at the close of the sales the unit was practically equal to that of the previous auctions, and slightly above the average at last week's Amsterdam sales. It may therefore be placed at 1 $\frac{1}{2}$ d. all round. The approximate quantities purchased by the principal buyers were:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	164,175
" Auerbach works	50,980
" Frankfort-o/Main and Stuttgart works	47,148
Messrs. Howards & Sons	18,214
Agents for the American and Italian works	12,655
" Brunswick works	8,940
Sundry druggists, &c.	24,160
Total quantity sold	326,272
Bought in or withdrawn	20,660
Total amount of bark offered	346,932

It should be remembered that the quantity of bark purchased affords no guide to the amount of quinine represented. The following prices were paid:—

CEYLON BARK.—*Original.*—Red varieties: A very large quantity of chips was offered, of which ordinary woody to fair branch and stem realised from 1 $\frac{1}{2}$ d. to 2d.; good to fine bright quilly ditto, 2 $\frac{1}{2}$ d. to 3d.; fair bright spokeshavings, 3 $\frac{1}{2}$ d.; rather dusty root, 3d. per lb. Grey varieties: Ordinary dull to fair quilly stem and branch chips sold at 3d. to 6d.; common woody twigs at 2 $\frac{1}{2}$ d. to 2 $\frac{3}{4}$ d. per lb. Fair to good hybrid chips fetched 3d. to 4 $\frac{1}{4}$ d. per lb. *Renewed.*—Red

varieties: Very thin dull to fair bright quilly stem and branch chips, 1 $\frac{1}{2}$ d. to 3 $\frac{1}{2}$ d. per lb.; fair to good hybrid chips, 3d. to 5 $\frac{1}{2}$ d. per lb.

EAST INDIAN CINCHONA.—Red and yellow varieties were not offered. *Original.*—Thin to good quilly grey stem and branch chips brought from 1 $\frac{1}{2}$ d. to 4d.; chips and shavings mixed, 1 $\frac{1}{2}$ d. to 1 $\frac{3}{4}$ d.; dusty root, 3 $\frac{1}{2}$ d. per lb. *Renewed.*—Ordinary grey chips, 3d. to 3 $\frac{1}{2}$ d.; fine quilly ditto, 7 $\frac{1}{2}$ d. per lb.

JAVA BARK.—Thirty bales of direct import found buyers at 5 $\frac{1}{2}$ d. per lb. for fair Ledger chips, and 3 $\frac{1}{2}$ d. per lb. for crushed branch chips.

AFRICAN BARK.—A recent import of 244 bales St. Thomas bark, rather less mixed with damaged lots than usual, sold with fair competition at 3d. to 4d. per lb. for rather irregular and broken red quill. Another parcel of 33 packages realised 2 $\frac{1}{2}$ d. to 3 $\frac{1}{2}$ d. per lb. for sound, and from 1 $\frac{1}{2}$ d. to 4d. per lb. for more or less damaged bark.

SOUTH AMERICAN BARK.—Of 456 small bales of cultivated yellow bark from Bolivia, 200 sold at 5 $\frac{1}{2}$ d. to 5 $\frac{3}{4}$ d. for sound quill, brown to silvery, rather irregular and partly thin, and 8 $\frac{1}{2}$ d. for fine rich silvery, slightly damaged, stout quill.

CUMIN-SEED.—Good *Mogadore* has advanced to 23s. per cwt.—a price which is cheap as compared with the figures (40s. to 50s. per cwt.) asked for good to fine *Maltese* seed. The demand remains good.

ERGOT OF RYE.—We are told that the consignees of good new *Spanish* ergot require 3s. per lb., but might probably accept 2s. 10d. per lb., which is the lowest limit given them by the shippers in Vigo. *Russian* is quoted at 2s. 4d. per lb. on the spot.

GUM ARABIC.—During the month of September 115 serons of genuine Soudan sorts were sold in Liverpool at prices which gradually declined from 85s. to 75s. per cwt. for fair white soft. Business is also reported in bold pale *Senegal* gum at 65s., c.i.f. terms, to arrive. At to-day's London sales 3,500 packages were offered. A fair proportion was sold, but prices ranged lower all round, with the exception of *Ghatti* gum, which was very firm. *Soudan* sorts declined fully 2s. to 3s. per cwt., *Kurachee* 2s. 6d. to 5s., and soft *Cawnpore* 1s. to 2s. per cwt. The following were some of the prices obtained: *Soudan* sorts (of which 143 bales were offered), 67s. to 73s. per cwt. for amber and drossy mixed to fair pale. *Cape*: Good pale siftings, 40s.; common to fair ambery and dusty sorts, 29s. to 43s.; ordinary brown glassy sorts, 17s. to 20s. per cwt. *Brown Barbary*, 46s. per cwt. *Australian*: Common dark to fair reddish, 22s. to 27s. per cwt. *East Indian*:—Common to fair brown Amrad drop, 29s. to 31s.; fair to good bright Cawnpore, 31s. 6d. to 46s.; common red to fine amber Kurachee drop, 33s. 6d. to 54s.; red to soft pale ditto siftings, 23s. to 30s. 6d.; red olibanum-scented Aden, 30s.; common dark to fine pale Ghatti, 15s. 6d. to 45s. per cwt. *Senegal* gum is offering very cheaply now; good Bas-du-fléuve may be had below 50s. per cwt.

IPECACUANHA.—One of the importers has sold the whole of his stock since the last auctions at some advance in price. Very little is now offering, and for good stout sound root 9s. 6d. per lb. is asked. There have been no arrivals since our last report. The stock on September 30 was 256 packages in 1892 (including nearly 100 packages Cartagena), 193 packages in 1891, and 280 packages in 1890. The following figures represent the annual imports and deliveries for the last eleven years, together with the stock left at the end of the year:—

Year	Imports	Deliveries	Stock, Dec. 31	Year	Imports	Deliveries	Stock, Dec. 31
1882	Bales 1,024	Bales 656	Bales 590	1888	Bales 512	Bales 724	Bales 10
1883	545	935	210	1889	1,101	947	208
1884	672	697	175	1890	1,349	1,176	251
1885	662	715	122	1891	1,297	1,133	279
1886	591	642	71	1892*			
1887	613	561	158				

* For the first nine months.

To-day 9s. 2d. to 9s. 3d. per lb. was actually paid for good sound *Rio* root; and from 6s. to 6s. 6d. per lb. for *Carthagera*, according to quality.

INSECT-FLOWERS.—Some of the importers say that prices in Trieste are from 2s. to 3s. per cwt. higher, others report a firm market, but no change in prices.

OILS (ESSENTIAL).—American oil of *Peppermint* still shows a declining tendency. HGH brand sold at 12s. 6d. per lb. a few days ago; but it is said that since then 12s. 3d. per lb. has been accepted. English oil of *Cloves* has been advanced 3d. per lb. in sympathy with the rise in Zanzibar cloves. The quotations are now from 2s. 5d. to 2s. 6d. per lb. for first, and 2s. 4d. per lb. for second quality. English *Caramay* oil may be had at 5s. 3d. to 5s. 6d. per lb. *Menthol crystals* are offering for distant shipment (February) at lower prices—viz., 9s. per lb.—but on the spot from 9s. 9d. to 10s. 6d. per lb. is wanted, according to quality. The fixing of the prices of the new oil of *lemon* in Italy is expected daily. Meanwhile prices keep firm, as also do those of *Bergamot*. There have also been modifications in the quotations of the following essential oils:—Oil of *Anise* is dearer, German being quoted at 7s. 9d., and Russian at 8s. 9d. per lb.; oil of *Chamomiles* has advanced to 7s. per lb. for fine English distilled, and to 8s. 6d. per oz. for oil distilled from German flowers; *Coriander* oil is now quoted at 25s. per lb.; oil of *Dill* at 9s. per lb.; oil of *Fennel* (German) at 4s. per lb.; all these being dearer. The demand for *Eucalyptus* oil continues, and we hear of considerable sales, though there has been no further advance in price. *Lemon-grass* oil is quiet at 1½d. per oz. on the spot; for arrival there are buyers at 1½d. "c.i.f." terms. *Star anise* oil has sold to arrive at 5s. 4d. per lb. c.i.f., and on the spot at 5s. 11d. per lb. For oil of *cassia* 2s. 9d. c.i.f. to arrive would be accepted. On the spot 3s. 3d. per lb. is still the quotation.

OPIUM.—The London market is firm, but not very active. *Persian* opium is still held for 10s. 6d. per lb. for fine quality, while fine druggists' kinds are quoted at 7s. 6d. to 8s., and secondary varieties at 6s. 6d. to 7s. per lb., according to quality. Old crop *Malatia* opium is quoted at 8s. 6d. per lb. New *Salonica* is held for very high prices (about 10s. 6d. per lb.), and is, therefore, practically off the market at present. Our Smyrna correspondent writes as follows, under date of September 24:—"Our market has again been active this week, the sales consisting of over 100 cases new manufacturing, chiefly for America, from 6s. 3d. to 6s. 5d. per lb., f.o.b.; but to-day sellers are holding for more money, otherwise double this quantity would have been secured, as there are still many buyers who have not been able to operate. For the Dutch Government also opium is eagerly inquired for, the last price paid being equivalent to 7s. 2d., f.o.b.; but the quantity hitherto accepted as suitable for the purpose required does not exceed, so far as Smyrna is concerned, 100 cases, against the 600 sold to the Government by the Smyrna and Constantinople houses. No rain has as yet fallen in the Upper districts, therefore no progress can be made with the autumn sowings. The arrivals to date in this market are 2,730 baskets, against 2,180 at the same time of last year."

ORRIS.—This is what we hear from Leghorn under date of October 1:—"The new crop is now beginning to arrive upon our market; prices are firm, but no business to speak of has yet been put through. The quality of the *Verona* root is unusually fine; that of *Florentine* does not appear to be particularly attractive."

QUICKSILVER.—The importers' price remains 6l. 7s. 6d. per bottle, while second-hand holders offer at 6l. 5s.

QUININE has been dull all the week, second-hand being quoted nominally at 9d. per oz.; but last night a strong excitement has suddenly made its appearance in the market, and with buyers coming in on all hands a very large quantity, estimated variously at between 100,000 and 200,000 oz., has changed hands at rising prices, from 9½d. to 9¾d. being paid on the spot (10d. being asked), 9½d. for December, from 9¾d. to 9¾d. for January, and 10d. for March delivery. The whole of this business has been done by second-hand holders, and there is no doubt that it is all of a speculative character. The agents do not quote any fixed prices at present.

SENEGA.—There are not many dealers who have any to

offer, and 2s. 9d. to 2s. 10d. per lb. is spoken of as the market value for good quality, but we do not think that it would be easy to sell at that figure. Some "inferior" root is being offered at 2s. 6d. per lb.

SENNA.—The arrivals remain small up to the present. By the *Peninsular* have come 252 bales of leaves and 25 bales of pods. The crop of *Tinnevely* leaves is now estimated at only half of an average yield, while the quality generally is reported to leave much to be desired.

SPICES.—After many months of stagnant trade and declining prices a sharp improvement has set in, and several of the leading kinds of spices are higher. This is notably the case with *cloves*, in which a large business has been done, while at auction 890 bales Zanzibar sold with strong competition at 2½d. to 3d. per lb. for dark to fair. *Chillies* are irregular, at 60s. to 70s. per cwt. for Zanzibar or Sierra Leone, according to quality. *Black pepper* is very firm, both on the spot and for delivery, and *white* is also dearer, at 4½d. per lb. for fair Penang, and 5½d. to 7½d. for fine to bold selected Singapore. *Pimento* has advanced to 2½d. to 3d. per lb. for fair to fine bold. *Ginger* is dearer for Jamaica, 56s. to 62s. for low to bright washed medium; Bengal sells at 30s., but Cochin is not so brisk of sale.

STROPHANTHUS.—The brown seed which is being offered at 9d. per lb. is of very ordinary wormy quality. Good *Hispidus* seed, though not in brisk demand, still brings about 2s. 10d. per lb. when wanted.

TEA.—The higher rates for tea have brought out large supplies of Assam, with easier prices all round, especially for commoner kinds. A large number of better teas were withdrawn in the heavy auctions of Monday and Wednesday, the biddings being below importers' ideas of values. Congous are unchanged, with a fair trade doing; and Capers are steady to firmer for good 7d. to 8d. sorts. The offerings of Ceylon tea for the week have been smaller than of late, and with good competition full prices have been obtained, especially for teas from 7d. to 9d., which show an advance in many cases of fully 2d. from the lowest point.

TURMERIC is selling at 17s. 6d. to 18s. per cwt. for *China*, and at 20s. per cwt. for *Bengal* finger.

VALERIAN-ROOT.—A little dearer; for Belgian from 32s. 6d. to 35s., according to quality, must now be paid, whilst French is held for 27s. 6d. to 30s.

VANILLA.—Reports from Mauritius, dated September 10, say that the crop is being cured, and that small parcels of it will soon be available.

WAX (JAPAN).—Very slow and lower again, 35s. to 36s. per cwt. having been accepted for good pale squares on the spot.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

THE Philadelphia chemical factory has been buying this week, and we have to report sales of 150 cases of usual current manufacturing opium (mostly to that firm) at the parity of 6s. 4d. per lb., f.o.b. Our market is active and well sustained.

THE NEW YORK MARKET.

(By Cable from our Correspondent.)

NEW YORK, October 6.

THERE has been a great deal of excitement in cascara sagrada, of which 10,000 lbs. have been sold at gradually advancing prices up to 10c. here. Senega root is also dearer, with business amounting altogether to 30,000 lbs. at prices closing at 55c. per lb. Balsam Canada has risen to 2c. per lb. for good new quality. On the other hand, there has been a serious fall in Mexican sarsaparilla, which is now offering at 8½c. per lb.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Is Water-analysis a Failure?

SIR,—I do not know whether I am quite in order in criticising an editorial, but if I am there are several points in your "Is Water-analysis a Failure?" that call for plenty of discussion. The dictum of such authorities as Sir George Buchanan and Dr. Thresh must carry immense weight, but I think the suggestion that only the medical officers of health are to give opinions on water could hardly be seriously entertained. That a certain amount of medical knowledge must be brought to bear on special water-questions is certain; but in ordinary water-analysis a chemist who has had thorough experience in his work may, I maintain, pronounce a fairly definite opinion. What medical knowledge did Dr. Thresh bring to bear in his strictures on the water-supply of Writtle? I have carefully followed his analytical figures and the deductions he draws. Those deductions follow directly from the chemical analyses, and from no medical evidence. The fact that many samples contained, as Dr. Thresh puts it, "much oxidised sewage" is seen from the high amount of nitrates and chlorine, together with the large amount of organic matter, and its state of oxidation from entirely chemical data. Of course responsible authorities will generally trace a condemned water to the source of contamination, but how are they to suspect this contamination without a chemical analysis? For example, a sample of water was sent to a colleague of mine—water which was being drunk largely in the north of London. He condemned it at once on account of the high amount of ammonia, free and albuminoid, and chlorine. Moreover, he succeeded in extracting a small quantity of urea from it. He succeeded in closing the source of supply; but after a year or so the local authorities reopened it, and he had hard work to close it again. When at length the well was honestly examined, a urinal was found draining straight into it. What need of medical testimony in such a case is there? There is one more point I must mention, and that is that a water-analyst who has had any real experience in bacteriological work will not judge a water from the number of the organisms contained therein. We have repeatedly found that the Kent water, which is by far the purest water supplied to London, contains more organisms than that of any other company, and Dr. Washbourn, the well-known bacteriologist, has, he tells me, made substantially the same observation. I must apologise for taking up so much of your space, but such a question as your leader asks is of vast importance to water-analysts.

Yours, &c.,

40 Craven Street, W.

ERNEST J. PARRY.

Slake.

SIR,—I have had considerable dealing with the polishing fraternity, and my experience is that slake-varnish is not shellac and sandarac in spirit, but gum benzoin in spirit, in the proportion of 4 lbs. fair whitish pieces to 1 gallon spirit. The shellac and sandarac in spirit is what is termed French polish.

Yours truly,

Glasgow, October 1.

D. S. C. REID.

Nux Insana.

SIR,—I am very much obliged to Mr. Hooper for his interesting letter. His description of the fruit of *Hydnocarpus venenata* seems to tally with that of the *Pruna insana* of Clusius, and my query is therefore answered.

Whether this is Shakespeare's "insane root" or not is another question, and one of minor importance; but I do not see why Shakespeare must have meant a European plant. So far as I am aware there is no such plant bearing this name that he could have referred to with any show of reason. Henbane has been suggested, and Apuleius calls it *insana*, but who would "eat on" henbane? It is not a drug that we want, but something that is or may be mistaken for an edible fruit. What more likely than that such a fruit as this, so recently described in books accessible to him, should have occurred to Shakespeare as serving his purpose? All was fish that came to his net.

I am, &c.,

Epworth, Doncaster,

C. C. BELL.

October 1.

P.S.—There is one point, by the way, in which Mr. Hooper's description of the fruit differs from Gerard's. He says it contains "several oily seeds"; Gerard says "a membranous stone or kernel." Is there more than one?

The Label on a Poisonous Proprietary.

SIR,—Two points strike us in connection with the pattern poison-label on page 534:—

(1) What "law" forbids us to purchase a "poison" from any person who may be willing to sell it?

(2) Is the statement of the existence of an admitted legal obligation a fulfilment of such obligation?

Yours faithfully,

Sept. 30.

QUERULOUS QUESTIONERS. (127/45)

Non-cutting Arrangements.

SIR,—In regard to this matter I quite agree with the views of "Country Chemist."

In my district I have not had the slightest demand or inquiry for the "Curative Compound," nor have I noticed any form of advertisement with a view to creating a demand.

The first thing is to make a demand for the preparation. It is idle to expect traders to "enthuse" about an article for which they have not a sale.

If Mr. Geddes is so solicitous about the interests of the chemists, why does he not try the non-cutting arrangements with regard to St. Jacobs Oil? There he would be on sure ground and have none of the difficulties which now appear to confront him. While many of the largest and most successful proprietors have steadily refused to make any move as to regulating retail prices, there are a few cases where it has been successfully done, and an effort to "protect us from ourselves," as it may be put, is in many districts required, and would be welcomed by numerous retailers.

Yours, &c.,

September 28.

IRISH CHEMIST. (126/44.)

SIR,—Reduced to plain speech, Mr. Geddes' case seems to stand thus:—"Let the chemist introduce and push my 'Compound,' and thus save me an enormous outlay in advertising, and he shall have a fair profit on what he sells—say, 20 per cent.—and I will supply him with the compound at, say, 60 per cent. profit to myself." Is it to be wondered at, or is he surprised to know, that chemists don't see the fun in it?

Yours truly,

HELP YOURSELF. (128/46.)

The Irish Council Election.

We have three letters as we go to press in reference to the recent election.

Mr. R. J. Downes maintains that the election proves that the pharmaceutical chemists have the confidence of the electors. There were, it appears, 140 good voting-papers from members. As the lowest pharmaceutical candidate on the poll scored 142, it is clear all must have received some associate votes. Mr. Downes also considers that the whole-

sale druggists have been plainly told that they are not wanted on the Council.

Mr. Arthur Reynor, member of the Society, Dublin, says that though he and others voted for Mr. McWalter's "recommendation," they did so because they thought he was technically correct, but Mr. Reynor is quite sure that as far as the examinership is concerned the right man is in the right place. He thinks it somewhat extraordinary that the Council should have themselves voted on what was practically a motion of censure on themselves.

Mr. B. J. Costello also thinks there was some illegality about the appointment of Mr. Robinson.

The Stamping of Proprietary Medicines.

A Southampton chemist, referring to Mr. Round's letter last week, says he had a somewhat similar communication from the Board in reference to an embrocation which he formerly stamped on the outside of the wrapper. He now, in accordance with the Board's orders, stamps it over the cork. But he says he has since noticed that recent arrivals of the following articles have been found to be stamped just as his was, viz. :—

2s. 9d. Liebig's Chemical Food.
4s. 6d. and 2s. 6d. Pepper's Quinine and Iron Tonic,
2s. 9d. Pepper's Taraxacum and Podophyllin.
Lalor's Phosphodyne.
Wild's Gout-mixture.
Pond's 1s. 1½d. Extract.
1s. 9d. Vinolia.
Orchard's Cure.

As every seller of articles inadequately stamped is liable to the penalty, this hint should be attended to by the makers of the goods named.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Mag. Sulph. and Bicarbonates.

SIR,—Please state how the following can be dispensed without a deposit or without crystals being formed :—

Potass. bicarb.	..	..	..	..	3iv.
Magnes. sulph.	..	..	..	..	3iv.
Sodæ bicarb.	..	..	..	..	3ij.
Spt. ether. chlor.	..	..	..	..	3iij.
Aqua ad	..	..	..	..	3viij.

M.

SENEX. (118/38.)

[When the mag. sulph. is dissolved in 2 oz. of water, the bicarbonates in the remainder, the latter poured into the former, mixed, and the spirit added, the mixture is perfectly clear. In the course of a few hours crystallisation begins, and proceeds steadily until the whole of the magnesia appears to come. The crystals are magnesium carbonate, and their formation cannot be prevented.]

A Double Query.

SIR,—I shall be glad to know how your numerous correspondents would dispense the following, received from an eminent physician :—

Pil. asafetide co.	..	..	..	..	gr. iv.
Ext. lactuce	..	..	..	..	gr. iss.
Tr. opii	..	..	..	..	℥j.
Tr. gentiane	..	..	..	..	℥ij.

M. Ft. pil. ij.

Sp. ammon. arom.	..	..	..	..	3j.
Quinine sulphat.	..	..	..	..	gr. iij.
Tr. lavand. co.	..	..	..	..	3ij.
Aq. camph.	..	..	..	..	3ij.

M.

Yours truly,
P. J. (121/16)

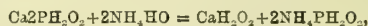
[Use the dry ingredients for the asafetida pill and evaporate the tinctures by a gentle heat to extract consistency

then mass. In the case of the quinine mixture rub the quinine sulphate to powder and mix with 5ss. of acacia mucilage. Mix the spirit and tincture with the rest of the water, and add to the quinine.]

Calcium Salts and Hydrates.

SIR,—I should be greatly obliged if you would give information as to the cause of the cloudiness when preparations of chloroform (either spirit or water) are mixed with camphor-water.

Also why a precipitate of CaH_2O_2 is not formed in the following mixture according to the equation :—



whereas with ammon. carb. a precipitate is immediately formed of carbonate of lime :—

Liq. ammon.	..	..	..	..	℥x.
Æth. chlor.	..	..	..	..	℥x.
Tr. limonis	..	..	..	..	℥x.
Calc. hypophos.	..	..	..	..	gr. v.
Aq. camph.	..	..	..	..	3ss.

The precipitation of camphor (?) is considerable.

A JUNIOR. (123/47.)

[We have failed in obtaining a camphor precipitate under the conditions stated; we attribute it in the case of the mixture to the salt present. Calcium salts are not affected by ammonium hydrate, nor by sodium and potassium hydrate unless in very strong solution. The hypophosphite behaves like the chloride. Apparently calcium has greater affinity for the acid radicle than for hydroxyl.]

Another Quinine Mixture.

SIR,—Can the following be made into a presentable mixture or dispensed without a precipitate sticking to the sides of the bottle ?—

Quin. disulph.	..	..	..	..	gr. xx.
Sod. salicylat.	..	..	..	..	3j.
Ac. citric.	..	..	..	..	gr. xx.
Tr. aurant.	..	..	..	..	3vj.
Aq. ad	..	..	..	..	3vj.

Ft. mist.

3j in water night and morning.

I followed "Art of Dispensing" and several ways, but could not make a satisfactory mixture.

CODEX. (121/5.)

[The mixture is a thoroughly bad one. The quinine salt reacts with the salicylate, and the citric acid precipitates salicylic acid, which with the insoluble alkaloidal salicylate gives the trouble. If the citric acid is omitted and the quinine simply rubbed up with water a fairly presentable mixture is obtained.]

How Can this be Done ?

SIR,—I have had to make as under :—

Ext. abietis nig. inspiss.	..	..	..	..	3ij.
Mag. carb.	..	..	..	..	q.s.

M. Ft. pil. xx.

Beat as much as you like of mag. carb. into the extract, in a few days they lose their pilular form.

INSPISS. (119/71.)

The Spanish Prescription.

SIR,—I was pleased to see a translation of the above from a correspondent in Uruguay. It shows what a far-reaching influence your journal exerts.

The prescription, as you say, proved a puzzle to your English readers, and even now, after a solution from a Spanish quarter, the mystery is not cleared up, for if dispensed according to "E. E. C." the result is a black jelly, whereas the patient said he had had it made up as a reddish liquid. You may remember I made two attempts at

deciphering the hieroglyphics. In my second guess I stated the ingredients as follows:—

Extracto fluido de quina	Fluid extract of cinchona
Tintura de canela	Tincture of cinnamon
Vino rojo	Red wine
Agua pura	Pure water
Percloruro de hierro	Perchloride of iron (solution)

As this would have made a black mixture, I suggested that the first dispenser had read "mercurio" for "hierro."

I was probably wrong in reading "fluido" for "blando" (soft) in the first line, but the original dispenser appears to have agreed with me in the third and fourth lines. What were the prescriber's real intentions?

Yours truly,
C. S. ASHTON.

123/6. *W. H. Turner*.—We cannot make out the third item of your prescription. The others are:—Acid. phenic, cocain. hyd., tinct. hamamelid., and aq. puræ.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMIST'S AND DRUGGIST'S DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

118/71. *Diamond*.—See reply to "Frank," last week.

118/56. *Mag. Cit.*—(1) One per cent. of carbolic acid is the average quantity added to dentifrices. You will find 10 grains of absolute acid to 1 oz. is a quantity not very agreeable, and difficult to cover. (2) As the strength of Liquor Morphine Hydrochlor. B.P. is 1 grain in 96 fluid grains, you will require to take 105 minims in order to get 1 grain of the morphine salt. (3) In cases of Poisoning with Paraffin the emetic should be followed by a stimulant (black coffee with a dash of brandy in it), then the dose of castor oil and laudanum.

119/57. *Ignoramus*.—Coffee-stains, like most vegetable colour stains, can be removed from linen with chlorinated-lime solution.

119/14. *B. H. B.*—Such houses as Maw's can supply you with a skeleton. You should consult the "Science Directory" in regard to loans of apparatus, &c., for science lectures.

119/68. *Benzoïn* has not complied with our rules.

119/32. *X. Y. Z.*—You may improve the Smoke-flavoured Honey by clarification, but it is risky to "doctor" honey in any way.

119/69. *Subscriber* (Leicester).—For Ginger-ale Essence see our issues of March 5, 1892, page 356, and March 19, page 432.

119/18. *W. Bove*.—There are two varieties of Erasmus Wilson's Hair-lotion, one with oil of almonds and ammonia, and one without. The former is commonly used, the latter rarely. See THE CHEMIST AND DRUGGIST, May 2, 1891, page 633, and February 6, 1892, page 216.

100/38. *Phosphate* wishes to know if Liquor Ferri Magnetic. Phosph. Conc. (Lightfoot) is a proprietary article.

Our information is that it is, and that the formula has not been published. Does anyone know to the contrary?

111/9. *Angelus*—Glycerine and Cucumber.—We have obtained very satisfactory results with the following formula:—

Warrick's jasmine pomade..	..	..	3iiss.
Powdered white Castile soap	..	..	5v.
" borax	..	..	9ij.
Otto of rose	..	..	mxxx.
Oil of lemongrass	..	..	mv.
Rectified spirit	..	..	3iv.
Glycerine	..	..	3viij.
Water	..	..	3xxv.

Mix the first three ingredients in a mortar, dissolve the essential oils in the spirit, and add to the glycerine and water previously mixed. Now emulsify the fatty mixture with this solution by adding it gradually and with constant stirring.

111/69. *H. T. (Transvaal)*.—(1) Old-fashioned Ginger-beer is a thing that cannot be hastened much in the making, since it is the yeast-cells that do the work. But we imagine that in the heat of the Transvaal the sooner you complete the process the better. To begin with, the yeast must be fresh "brewer's barm," and thoroughly active, and the proportions of ingredients are as follows:—

Honey	..	..	..	3ij.
Sugar	..	..	..	1 lb.
Strong tincture of ginger	..	..	..	3j.
Ticture of lemon-peel	..	..	..	3j.
Yeast..	..	..	..	3ij.
Warm water	..	..	..	Cong. j.

Dissolve the honey and sugar in the water, and add the tinctures when the solution has cooled to about 70° F. Then pour in the yeast with a few pieces of dry toast, and set aside to ferment for at least a day; add 3 drachms of cream of tartar dissolved in a few ounces of the brew. Strain and bottle.

We think you will find the product satisfactory, especially in regard to flavour, and you may expedite fermentation by decreasing the amount of sugar, and letting honey take its place. Much, of course, depends upon the temperature you work at. (2) We are communicating with your London agents.

120/34. *T. J. (Birmingham)*.—Treatment of Eczema.—We cannot advise in any special case; but see the following notes in THE CHEMIST AND DRUGGIST:—January 30, 1892, page 136; May 28, 1892, page 767; August 8, 1891, page 222; and in many previous volumes. You should use only such a soap as Eichhoff's ichthylol and tar soap.

120/18. *Apprentice*.—(1) In the B.P. Opium Assay, you take 140 grains of opium and 1,400 fluid grains of water, but only use 1,000 fluid grains of the saturated liquor; obviously, that is the equivalent of 100 grains of the drug. (2) You will get a cheap set of volumetric apparatus from Messrs. H. Poths & Co., who put up a set packed in a box. (3) Yes; you should try the "Corner for Students" again. We like to see young men work up from the bottom to the top.

121/33. *Thistle* has a lady customer who gets and uses 4 oz. of 1-in-12 Hypodermic Solution of Morphine every fortnight. He uses neutral tartrate of morphine, but every bottle sent gives trouble towards the end, becoming acid and brown. This can be avoided by boiling the distilled water with which the solution is made. "Thistle" should proceed as follows:—Boil 6 oz. of distilled water and pour into a dry 10-oz. stoppered bottle, which has been heated thoroughly in an oven and is still hot; close the bottle, and when the contents are cold add 5 drops of chloroform; shake until dissolved. To make the injection, put 160 grains of morphine tartrate in a 6-oz. dry, stoppered bottle, recently heated in an oven, and add 4 oz. of the sterilised chloroform-water; shake until dissolved, and send out in 1-oz. bottles which have been sterilised by heating. The corks should also be boiled in water. The morphia

may be recovered from the old solutions by precipitation with ammonia, and conversion into the hydrochlorate; but the simpler plan would be to sell it to the manufacturer who supplied the tartrate.

121/52. *Wilts.*—The tragacanth paste (THE CHEMIST AND DRUGGIST June 11, 1892, page 352) is suitable for sticking Labels on Parchment Paper.

122/66. *Shaheen.*—The process for Silvering Mirrors which is usually followed is to lay the glass, after it has been thoroughly cleaned, on a perfectly flat surface, cover it with tinfoil, and rub mercury over it with a hare's foot. Of course you may not succeed at first, just as you would not expect a mirror-maker to succeed at emulsion-making straight away.

122/31. *Jean.*—On referring to the American patents for a Self-inking Pad, we find that the inventor claims for an ordinary ink-pad, but preferably with two layers of woven material or felt, the lower one being softer than the upper. The lower cloth is to be saturated with any ordinary ink or colouring-matter, and the upper with a solution of alum in glycerine.

123/58. *Lapis Divinus.*—We are not aware of any means for freshening rancid butter.

124/39. *Desiderata.*—"Scientific Mysteries" should assist you. See also THE CHEMIST AND DRUGGIST, vol. xxxvi. page 256 *et seq.*, for outlines of lectures.

119/4. *W. R. Craig.*—Glycerine Jelly.—See THE CHEMIST AND DRUGGIST, December 12, 1891, page 361.

125/24. *Nemo.*—We cannot tell whether your sample of pulv. jalapæ is pure or not, because we do not undertake work of that kind for subscribers.

125/27. *Tempus Fugit.*—We have not the formula.

124/16. *H. S.*—We cannot assist you in the matter. See the rules which head this section.

117/19. *Oxon.*—(1) *Liquor Opii Sedativus*—See THE CHEMIST AND DRUGGIST, February 28, 1891, page 321. (2) *Pine Perfume*:—

<i>Olei pini sylvestris</i>	..	..	..	3iiss.
" <i>juniperi</i>	..	..	..	3iiss.
" <i>rosmarini</i>	..	..	..	℥lxxx.
" <i>lavandulæ</i>	..	..	..	℥xliv.
" <i>limonis</i>	..	..	..	3ss.
<i>Spt. rectificat. ad</i>	..	..	..	℥ij.

M.

161/59. *Chaulmoogra* sends a sample of Lotion for Broken Knees. He says:—"The recipe comes from a cavalry officer, and is put up by a groom. It is spoken highly of by horsemen, who use it in cases of broken knees, wounds resulting from accident, &c., and is said to heal slowly, closing the wound, and leaving but seldom a mark." On analysing it we make out the formula to be somewhat as follows:—

<i>Cupri sulph.</i>	..	..	..	3j.
<i>Plumbi acet.</i>	..	..	..	3j.
<i>Spt. camph.</i>	..	..	..	3j.
<i>Aq. ad</i>	..	..	..	3x.

Dissolve the salts separately in water; mix, and add the spirit of camphor

123/17. *Carduus*—(1) The list of Stock for a New Shop is printed in our DIARY for 1890. (2) We have formulæ for the preparations in type, ready to put in when space is available.

125/15. *Phosphate.*—*Manufacture of Aloin.*—Tilden's method is as follows:—Select a specimen of Barbadoes aloes, the most powerfully odorous that can be procured, bright-looking, and not the most waxy; break it up, and dissolve it in a quantity of boiling distilled water to which a few drops of sulphuric, sulphurous, or hydrochloric acid have been added. The proportions may be 1 lb. of aloes to 1 gallon of water. Let the liquid stand all night to deposit resin, then pour it off and evaporate quickly to double the weight of the aloes employed. Set aside for twenty-four hours to crystallise. Collect the crystals, and purify by re-crystallisation twice from water. This process worked well fifteen years ago, and the only reason why it should not now is that the aloes has undergone some change. It is an advantage to allow crystallisation to proceed for a week rather than a day.

118/52. *Tooth-paste.*—(1) A Tooth-paste similar to what you mention may be made according to the following formula:—

Precipitated chalk	..	..	..	3xvj.
Rose pink	..	..	..	3vj.
Powdered areca-nut	..	..	..	3iiij.
Sugar	..	..	..	3iiij.
Oil of cloves	..	..	..	℥xv.
Oil of cinnamon	..	..	..	℥xv.
Rose-water	..	..	..	a sufficiency
Glycerine	..	..	..	"

Mix the powders intimately with the essential oils, and make into a stiff paste with the glycerine and water mixture.

(2) The poison laws in Germany and France are much more restrictive than in this country. In the United States similar regulations exist as in Great Britain, and the same applies to Canada. See this volume, page 238.

163 29. *Newcastle* asks if the following directions may be used for B.P. Chlorodyne:—

Doses for adults only.

	Drops
In coughs, colds, influenza, agues, &c.	5 to 15
In consumption, asthma, bronchitis, spasm, &c.	10 to 25
Cholera, dysentery, diarrhoea, colics, &c.	15 to 30

We think the doses are quite safe, but it is well to bear in mind that should anything untoward happen (as is quite likely in bronchitis cases) condemnation for not sticking to the B.P. is almost certain to follow. We should omit "asthma" and "bronchitis," and add the following caution:—

The smaller doses should be taken in a tablespoonful of tepid water, not oftener than every four hours. The larger doses should in no circumstance be exceeded, or repeated within four hours.

122/63. *Inquirer.*—The effervescence on mixing glycerine with borax and sodium bicarbonate is due to liberation of carbonic-acid gas. See report of American Pharmaceutical Association in our issue of August 6, and article on American pharmacy the week following.

123/40. *Ergot.*—(1) Solution of Chloride of Lime is not usually bottled and sold for disinfection, but for bleaching. Chloride of zinc solution is used for the former purpose. You may follow the B.P. in regard to the lime. (2) We have already published a formula for a Linseed Compound for Coughs. See THE CHEMIST AND DRUGGIST, September 4, 1886, page 323, and December 21, 1889, page 377.

126/62. *Inquirer* (Ballymena) asks us what should be added to a strained infusion of Hops for Baking Purposes in order to make bread rise well. We take it that the hop infusion is not to make the bread rise, but the something else should. Carbonate of ammonia is the simplest thing.

126/29. *Chamomile.*—See the list of books in the DIARY.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL.

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AUSTRALASIA.

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crossed MARTIN'S BANK (LIMITED).

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Summary.

A CASE is reported from Hastings of a conviction under the Poisoned Grain Act.

DR. J. C. THRESH and Mr. D. B. Dott contribute letters on the water-analysis discussion.

THE competitors in the Corner for Students have done fairly well this month with an alloy.

LEAD-TAINTED tartaric acid has been the subject of several prosecutions in Glasgow, which are not yet settled.

A TORONTO Magistrate has fined a limited company for selling chlorodyne and keeping open shop for the sale of poisons.

At a meeting of the Institute of Chemistry it was resolved to purchase a house near Bloomsbury for offices, examination-hall, &c.

WE print the questions set at the Pharmaceutical Preliminary examinations in Great Britain and Ireland this month, also the results of the English Minor and Major.

A PATENT-MEDICINE vendor at Huddersfield has been fined for selling a stamped medicine from a shop for which he had not a licence. He had a licence for other premises in the town.

WE give fuller particulars of the prosecution of the wife of an unqualified vendor of poisons by the Pharmaceutical Society under the Pharmacy Act at Birmingham, which we reported briefly last week.

AT the annual meeting of the Federation of Grocers' Associations are solution in favour of contending for the legal right of grocers to sell stamped proprietary medicines containing poisons was adopted.

IT will be seen from our report of the American Wholesale Druggists' Convention that manufacturers, wholesale dealers, and retailers of proprietary medicines have arrived at an agreement in regard to cutting.

IN a case involving the question of liability for the carriage of oil of peppermint, Mr. Commissioner Kerr has made some characteristic remarks on the way shipowners contract themselves out of liability for damage.

MR. WILLS, at the dinner of his College on Tuesday night, and a correspondent in this issue, complain about the London pharmaceutical examiners summoning October candidates in September. This is a real grievance, if not an illegality.

THE report of the Irish Pharmaceutical Council's last meeting shows that Mr. Samuel Turkington, an associate druggist, has been selected to fill the vacancy on the Council caused by the death of Mr. Doran. Mr. Hayes has been re-elected President.

THE report of Dr. Bell, Principal of the Somerset House Laboratory, on which we comment, shows that the export of British tinctures and spirituous medicines, encouraged by the allowance of drawback, is largely developing. Dr. Bell also mentions a remarkable investigation into the bactericidal efficacy of disinfectants undertaken with a view to revise the Board of Trade's ships' stores requirements, the result of which is largely to the credit of carbolic acid.

THE CHEMISTS' AND DRUGGISTS' DIARY, 1893.

WE have nearly completed the preparation of this work, and will be going to press with it in a few days. So far as advertisements are concerned, we must absolutely

CLOSE FOR PRESS ON OCTOBER 22,

after which no orders can be received. We ask Firms who wish to have announcements in this DIARY to note that fact, and to communicate with the publisher at once. This is

AN OPPORTUNITY WHICH SHOULD NOT BE MISSED.

THE CHEMISTS' AND DRUGGISTS' DIARY is a universal favourite, a steady desk-companion all the year round, and is used daily in thousands of pharmacies and wholesale houses in all parts of the globe. It is to sustain the reputation of the DIARY in these respects that it is being prepared thus early. In order that

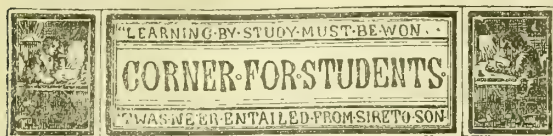
COLONIAL FIRMS

may have their copies about Christmas time, we must print and bind a large consignment for dispatch by the mail steamer sailing the first week of November. Then will follow dispatches to Indian, South African, and foreign subscribers, all of whom we aim to put on a footing with home subscribers in having their diaries ready for use before Christmas. It would be ridiculous placing the book before them in the middle of January. The literary contents of the 1893 edition will be of exceptional value, and we should like to see the advertisement section completely representative of the

BRITISH DRUG AND ALLIED TRADES.

Firms who have advertisement-contracts with us now in force should write to the publisher if they desire special matter inserted. Others who wish to figure in it will appreciate the necessity for securing space within the next few days.

DISTINCTION BETWEEN LINEN AND COTTON FIBRE.—If chromic acid is applied, linen fibre after a few seconds, appears as if cut up into transverse portions, whilst cotton fibre, if similarly treated, is split up as if into bristles. [Wiesner in *Dingler*.]



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

A METALLIC alloy will again form the subject of the exercise in qualitative analysis. The alloy must be submitted to a thorough systematic examination, its constituents detected, and all other substances proved absent.

Students' applications for portions of the alloy will be received up to Wednesday, October 19, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, October 29.

REPORTS.

The metallic alloy issued to our correspondents last month contained 33½ per cent. each of zinc and antimony, and 16½ per cent. each of lead and tin; it contained traces of iron, sulphur, and arsenic.

Sixty-three students received portions of the alloy, and forty-six sent in reports of their analyses. No less than twenty-five students failed to detect the tin, while the failures to detect lead, zinc, and antimony were 11, 10, and 8 respectively.

In the analysis of a metallic alloy the preparation of a solution is a matter of no small importance. For the purposes of precipitation hydrochloric acid alone has great advantages, while nitric acid or nitrohydrochloric acid are objectionable solvents when the use of sulphuretted hydrogen is contemplated. There are, however, cases in which the objection to the use of these solvents is overcome by some important advantage, and this exercise illustrated the fact very well. When the alloy was warmed with dilute nitric acid a violent action ensued, and nitrous fumes were evolved, showing that the acid was being robbed of its oxygen, and a whitish powder separated. It was clear that oxidation of the alloy or of some of its constituents had taken place. When it is considered what metals are oxidised in this way the number is found to be small, and for all practical purposes attention may be confined to antimony and tin. The first question that arose then was—Did the insoluble product of the action of nitric acid upon the alloy consist of an antimony oxide, a tin oxide, or of both? There was no difficulty in answering this question. One way of solving the problem was to wash the white residue with water, dry, and fuse it with sodium hydrate, exhaust the fused mass with water containing about one-fourth of its volume of alcohol. The solution now contained any tin present, while the insoluble residue, if any remained, contained the antimony in the form of sodium antimonate. To obtain the tin as sulphide the alkaline solution was acidulated with hydrochloric acid, and the tin precipitated with sulphuretted hydrogen. The antimony was also easily obtained as sulphide from an acid solution of the antimonate; or any other tests might have been applied for the purpose of identifying the separated metals.

The nitric-acid solution contained the lead and zinc, with very little antimony or tin. When the excess of acid had been removed by evaporation, hydrochloric acid added, and the solution cooled thoroughly, the greater part of the lead separated as chloride. The precipitation with sulphuretted hydrogen now presented no difficulties; most of the heavy

metals were removed, and consequently very little of the gas sufficed. This was a consideration which many of our correspondents will appreciate.

If, instead of operating in this way, a complete solution of the alloy were obtained, a serious difficulty arose. It was very hard to effect a perfect precipitation of the lead, antimony, and tin as sulphides; the disagreeable operation of passing sulphuretted hydrogen through the solution required to be continued for a long time. It was in the attempt to carry out this plan that most of our contributors got into difficulties. Those who took advantage of the production of insoluble oxides of tin and antimony had a much easier task to perform.

PRIZES.

The first prize for the best analysis of the alloy has been awarded to

A. H. CLELAND ("Danwer"), Leytonstone, N.E.

The second prize has been awarded to

GEORGE VOGT, 8 Serpentine Terrace, Kendal, Westmoreland.

Marks Awarded for Analyses:—

A. H. Cleland (1st prize) ..	97	Vigovina	76
Geo. Vogt (2nd prize) ..	96	G. H. H.	75
F. F. A. Tunbridge ..	93	Verax	72
A. Lander	92	D. N. Fullerton ..	70
H. F.	92	T. K. (Dublin) ..	68
A. Bunsen	90	A. Howard	67
Persist	90	Acidulous	65
H. McL. R.	90	Ozone	63
Zirconium	90	P. Harris	60
W. J. Brown	90	W. Burnett	55
Walton Porter	85	Sapientia	55
J. Rose	85	C. E. Ashby	55
H. Bowden	85	Moyhitt	50
Belladonna	84	Pepsine	50
W. Hood	83	Sunland	48
John	83	Aconitum	46
Pyrogallol	82	Schizocarp	46
Ornum	82	KCy.	45
J. A. Hare	80	Nulli Secundum ..	45
Ulexine	80	Victory	40
Cogito	79	Tyro	30
Cymro	78	Spero	25
Bee Gee	77	M. M.	20

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

G. VOGT.—Other determinations of the specific gravity were even lower than yours. It would have been difficult to get an accurate determination unless the alloy were reduced to fine powder, it was so full of cavities.

A. LANDER.—The precautions you took to ensure that the sulphuretted hydrogen was used in sufficient quantity were most important in this case.

PERSIST.—You should have given a summary of your results.

ZIRCONIUM.—The precipitation of lead as chloride showed more than a trace to be present, bearing in mind the comparative solubility of the chloride.

W. J. BROWN.—It was not easy to form an estimate of the quantity of tin present, but the spongy mass thrown down on the zinc was of considerable bulk if the precipitation in the platinum dish were conducted properly.

BELLADONNA.—Probably your solution contained too much free acid to admit of the precipitation of the tin as sulphide.

JOHN.—With ordinary care a considerable mass of finely-divided metallic tin was obtained by the electrolysis of the hydrochloric-acid solution of the oxides produced by treating the alloy with nitric acid.

J. A. HARE.—The nitrohydrochloric-acid solution of the alloy gave a considerable precipitate of lead chloride on cooling. A large excess of acid would, of course, prevent this.

ULEXINE.—The flaming you observed was due to the volatilisation and combustion of zinc, which burns in the air at a high temperature.

COGITO.—You must have had a large excess of acid present to prevent the separation of the lead chloride, or else you did not allow the liquid to cool sufficiently.

CYMRO.—It is possible that, notwithstanding all your trouble, you failed to precipitate the heavy metals completely with sulphuretted hydrogen. The white precipitate which you took for aluminium hydrate may have been due to tin.

G. H. H.—A sublimate of mercury may always be positively identified, however small it is. No other sublimate consists of metallic globules which coalesce on being rubbed together. You should give more attention to methods of separation; odd tests are of very little value in such an analysis.

J. H. SHIMWELL.—The behaviour of the alloy with nitric acid suggested antimony just as much as tin. The colour of the sulphuretted-hydrogen precipitate was strongly suggestive of antimony.

T. K. (Dublin).—The metallic deposit of antimony was easily obtained by electrolysis. It is strange that you did not observe the blackening of the platinum, although you tried the experiment twice.

A. HOWARD.—With very little free acid present, part of the zinc might have been thrown down with the sulphides of the heavy metals but enough for subsequent detection would certainly remain in solution.

ACIDULOUS.—It does not appear from your notes that you allowed the hydrochloric-acid solution to cool for the purpose of seeing if lead chloride would separate.

OZONE.—You did not sufficiently consider the possible presence of antimony: the several reactions you attributed to bismuth were due to either antimony or tin.

P. HARRIS.—A much more exhaustive analysis is necessary, remembering that all metals not detected in the alloy must be proved absent.

MOYHITT.—You mentioned lead as a constituent of the alloy, but according to your notes you did not detect it.

PEPSINE.—You do not seem to have noticed that it was an alloy you were dealing with.

ACONITUM.—An alloy of lead and zinc would not have yielded such a result with nitric acid; it would have dissolved to a clear solution free from white precipitate.

VICTORY.—It is impossible that you could have added sulphuretted hydrogen to a solution of the alloy without getting some precipitate, but to ensure a complete precipitation of the metals was a rather difficult matter.

HALF-YEARLY PRIZE.

The following are the names of the first twenty competitors in the special prize competition. Two of those included in our last list fall out—viz., "P. Macrocephalus" and "Moyhitt," giving place to F. F. A. Tanbridge and J. Rose.

Walton Porter	376	H. Bowden	343
J. A. Hare	373	Ulexine	341
A. Lander	373	H. McL. R.	337
Belladonna	372	Verax	337
Zirconium	370	A. Howard	330
John	357	Ornum	329
H. F.	354	F. F. A. Tanbridge	326
Bee Gee	352	J. Rose	317
Danwer	349	T. K. (Dublin)	313
W. Hood	347	Pepsine	309

English News.

Carbolic acid Poisoning.

On Monday night, Emily Holmes, aged nine years, residing at Allerton, near Bradford, died from carbolic-acid poisoning, after enduring frightful agonies. Deceased was in the house with her sister, and the latter handed her from the cupboard a bottle containing, as she believed, raspberry vinegar, a portion of which she drank from the bottle before the mistake was perceived.

Sheffield Chemists Meet.

The annual general meeting of the Sheffield Pharmaceutical and Chemical Society was held in the Society's rooms, Surrey Street, on Thursday evening, October 6. There was a good attendance of members and associates. The annual report and financial statement were read and passed. The following officers were appointed for the ensuing year:—President, Mr. Robert Watts; vice-presidents, Mr. William

Ward and Mr. S. T. Rhoden; hon. treasurer, Mr. G. T. W. Newsholme; members of the Council, Messrs. J. H. Bradwall, G. Ellinor, A. B. Fox, C. O. Morrison, G. T. W. Newsholme, G. Owen, jun., and J. Preston; auditors, Mr. R. W. Watson and Mr. A. Wood; hon. secretary, Mr. J. F. Eardley.

The School of Pharmacy was opened on Thursday evening, when an address to the students was delivered by Alderman W. Gowen Cross, J.P., of Shrewsbury.

A Chemical Firm's Gift to Oldbury.

Members of the firm of Messrs. Albright and Wilson, chemical manufacturers, of Oldbury, have presented three recreation-grounds to their town. Mr. Arthur Albright gave a park for Langley and 1,000*l.* for its maintenance. His son, Mr. W. A. Albright, gave a recreation-ground for the centre of the town, and Messrs. Wilson contributed 1,000*l.* to provide a recreation-ground for Rounds Green.

A Goose Stuffed with Poison.

The residents at Clarke's Temperance Hotel, Birmingham, had a narrow escape a few days since. The late Mr. Clarke suffered from asthma, and used to smoke a mixture of stramonium and belladonna, which was kept in a jar in the pantry. A goose was prepared for dinner, and by mistake the cook went to the jar referred to, and took out a large handful of the mixture and stuffed the goose with it, believing it to be sage. About an hour after dinner Mrs. Clarke, her two daughters, and the servants experienced burning and dryness in the throat, and the pupils of their eyes were dilated. After consultation with a neighbouring chemist (Mr. W. Jones, of Banks & Co.) the origin of the mischief was traced, and a surgeon was called in, who administered emetics. A commercial traveller staying in the house was also affected.

Fire.

On Thursday afternoon of last week a fire broke out in the shop of Messrs. Chave & Jackson, chemists and druggists, Broad Street, Hereford, owing to the vapour of some turpentine catching fire during the making of furniture-polish by an assistant. A police constable who was standing outside observed the smoke and hurried in, and with the help of the assistant succeeded in extinguishing the flames in a few minutes. Their labours were greatly helped by the bursting of a large carboy containing water in the vicinity of the outbreak. The damage to the shop and contents is considerable, and two sheets of plate glass in the front window are cracked. Messrs. Chave & Jackson are insured.

Westminster College Dinner.

On Tuesday night the opening of the twenty-first session of the Westminster College of Pharmacy was celebrated by a dinner in the Venetian Chamber of the Holborn Restaurant, whereat Captain Cecil Norton, M.P., presided, supported by Mr. G. S. V. Wills and Mr. H. Wootton. Covers were laid for 160 guests, and dinner was served about 7 o'clock. The chairmen of the spur tables were Messrs. Dobson, Gravill, Botwood, Walden, Watson Will, and Morrison. After the Queen had been toasted, the Secretary (Mr. Walden) read his report of the twentieth session, which reflected a change in the work of the College in sympathy with the altered examinations, a much larger proportion of time having been devoted to practical chemistry and pharmacy. Of the students 123 passed various medical and pharmaceutical examinations, the latter comprising 17 in the Preliminary, 63 in the Minor, and 13 in the Major. The numbers were not so large as in previous years, but that was attributed to the alteration in the examinations. The report concluded by congratulating Mr. Wills on the fact that this year he completes his twenty-first year as a pharmaceutical teacher.

Mr. Pensam gave "Success to the Westminster College of Pharmacy," and in replying to it Mr. Wills said that he was always glad to see the old faces which were brought together on those occasions. The College was still going ahead. At the July examinations they had twenty men more on hand than the College was supposed to accommodate, and he had the satisfaction of knowing that when his students went out into world they did well. Four Westminster College men were examiners on different pharmacy boards in the colonies, and two were presidents of colonial societies. He congratulated old

students on the fact that they had got "through the mill," for the Minor was a very different thing now to what it was when he first commenced to teach. To pass a creditable examination now was no mean ordeal. He believed that the examinations were conducted fairly and in an impartial manner. He had no fault to find with increased severity, nor with the new subjects, which would be useful, but he would like to know where these changes were going to end. (Hear, hear.) What with increased severity in chemistry and the knowledge of practical pharmacy required they were making all the candidates wholesale chemists, and there would be a strike amongst the latter by-and-by if they did not take care. (Laughter.) But one thing he did complain of, and that was the absence of any fixed date for the examinations. They used to know when the examinations would come on, and teachers made their arrangements accordingly. Thus in July the examinations used to begin on the 9th and they closed the College on the 10th; this year the examinations did not begin until the 20th. October examinations used to begin about the 24th; this year they began on September 27, while many students had still a large section of the lectures to attend. As the new regulation required fees to be paid on the 15th day of the month previous to that in which the examinations are held, the fee ought to have been paid in August. (Laughter.) He would not complain about the matter if the London Board was not so shifty, and there was agreement between them and the Edinburgh Board as to dates; but there was none. One of his students had received notice to attend in Edinburgh on October 26—a whole month more for preparation. It was the shortened time that accounted for the exceptional number of failures amongst the College men in the theoretical work last time; they had all done remarkably well in the practical part. Mr. Wills also mentioned that he had noticed a greater desire on the part of students to go to Edinburgh. They said it was easier there. He said that could not be; but they asked him to explain these figures of the July Minor examinations:—London, 191 examined and 67, or 35 per cent, passed; Edinburgh, 88 examined, and 51, or 58 per cent, passed. He could not explain that; it was for the Pharmaceutical Society to do it. (Hear, hear.)

Other toasts followed, and before the company—which, by the way, was an appreciative and enthusiastic one—separated Captain Norton distributed the prizes to last session's successful students. The following were the principal prize-takers:

Chemistry and Physics.—Silver medals: J. E. Frost, T. Brown, R. H. Richards. Bronze medals: F. L. Morris, W. A. Sharp, J. E. Thompson; 18 certificates were awarded.

Botany.—Bronze medals: J. E. Frost, T. Brown, H. W. Colley; 27 certificates were awarded.

Materia Medica.—Bronze medals: W. H. Peck, G. A. Johnson, C. Barnett; 25 certificates were awarded.

Pharmacy.—Bronze medals: W. H. Peck, T. Brown, C. Barnett; 15 certificates were awarded.

Practical Dispensing.—Bronze medals: C. E. Moorman, J. E. Collins.

In presenting the prizes Captain Norton made rather a smart speech, in which he claimed that the British chemist and druggist was as clever a man as his continental equivalent. Quite lately he had been in Bulgaria, and he did not think much of the condition of pharmacy there. He had been at the Hague and took a prescription to a chemist, who told him that it would take four hours to make. "Four hours!" said the Captain, "why I leave in an hour!" The fact was that no one in the shop could read the prescription. Captain Norton made an excellent chairman, and was quite popular with the guests before they parted.

Sad Death of a Chemist's Daughter.

Amy Hymarsh Johnson, aged 17, daughter of Mr. Mark Johnson, chemist, 6 Sylvester Road, Hackney, died last week from injuries received through burning. Her clothes took fire while cooking the breakfast, and though her mother and brother extinguished the flames as soon as possible, the injuries and the shock were so severe that she succumbed in a few hours.

Brighton Junior Association of Pharmacy.

The first meeting of the session of this Association was held on October 6, Mr. A. E. Coleman, president, in the

chair. Messrs. Jeeves, Price, Snow, and Wilson, were elected to the Council.

The President gave an address, in the course of which he alluded to the history of the Society. He directed attention to a lecture to be given by Mr. Lomax, Curator of the Brighton Museum, on "The Colouring-matter to be found in Plants," and said the Senior Association of Brighton had again offered two prizes for competition, particulars of which would be announced in due course. Last spring, when the same offer was made, there were twelve entries, but only two put in an appearance. That was a disgrace to them, and their thanks were therefore due to the Senior Association for giving them another chance to retrieve their character. After advocating a strong effort in favour of early closing, he said it was of no use looking to the Pharmaceutical Society for any help in this direction. They must work for it themselves, and he should like to see some effort made during his term of office. In speaking of the Pharmaceutical Society, he did not wish to enter into any controversy, but he was of opinion, if they wished to get a more general support, they should show themselves more worthy of it. Taking only one instance that had occurred this year—he meant the chlorodyne case—he thought they had acted even worse than the hare in the race with the tortoise, for they not only went to sleep, and allowed the Treasury to pass them, but it seemed as if they were asleep yet. In his opinion, they had allowed to slip one of the most excellent opportunities they had had for many a long year, notwithstanding what a loyal member of the Society had said to the contrary. If they had only followed up the new reading of the Act that was given in the early part of the year, it would have had the general support of the large majority of chemists in the country.

Manchester Assistants in Competition.

A few days ago there was held in Manchester the competition for the herbaria, presented by Mr. W. Stones, treasurer of the Manchester Pharmaceutical Association. The rooms of the Association proved quite large enough to hold the apprentices and assistants who came forward, for, sad to say, only about half-a-dozen of them put in an appearance. The adjudicators reserved their decision.

Alleged Embezzlement by a Traveller.

Before Mr. Bros, at North London Police Court, on Wednesday, Charles J. Huddy, a traveller, of Prince of Wales Crescent, Kentish Town, was charged with embezzling various sums of money paid him on account of his employer, Mr. Robert Orrock, glass-bottle manufacturer, of Wallis Road, Hackney Wick. Mr. D. A. Romain, who prosecuted, said that the prisoner had been employed by Mr. Orrock for three or four years as a traveller, and it had been discovered that he had not paid in all he had collected. The prisoner said he considered Mr. Orrock was indebted to him because he had taken a lot of his (prisoner's) customers. Mr. Major, bottle manufacturer, of Thomas Street, Kennington Park, and Mr. Galloway, chemist, of 74 Deacon Street, Walworth Road, were called to prove having paid the prisoner sums which he had not accounted for to his employer, and Mr. Bros committed the prisoner for trial, but accepted bail.

Laudanum-drinking.

Mr. Danford Thomas held an inquest on Wednesday in regard to the death of Lionel Jacobs, senior partner in the firm of Jacobs & Co., manufacturing stationers and printers, 12 and 14 Duke Street, Aldgate. According to the widow's evidence, her husband had been much afflicted with insomnia, for which he had recourse to laudanum and other narcotic poisons. On Sunday last he had a bilious attack, and remained in bed all day. On Monday morning he was found dead in bed. When Dr. Morton was called to the house he found in the bedroom a small bottle, which had contained chlorodyne, an ounce bottle that had held chloroform, and in a drawer a larger bottle which had contained laudanum. Dr. Morton found no organic disease to account for death, which was due, he considered, to an overdose of laudanum or some other narcotic poison. Mr. J. E. Vause, chemist, said Mr. Jacobs frequently purchased chloroform from him. The last occasion was a fortnight ago. There was no restriction upon the sale of chloroform or of chloro-

dyne, but the bottles containing laudanum must be labelled "Poison." He sold a gallon of laudanum a month, and six of his customers took 2 oz. of the poison daily. The jury returned a verdict of death from misadventure.

The Institute of Chemistry.

An extraordinary general meeting of the Institute was held in the large room of the Statistical Society, 9 Adelphi Terrace, Strand, on Friday, October 7. A fairly representative number of members attended, among whom were Dr. Frankland, Dr. Bell, Professors Ramsay, Dunstan, and Foster, Mr. Otto Hehner, and Dr. Bernard Dyer.

The President (Prof. Tilden) fully explained the circumstances which had induced the Council to recommend the securing of premises in which the business and examinations of the Institute could be efficiently conducted. Hitherto the examinations have been conducted in a manner scarcely calculated to ensure confidence either on the part of candidates, or of the profession, or of the public, in view of the lack of proper appliances in some of the laboratories at the disposal of the Council.

The President's uncompromising remarks as to the character of the examinations evidently produced a profound impression upon the meeting, with the result that the following recommendation of the committee was carried with the addition of the words "or buildings" after "such premises":—

In view of the necessity for providing, in addition to office accommodation, premises upon which the examination of the Institute can be efficiently conducted, the Finance and Office Committees jointly recommend that the Office Committee be empowered to take steps to secure such premises; and, if necessary, to expend upon the purchase of a lease a sum not exceeding one-fourth of the invested capital of the Institute, and that the President be authorised to sign the necessary documents.

Mr. Carteighe urged strongly the adoption of the recommendation and was prepared to spend a great deal more than the very reasonable one-fourth of the Society's invested funds.

Mr. Friswell proposed the resolution, and

Mr. T. Tyrer seconded it, but before doing so asked whether the addition of the words "or buildings," of which notice had not been given, would in any way jeopardise the legality of the decision of the meeting. He strongly urged that there should be no lapses which should encourage cavil and furnish openings for the criticisms which usually attended the public meetings of the Institute.

The President assured him that the recommendation of the Finance Committee had been so framed in wide terms that it might be narrowed and made definite at that meeting.

Mr. Tyrer thereupon formally seconded Mr. Friswell's motion, and expressed his belief that the Council had done a wise thing, and that if both parties in the Institute availed themselves of this opportunity great good would be done, and the influence of the Institute extended.

Some questions were then asked about the reasons for the recommendation of the Council, Mr. Hehner and Professor Foster particularly emphasising the desirability for proper facilities for adequate examinations—the former expressing himself emphatically in favour of the recommendation of the Council. Without definitely saying where the locality was, the President intimated that the house was in the neighbourhood of Bloomsbury, that it was a better house than the whole house in which they were then located, and that it had rooms which would lend themselves readily to the proper conduct of examinations.

A Glossop Chemist Fined.

At Glossop, on October 10, Thomas Bradbury, chemist, High Street West, was fined 10s. and costs for being drunk and disorderly.

St. Helens Chemical and Copper Workers.

About 50 members of the Chemical and Copper Workers' Union, of which Mr. P. J. King, of St. Helens, is president, have seceded and formed another Union under the title of "The Amalgamated Society of Chemical and Copper Workers." Mr. Andrew Hodgkins has been elected chairman, and Mr. P. Collins secretary. It is stated that the chief objection to the old Society is the one-man system under which its affairs have been managed.

Grocers and Stamped Medicines.

At the annual meeting of the Federation of Grocers' Associations of the United Kingdom, held in Manchester this week, reference was made, as was expected, to the sale of proprietary medicines by grocers. The General Purposes Committee, in their annual report, dealt with the subject in the following manner:—"This matter has been carefully considered by your executive, and much discussion and correspondence have ensued. In the opinion of your committee the interpretation of the Pharmacy Act which it is sought to impose upon vendors is most unfair and improper, and it strongly recommends affiliated Associations to defend any of their members against whom it is sought to recover penalties, assuring any Association taking such action of financial and all other proper support." Mr. Alderman Barrow, of Birmingham, who presided over the meeting, spoke in commendation of this passage in the report; and later in the proceedings, on the motion of Mr. Maurice Piper (London), the meeting passed the following resolution:—

That in the opinion of this Federation of Grocers' Associations it is expedient to take the earliest opportunity of thoroughly testing the question of the sale by grocers of stamped medicines containing poisons, this Federation being of opinion that stamped proprietary medicines are within the exceptions of the Pharmacy Act, 1868.

The Chemist and the Botanist.

William Butterfield, chemist and druggist, of Bolton Road Blackburn, has been summoned at the Police Court of that place for using insulting language to Edward Howarth. Complainant, who is a botanist, stated that in December last he ordered some syrup from defendant, who sent more than he required. He sent the surplus back. On Monday he and his father went to Mr. Butterfield's and asked for the syrup that had been returned. To this Mr. Butterfield objected, saying he would not let complainant have it until he paid 6d. for the storage. Howarth objected, and high words followed on both sides. There was also a cross-summons. It seems that in August Mr. Butterfield obtained judgment against Howarth in the County Court, and it was argued that he went to the shop for the purpose of insulting Mr. Butterfield. Ultimately one summons was withdrawn and the other was dismissed.

Dispute over a Chemist's Contract.

At the meeting of the Farnham Board of Guardians a letter was read from Mr. Dunston, chemist and druggist, asking why the tender of Mr. Griffith was accepted for the supply of cod-liver oil, crushed linseed, and quinine when it was more than his. He wanted to know how Mr. Griffith obtained the list of extra drugs. He (Mr. Dunston) applied for it at the workhouse, and was told that the doctor had not made it out. It appeared that the reason the committee recommended Mr. Griffith's tender was that that was the only complete one before them. It further transpired that there being no extra list of drugs, the master suggested to Mr. Griffith's assistant, who called on him, that Mr. Griffith should compile a list of drugs he thought the doctor would require. It was decided that in future the doctor should submit to the Board a list of the extra drugs he required before the tenders were advertised for, and that a letter should be written to Mr. Dunston regretting that there had been an error, and assuring him that it would not occur again.

Irish News.

The Castlerock Poisoning case—The Druggist Committed for Trial.

At Coleraine Petty Sessions, on October 7, James Mullan, druggist, Castlerock, was charged with having negligently sold a quantity of tartar emetic in mistake for tartaric acid, unlawfully causing the death of the male infant child of David and Sarah Jane Gardner, of Liffock, near Coleraine, on August 26, 1892. The circumstances of the case have been already reported. The defendant supplied for the Rev. Dr. Irwin some tartar emetic when tartaric acid was sent for.

The powder was used to make a drink with, and all the members of Dr. Irwin's household partook of it, and were made ill by it. Mrs. Gardner, who was working at the house, and who also drank some of the solution, was confined of a child a few days later, and this child died some days after. Medical and chemical evidence attributed the death to the poison the mother had taken. After consultation, the Magistrates (there were ten on the bench) resolved, by the casting-vote of the Chairman, to send the case for trial. Mr. Mullin was admitted to bail, himself in 50%, and two sureties in 25% each.

A Prize-essay Writer.

John Strahan, M.D., Belfast, has been awarded the Triennial Warren Prize, value \$500, given by the General Hospital, Massachusetts, U.S., for a treatise on "Rickets." The prize was open to general competition, and the subject left to the candidate; the prize to be withheld if no essay of sufficient excellence was submitted. The essay will be published shortly. In 1888 Dr. Strahan gained the Fothergill Gold Medal of the London Medical Society for an essay on "Typhoid Fever," and in 1889 the Jenks Memorial Prize of \$250 given by the College of Physicians, Philadelphia, for an essay on the "Diagnosis and Treatment of Extra-uterine Pregnancy," for which he was also elected corresponding member of the College.

The Council's Record.

During the past official year the Pharmaceutical Council held thirteen full Council meetings and sixty-four committee meetings.

[October Examinations.

Pharmaceutical Licence.—Messrs. J. W. Harvey, R. S. Chapman, P. P. Lee, G. G. Fetherston, R. D. Harman, M. R. Nugent, S. L. Cleland—J. Hill, T. M. Jozè, passed. Three candidates were rejected.

Pharmaceutical Preliminary.—Messrs. D. Nelligan, H. Johnston, S. H. Fisher, J. Hanratty, J. J. Fitzsimons, J. Magill, M. Johnston, R. J. Chapman—F. Keppel, R. Collis, passed. Three candidates were rejected.

Registered Druggist Licence.—Messrs. E. Brady, A. H. Cunningham, H. T. Galbraith, J. W. Henderson, W. E. Hunter, passed.

Probate.

The personal estate of the late Mr. Harry Napier Draper, pharmaceutical chemist, of Dublin, has been proved at over 22,000l.

Scotch News.

Tartaric Acid Alleged to be Adulterated.

In the Glasgow Sheriff Court on Monday, October 10, before Sheriff Birnie, Andrew Whitelaw, grocer, 52 Grove Street, was charged, at the instance of the sanitary inspector for the city, with having sold to one of his officers on August 31 $\frac{1}{4}$ lb. of tartaric acid which the public analyst certified was adulterated with '13 per cent. of sulphate of lime extraneous to tartaric acid, and '041 per cent. of lead, equivalent to 287 grains of lead per lb. of the sample, also extraneous to tartaric acid.

Mr. Whitelaw, who pleaded not guilty, stated that he was having an analysis made of a sample of the tartaric acid, and, on his application, the case was adjourned till October 26.

John Black, grocer, 66 Maitland Street, was charged that on August 31 he "sold to Inspector Armstrong $\frac{1}{4}$ lb. of tartaric acid which, on analysis, was found to contain '17 per cent. of sulphate of lime and '013 per cent. of lead, the proportion of lead being equivalent to '91 grain per lb. of the sample."

Mr. Black produced a warranty, which he said he had received from the wholesale merchant along with the tartaric acid, and said he should base his defence upon that document.

Mr. John Lindsay, the prosecuting agent, said he would examine the document, and intimate to the defender what course he meant to adopt regarding the prosecution.

This case was also adjourned till October 26.

A similar case against Messrs. H. & W. Wilson, grocers, 30 Titwood Place, Strathbungo, was also adjourned to the same date because of the non-appearance of the defenders. It is alleged that they sold 1 oz. of tartaric adulterated with '0278 per cent. of sulphate of lead, equivalent to 1.33 grain of lead per lb. of the sample.

Alkali Manufacture.

The Edinburgh Museum of Science and Art, one of the most instructive museums to students of pharmacy, has recently acquired an interesting series of specimens illustrating the production of alkali by the Leblanc process. The United Alkali Company (Limited) are the donors, and each specimen is the representation of the amount of the product obtained by manipulating 1 lb. of common salt. There are also wood-blocks to represent the furnaces and apparatus employed, whereby the whole system of processes connected with the Leblanc method of making soda is admirably shown. On the labels of the specimens the weights are given in pounds and decimals of a pound. Thus, to produce 1.10 lb. of sulphate of soda it requires 1 lb. of common salt and 1.04 lb. of sulphuric acid of 1.71 specific gravity. From this 1.10 lb. of sulphate of soda, together with 1.10 of limestone and '55 of mixing coal, 1.76 lb. of black ash is obtained. By subsequent treatment this quantity of black ash yields either '76 lb. of soda ash, or 1.92 lb. of soda crystals, or '50 of caustic soda. In the same way the figures are given for the bleaching powder and sulphuric-acid processes and for the recovery of sulphur. Fillets in different colours connect the specimens and blocks representing each process, the whole arrangement being founded on an instructive diagram showing the processes in the soda manufacture designed by Mr. J. J. Müller, of Gateshead-on-Tyne, and recently published by Mr. J. Heywood, Manchester.

In Latin.

Last Friday, Dr. William Macewen, the new professor of surgery in the Glasgow University, in accordance with ancient usage, read a Latin essay on a theme prescribed as a "trial of his abilities." The subject of his essay was: "Quibus indicibus externis locus suppurationis in cerebri regione temporosphenoidali recte reperiatur." It was approved.

Society of Chemical Industry.

The meetings of the Glasgow and Scottish section of this Society have been fixed for November 1, December 6, January 3, February 7, March 7, April 4, May 2, and June 6. The December and March meetings are to be held in Edinburgh, and all the others in Glasgow.

A Misconception.

The paragraph in last week's Scotch News in regard to the sale of Robertson & Co.'s business, at 5 Alvanley Terrace, appears to have given rise in Edinburgh to the impression that Mr. Thomas Thompson, of J. Robertson & Co., has sold his retail business at 35A George Street. There is only the similarity in the firms' names which can account for that, otherwise there is no connection, and Mr. Thompson has no intention of selling his George Street business.

Presentation to a Glasgow Chemist.

On October 7 a set of handsomely-bound volumes and a valuable diamond scarf-pin were presented by the assistants of Mr. John McMillan, the well-known Glasgow chemist, to one of the members of the staff, Mr. James Abbott, who was for a good many years in Mr. McMillan's Hillhead establishment, and who is this week starting for himself in a well-stocked shop in Henderson Street. The presentation was made by Mr. John Neil. After Mr. Abbott had replied, a pleasant evening was passed by the company.

Carbolic Poisoning.

A child of eight months, daughter of Mr. Glasban, Mill of Cromlet, Old Meldrum, was accidentally poisoned on Tuesday, October 11, by a sister of four years giving it a quantity of carbolic oil.

An Edinburgh Trade Association.

There is every likelihood of a trade association being formed shortly among Edinburgh chemists. Its objects, as contemplated, will be the consideration of questions affecting the trade generally, such as spirit-duties, patent-medicine licences, the affixing of stamps on patent medicines, and any other matter on which there would likely to be unanimity, and on which joint action would be taken if necessary. It is proposed to call a meeting at an early date, probably about the beginning of November.

French Pharmaceutical News.

(From our Paris Correspondent.)

CHLOROFORM ACCIDENTS.—M. Peyron, Director of Public Relief, has issued instructions to the managers of Hospitals to prepare statistics of all accidents caused by inhaling chloroform. They are required to give the date of the accident, the service in which it has taken place, the name of the doctor, the age, name and profession of the patient, and the nature of the malady or operation for which the chloroform was used. This order is to date from April 1, 1890.

BROMIDE OF STRONTIUM.—Professor Germain Séé has made a special study of bromide of strontium, and has used it successfully for affections of the stomach. Another medical man has now discovered that it is extremely useful as a cure for nausea. One or more doses at meal times are advised. Bromide of strontium may also be used to advantage in the general treatment of vomiting. The unpleasant taste of the remedy in solution can be overcome by supplying the salts in hermetically closed bottles containing a gramme each; the patients should take the contents in a wafer just before a meal.

ENGLISH PHARMACISTS AND DOCTORS IN PARIS.—The annual meeting of the Continental Anglo-American Medical Society was held at the Grand Hotel, Paris, on Thursday, October 6. After the usual afternoon meeting the company sat down to a banquet at 8 P.M. Among the visitors were the two *doyens* of English pharmacy on the Continent, Messrs. T. P. Hogg and Swann. Dr. Douglas Hogg, of the Champs Elysées Pharmacy, was also present. Amongst the guests from England was the ubiquitous Mr. S. M. Burroughs, of Messrs. Burroughs, Wellcome & Co. This gentleman had brought with him a really fine selection of the pharmaceutical specialities made by his firm. By the courtesy of the Society's committee these articles were exhibited for the inspection of the medical men present. No other pharmaceutical goods were shown.

THE NEW CUSTOMS TARIFF is now in fairly good working order, and not only the foreign manufacturers, but also French consumers, are beginning to discover its many disadvantages. A general feeling is growing that the tariff is devised too much in the interests of a privileged few. Alien pharmaceutical preparations have suffered very severely under the new state of things, and it would seem that an attempt is being made to endeavour to keep them out of the country altogether. As is generally known, the admission or refusal of medicaments made abroad is decided by a committee of the Paris School of Pharmacy. It is possible, also, that these gentlemen may in turn be influenced by the interested representations of some of their manufacturing colleagues. Such a course is greatly to be deprecated. In the first place, the reputation of French pharmacists is such that they can surely meet the competition of the world in their own country with perfect equanimity, and, in the second, the authorities apparently lose sight of the very important fact that thousands of invalids flock to Paris and the Riviera annually. If these visitors cannot easily obtain the medicines prescribed by their medical men, who may reasonably be supposed to know what their patients require, there may be a tendency on the part of foreigners to seek repose in countries less hampered by prejudice. The loud wailing on the part of hotel proprietors and shopkeepers that would follow such a state of things might then arouse the Govern-

ment somewhat tardily to establish a more reasonable system. An instance of the curious way the Customs tariff is being administered was mentioned to the representative of *THE CHEMIST AND DRUGGIST* by a well known London manufacturer a few days ago. This gentleman had sent a varied parcel of pharmaceutical specialities to Paris, and discovered to his amazement that duty had been charged, not on the invoiced or wholesale value, but on the *supposed* retail price of the articles.

AMERICAN WHOLESALE DRUGGISTS' CONVENTION.

THE National Wholesale Druggists' Association of America held their eighteenth annual "Convention" at Montreal in the third week of September. Mr. Robinson was in the chair. This, we believe, is the first time that the Association has foregathered beyond the boundaries of the United States, but in spite of the somewhat out-of-the-way situation of the meeting-place, the attendance was large and enthusiastic. The druggists were welcomed to Montreal by the mayor of the city, and their first business meeting was opened with prayer by the Rev. Dr. Rose. The Association numbers 434 members—an increase of nine since the meeting at Louisville last year.

The question of the regulation of prices of proprietary articles occupied, as usual, a very large share of the attention of the members, and at the third session a deputation delegated by the retail druggists' associations was admitted to address the meeting on the subject. This deputation reminded the meeting that a scheme for the prevention of cutting had been elaborated by the American Pharmaceutical Association at the request of the wholesalers, and had already been considered by them. They now pressed for a declaration of the views of the Convention on the subject. A long discussion ensued, remarkable for little else than the revelation of hopelessly discordant views on the subject, and at its close the matter was referred to a committee, who appear to have been more reconcilable in their opinions, for they afterwards presented a series of resolutions which were the practical outcome of an agreement between themselves and the National Association of Manufacturers of Proprietary Medicines, which was holding its conference in Montreal at the same time. The resolutions (subsequently adopted by the Convention) are to the following effect:—The manufacturers of patent medicines will adopt such marks on their goods and keep such records as will enable them to discover from each retail package the name of the wholesale dealer to whom they sold the goods. They will also include in their contracts with their wholesale agents a clause to the effect that they (the agents) must not sell their goods to any retail dealer whose name may be in the Prohibited List, except at full retail prices. This Prohibited List is to consist of the names of all retail dealers who sell goods at cut prices, provided that evidence of such sale is furnished to the Patent-medicine Association by the secretary of the Druggists' Association, endorsed by at least three retail dealers engaged in business in the city or town where such complaint is made, and who are members of the organisation, and by at least one wholesale dealer who is a member of the National Wholesale Druggists' Association. This provision is not to be operative unless at least 50 per cent. of the retailers in the city or town in question are members of the league.

The next session was enlivened with a speech by Mr. Albert Plant on the Paddock Pure Food and Drugs Bill, a Draconian measure which has been before Congress for some time and proposes to place the drug-trade under the most stringent Government control with regard to the purity of the goods handled by it. Mr. Plant maintained that the laws enacted by other countries for the prevention of the trade in impure drugs and foods had been gross failures. He referred particularly to this country, and made the following astonishing statements:—"There have been no convictions under the law now in force in England. The most recent case was the indictment of a grocer in Glasgow for canning green peas with copper, there being ten times as much copper as was usually found. He brought four experts—two former State

chemists and two professors from the State University—to prove that the addition of copper to green peas was not harmful. The consequence was the jury disagreed.”

After being thus enlightened, a resolution to oppose the Paddock Bill was carried. Detroit was chosen as the next meeting-place, and Mr. J. E. Davis, of the firm of Williams, Davis, Brooks & Co., of Detroit, was elected President for the ensuing year, with Mr. Merriam, formerly of A. B. Merriam & Co., in Cincinnati, as Secretary.

Pharmaceutical Society of Great Britain.

FIRST OR PRELIMINARY EXAMINATION.

THE following are the questions which were given on Tuesday, October 11.

LATIN.

(Time allowed: From 11 A.M. to 12.30 P.M.)

I. For all candidates. Translate into Latin:—

1. The good son has a good mother.
2. Those things which are right are praised.
3. We know that virtue and vice are contrary to each other.
4. The table is two feet long, a foot and a half wide.
5. There are some who think that M. Crassus is not ignorant of the design of Catiline.

II. Translate into English either A (Caesar) or B (Virgil).

(Candidates must not attempt both Authors.)

A. CAESAR.

1. Labienus, ut erat ei praeceptum a Caesare, ne proelium committeret, nisi ipsius copiae prope hostium castra visae essent, ut undique uno tempore in hostes impetus fieret, monte occupato nostros expectabat proelioque absteinebat. Multo denique die per exploratores Caesar cognovit et montem a suis teneri, et Helvetios castra movisse, et Considium, timore perterritum, quod non vidisset, pro viso sibi renuntiasse. Eo die, quo consuerat intervallo, hostes sequitur, et milia passuum tria ab eorum castris castra ponit.

2. Factum ejus hostis periculum patrum nostrorum memoria, quum Cimbris et Teutonibus a Caio Mario pulsus, non minorem laudem exercitus, quam ipse imperator, meritis videbatur; factum etiam nuper in Italia servili tumultu, quos tamen aliquid usus ac disciplina, quam a nobis acciperent, sublevarent. Ex quo judicari posset, quantum haberet in se boni constantia; propterea quod, quos aliquamdiu inermes sine causa tenuissent, hos postea armatos ac victores superasset.

Grammatical Questions.—For those only who take Caesar.

1. Decline in full (singular and plural), *ejus hostis*; and in the singular only, *servili tumultu*. (Paragraph 2)
2. Give the principal parts of the following verbs:—*committeret, fieret, absteinebat, cognovit, movisse, vidisset, consuerat, sequitur, ponit*. (Paragraph 1.)
3. Parse fully the following words:—*ne, prope, occupato, movisse, perterritum, quod, quo, sequitur, passuum*. (Paragraph 1.)
4. When is the conjunction *ut* followed by the subjunctive mood, and when by the indicative? Give sentences in illustration.

B. VIRGIL.

1. Dixit, et avertens rosea cervice refalsit,
Ambrosiaeque comae divinum vertice odorem
Spiravere; pedes vestis defluxit ad imos;
Et vera incessu patuit dea. Ille, ubi matrem
Agnovit, tali fugientem est voce secutus:
Quid natum toties, crudelis tu quoque, falsis
Ludis imaginibus? cur dextrae jungere dextram
Non datur, ac veras audire et reddere voces?
Talibus incusat, gressumque ad moenia tendit.
2. Di tibi, si qua pios respectant numina, si quid
Usquam justitia est et mens sibi conscia recti,
Praemia digna ferant. Quae te jam laeta tulerunt
Saecula? qui tanti talem genere parentes?
In freta dum fluvii current, dum montibus umbrae
Lustrant convexa, polus dum sidera pascet,
Semper honos, nomenque tuum laudesque manebunt,
Quae me cunq̄ue vocant terrae.

Grammatical Questions.—For those only who take Virgil.

1. Decline in full (singular and plural) *cervice, pedes, moenia*. (Paragraph 1.)
2. Give the principal parts of the following verbs:—*respectant, tulerunt, current, pascet, manebunt*. (Paragraph 2.)
3. Parse fully the following words:—*avertens, spiravere, tali, secutus, toties, quoque*. (Paragraph 1.)
4. When is the conjunction *ut* followed by the subjunctive mood, and when by the indicative? Give sentences in illustration.

ARITHMETIC.

(Time allowed: From 12.30 P.M. to 2 P.M.)

[The working of these questions, as well as the answers, must be written out in full.]

1. Write in Roman characters the product of Ten thousand three hundred, and One hundred and seven.
2. I spent a third of my money, then one-fifth of the remainder, then half as much as I had already spent. This left me with a guinea and a half. How much had I at first?
3. Multiply 253.75 by 4.027, and divide the product by .028189.
4. Divide 107½ kilog. of beef among 6 men and 16 women, giving each man half as much again as each woman.
5. Express
428571 of 2 tons—¼ of 1 of 2½ of ⅔ of .025 cwt. + .046875 of 3 qrs. 12 lbs. as the decimal of 2½ tons.
6. What is the income corresponding to an income-tax of 13l. 2s. 6d., at the rate of 7d. in the £?
7. A man invests 2,852l. in a 5-per-cent. stock at 115. He afterwards sells this stock at 125, and invests the proceeds in a 3-per-cent. stock at 93. Find the change in his income.

ENGLISH.

(Time allowed: From 3 P.M. to 4.30 P.M.)

1. Analyse the following sentence:—

“O kind hosts and dear,
Hearken a little unto such a tale
As folk with us will tell in every vale,
About the yule-tide fire, when the snow
Deep in the passes letteth men to go
From place to place.”

2. Parse fully *hearken, such, every, yule tide, when, letteth*. (Question 1.)
3. Correct the following sentences, giving your reasons:—
(i.) The mens leader with his companions are running away.
(ii.) This is the man whom you said had beseeched you to remain.
(iii.) They that backbite their neighbours stealthily, do you rebuke publicly and sharply.
4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where necessary:—i think you exaggerate very much said orsino there is always risk in such business as this but it strikes me that the risk was greater when we had less capital capital exclaimed the architect contemptuously and without turning round can we draw a cheque a plain unadorned cheque and not a draft for a hundred thousand francs to-day or shall we be able to draw it to-morrow capital we have a lot of brick and mortar in our possession put together more or less symmetrically according to our taste and practically unpaid for if we manage to sell it in time we shall get the difference between what is paid us and what we owe that is our capital.
5. [This must be attempted by every candidate.] Write a short composition on one of the following subjects:—

- (i.) The influence of music.
- (ii.) The British Constitution.
- (iii.) Colonisation.
- (iv.) “Knowledge is power.”

EXAMINATIONS IN LONDON.

WE have received from the Registrar of the Pharmaceutical Society of Great Britain the following list of candidates who were granted certificates at the October meeting of the London Board of Examiners:—

MAJOR EXAMINATION.

Twenty-one candidates were examined. Fourteen failed. The undermentioned seven passed, and were declared qualified to be registered as Pharmaceutical Chemists:—

Brown, James, London	Hunt, John Lambert, Chesterfield
Cameron, Lauchlan, Brighton	Walden, William Herbert, Reedham
Chaston, William Robert, Norwich	Willmott, Alfred Wade, Darlington
Hulme, Thomas, Manchester	

MINOR EXAMINATION.

One hundred and eighty-one candidates were examined. One hundred and eighteen failed. The undermentioned sixty-three passed, and were declared qualified to be registered as Chemists and Druggists:—

Akam, Arthur, Bradford	Howorth, Henry Cook, Preston
Ashfield, Percy John, Stratford-on-Avon	Hughes, Thomas John, Bethesda
Barker, George, Bedale	Inglis, Frank, Delph
Baron, Richard Edward, Guernsey	Jackson, Thomas, Preston
Birnie, Arthur William, Christchurch	James, James Richards, London
Boreham, Walter Herbert, Lee	Jeffries, Charles, Nunhead
Bosustow, F. Samuel Mathews, Penzance	Jewell, Harry, Salisbury
Bowen, Isaac, Llangammarch	Jones, Alfred Morgan, Cefn Coed
Brown, Richard Moss, Nottingham	Lee, George, Barnstaple
Burgess, Arthur Leland, Guernsey	Leitch, William Alfred, London
Burton, Alfred Henry, Llandilo	Macdonald, Hugh, London
Calvert, Albert Boston, Southwark	Marshallsay, Henry Raynold, Wareham
Carter, James Charles, Hastings	Maskew, William, Easingwold
Clarke, Arthur Bertram, Coventry	Millman, Thomas Richard, Barnstaple
Cooke, William Arthur, Hemel Hempstead	Rose, Alfred, London
Cooper, Frederick, Ticehurst	Rossiter, Robert Tapley, Paignton
Dickson, David, Salford	Smith, Hedley Crossley, Uxbridge
Elphinstone, Joseph Lawson, Aberdeen	Southall, Alfred William, Birmingham
Evans, Moses Thomas, Llanelly	Spearing, Arthur John, Weston-super-Mare
Eyres, John Ernest, Southsea	Steggles, George, Petworth
Francis, Arthur Llewelyn, Wrexham	Stephens, John Richard, Cook, Swindon
George, Henry Attwood, Pontypridd	Stone, Ernest Frederick, Exeter
Haden, Thomas Henry, Barnes	Taylor, Walter, Gainsborough
Hanna, George Henry, London	Tredgold, Alfred Frank, Derby
Hardy, George Bonnor, Parkstone	Turton, Edwin Evelyn Harrison, Nottingham
Hare, Arthur, Newcastle-on-Tyne	Wade, Thomas, Oldham
Harper, John Thomas, Market Drayton	Waite, Herbert Shuttleworth, Bradford
Harris, John George, Nottingham	Wathes, Charles John, Leicester
Harvey, Thomas Featherstone, Sibley	Watkins, Horatio Ernest, Oxford
Hill, Lawrence, Sheffield	Watson, Henry, Spennymoor
Horsley, Frederick Samuel, Woodbridge	Weatherley, William Ralph, Knaresborough
	Williams, Llewelyn, Bala

MODIFIED EXAMINATION.

One candidate was examined, and failed.

THE CHEMISTS' ASSISTANTS' ASSOCIATION.

THE sixteenth session of the Chemists' Assistants' Association was opened on Thursday, October 6, at which Mr. Frank A. Rogers, the new President, delivered his inaugural address. He said he felt deeply grateful for the honour the Council had done him by unanimously voting him to the chair. As far as it depended on him they should have no cause to regret it. He did not offer himself as an original investigator, but as a true representative of "the retail." He hoped, therefore, that on those evenings devoted to short papers members would bring forward any notes or difficulties in dispensing or retail work. Let no one consider himself too unimportant to take an active part in the work.

We cannot all be corner-stones; but there are many small bricks in every building, and upon them its strength depends. The Association had made a place for itself, and this place must be maintained; the objects in view were the same as in former years, but the energy thrown into them was greatly increased year by year. Their papers were not always purely scientific; often they were very practical. Could not even more assistants be present at the meetings? He appealed to principals to let Thursday be their early-closing day, so as to make it a free evening, if not every week, perhaps every other week. Year after year the formation of a chemists' club had been entertained, but had always fallen through, partly because of the difficulties surrounding its working; partly, he ventured to hope, through the attractiveness of their own Association. An Assistants' Union had also been talked of. With reference to this, he said, a discussion by correspondence had gradually evolved itself in THE CHEMIST AND DRUGGIST, from an embryo of discontent on the one hand and mistrust on the other, into the nucleus of a satisfactory understanding between both parties, and had had far-reaching influence. Recognising this, an evening had been set apart early in the session for a friendly discussion of the difficulties, to which all interested in their solution were cordially invited. It was a matter of distinct regret that last session they were unable to award the medals and prizes of the Association. To make these awards when the papers sent in were of inferior merit would merely belittle their value; this year they were again offered for competition, and he would urge all members to compete, to ensure their being awarded. The Research Prize consisted of a silver medal and 5*l*, for the best pharmaceutical investigation published during the year by any member. The Essay Prize consisted of a silver medal, 5*l*, and a copy of Remington's "Pharmacy," for the best essay on "Recent Advance in Pharmacy." He hoped that an evening would be found in the latter half of the session for a discussion on the bearings of recent decisions in the poison cases, with reference to the 15th section of the Pharmacy Act. At present the decision in the well-known chlorodyne case was merely a magistrate's dictum, and needed confirmation. In conclusion he drew attention to the programme. He hoped this session would be as successful as any in the past, and that a brilliant future was in store for the Association.

A vote of thanks to Mr. Rogers was proposed by Mr. Helbing, who said the value of the Association could not be over-estimated, and that many of the members had sent good work out to the world. He would only mention the paper by Mr. Campbell Stark on the incompatibles of antipyrin, which was in the hands of every pharmacist on the Continent, and had been of the greatest service to them.

Mr. Lloyd Williams seconded the vote, saying that Mr. Rogers had made such a good lieutenant when he himself was president that he had no doubts as to his success as leader.

The vote was carried by acclamation.

Business Changes.

MESSRS. J. TYE & SON, gelatine-capsule makers, formerly of 5 Little Cross Street, N., have removed to 108 Packington Street, N.

MR. ADAM D. CLARK, formerly of Dumfries, is now the proprietor of the drug business in Crewe lately carried on by Mr. W. Bayley.

MR. GEORGE VENABLES has succeeded to the business carried on for many years by the late Mr. Gabriel French, chemist, at 148 High Street, Chatham.

"AL. HUFF."—It sounds queer, but is simply the name of an American pharmacist. Perhaps it feels better to be Al. Huff than A. Huff.

INSTITUTE OF CHEMISTRY EXAMINATIONS.—Training at the McGill College, University of Montreal, under Professor G. P. Girdwood, is now recognised for the Associate Examination of the Institute of Chemistry of Great Britain.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on October 5, at 67 Lower Mount Street, Dublin, at 3 P.M. Present: Mr. William Hayes (President), and Messrs. Beggs (Vice-President), Baxter, Boyd, Dr. Burnes, Conyngham, Downes, Evans, Gibson, Grindley, Johnston, Lyons, Merrin, Montgomery, Simpson, Wells, and Whitla.

The minutes of the last monthly meeting, and of the special meeting held subsequently for the election of members, were read.

THE REJECTED NOMINATIONS.

A question arose whether the names of the gentlemen proposed for election as Associate Druggists by Mr. Boyd at the special meeting, but whose election had fallen through in consequence of no quorum being present when the nominations were made at the preceding meeting, should appear on the minutes at the special meeting.

Mr. BOYD thought there should be some record of the names.

Mr. BEGGS said he had taken legal advice on the matter, and had been informed that the moment there ceased to be a quorum in consequence of members going away, no business could be done.

The PRESIDENT said he had no doubt the monthly meeting had terminated before the names were handed in.

After some discussion it was decided that the names ought not to form part of the minutes.

ELECTION OF A COUNCILLOR.

The CHAIRMAN said the first business was the election of a member of Council in place of the late Mr. Alexander E. Doran.

Mr. MONTGOMERY moved that Mr. Samuel Turkington, associate druggist, be co-opted. Mr. Turkington had been unsuccessful at the late election, and that was a reason why the vacant seat on the Council should be given to him. He (Mr. Montgomery) had known him for twenty years, and he believed that he had the entire confidence of the druggists, and would make an excellent member of the Council.

Mr. BAXTER seconded the motion.

Mr. WELLS said he had pleasure in supporting it, but upon the understanding that Mr. Turkington's co-option, under the circumstances of the case, was not to form a precedent. An understanding had been come to—although he did not say that it was strictly binding—that when vacancies occurred on the Council, a druggist was to be replaced by a druggist, and a pharmaceutical chemist by a pharmaceutical chemist. But, having regard to the result of the late election, and after consultations, the conclusion had been arrived at that a druggist should be co-opted. Had things been done a little differently before the election, a few druggists would have been elected; but the gauntlet having been thrown down and an attempt having been made to put off some of the most active workers on the Council, nothing was left to the pharmaceutical chemists but to take up the challenge, and they had done so with the result that was known. However, he believed he spoke not only for the pharmaceutical chemists present, but for the licentiates of the Society generally, when he said that they all wished to see Mr. Turkington on the Council. He (Mr. Wells) was not acquainted with him personally, but he had heard strong recommendations in his favour. One was that he was a man who would uphold the law, and support the rest of the Council in protecting the interests of both the licentiates of the Society and the druggists.

Mr. BOYD said he rose for the purpose of expressing his gratification at this kindness on the part of the majority of the Council in nominating for the vacant position an associate druggist. He was sure that that act of grace would be appreciated. He had, however, one fear on the subject, and that was that the selection of Mr. Turkington would have the appearance of a slight upon Sir James Haslett for whom a larger number of votes had been recorded at the election than for Mr. Turkington. Perhaps, therefore, it would be better to nominate Sir James Haslett, who stood extremely high in the trade in Belfast and did good service

at the time of the passing of the Amendment Act. Another consideration was that Mr. Turkington lived in the extreme North of Ireland, and therefore, he feared, would not be a regular attendant at the Council meetings though he might be mistaken on that point.

Mr. GRINDLEY said their principal reason for supporting Mr. Turkington was that he was an independent member of the retail trade—(hear, hear)—and a man in thorough sympathy with all their aims and objects. He meant no disrespect to the wholesale druggists on the Council when he said he did not think they were in touch with the retail trade. Their interests were not the same. Sir James Haslett should have no difficulty in seeing that the Council were acting from right motives.

The PRESIDENT said Mr. Turkington living at such a distance from Dublin might be to some extent a drawback; but his (Mr. Hayes's) experience of the gentlemen of the North was that they were not daunted by distance when their presence was necessary in Dublin. He felt great pleasure that they had it in their power to co-opt a gentleman from amongst the registered druggists. Personally he should have liked to see a larger number of druggists on the board. Lately when the gauntlet was thrown down and an attempt was made to turn six pharmaceutical chemists off the board nothing was left to the latter but to do their utmost to retain their seats. And he did not think their friends the registered druggists would think badly of them for this. He was sure that when they should find the druggists were ready to meet them and to do their duty as faithfully as the pharmaceutical chemists had endeavoured to do theirs, they would be found willing to receive as many druggists as seats could be found for on the board. (Hear, hear.) When all saw it was their interest as well as their duty to put down breaches of the law, they would be of one heart and mind in the matter.

The motion for the co-option of Mr. Turkington then passed unanimously.

ELECTION OF OFFICERS.

Mr. CHARLES EVANS moved that Mr. William Hayes be re-elected President for the ensuing year. (Applause.) They all knew how he had worked during the last twelve months and the amount of time and attention that he had given to the affairs of the Society, and they were to be congratulated on being able to retain the services of such a gentleman as their chairman.

Dr. BURNES seconded the motion, which was put by Mr. Beggs and unanimously carried amid applause.

Mr. HAYES in acknowledging the honour bestowed upon him, said it was scarcely his wish to retain the office, but as he found it to be the wish of his co-councillors that he should do so, he made no objection, and would therefore endeavour to do his duty without fear or favour to the best of his ability. (Applause.)

Mr. WELLS moved the re-election of Mr. Beggs as Vice-President. Mr. GRINDLEY seconded the motion, which passed unanimously. Mr. BEGGS briefly returned thanks.

Dr. BURNES moved that Mr. Hodgson be re-elected Treasurer. Mr. BAXTER seconded the motion, and the PRESIDENT, in putting it, said Mr. Hodgson had been their Treasurer since the establishment of the Society. The motion passed unanimously. On the motion of Mr. DOWNES, seconded by the VICE-PRESIDENT, Messrs. Simpson and Grindley were elected auditors.

COMMITTEES.

Mr. WELLS moved that Messrs. Charles Evans, Grindley, Downes, Professor Tichborne, and Wells, constitute the Law Committee for the ensuing year.

Mr. MERRIN seconded the motion.

Mr. GIBSON said he thought the druggists should have a member of their body on the Law Committee. They had been met very fairly, he confessed, by the co-option of Mr. Turkington, and he suggested that the Council should go a little farther and place that gentleman on the Law Committee.

Mr. CONYNTHAM said an associate druggist might find himself in an unpleasant position on the Law Committee if it should be called on to deal with some of his friends.

Mr. GIBSON suggested that Mr. Boyd should be placed on the committee in question.

Mr. BOYD: I am much obliged, but I would much prefer

not to act on the Law Committee. Perhaps Mr. Conyngham would allow himself to be placed on it?

Mr. CONYNGHAM: I would rather not.

Mr. BOYD: It would gratify us if he did.

The PRESIDENT: If Mr. Boyd puts it in that way, I would suggest that the name of Mr. Conyngham be added to the committee.

Mr. GIBSON: If Mr. Boyd does not wish to act I propose Mr. Turkington. The Law Committee has not alone to look after people about dispensing, but also looks after the sale of poisons, and we are as much interested in that as the pharmaceutical chemists.

Mr. WHITLA agreed that the druggists should have a representative on the Law Committee, but he thought that Mr. Gibson would make a better representative on it than Mr. Turkington, who was only newly elected to the Council. He moved that Mr. Gibson be placed on the committee.

Mr. BOYD seconded.

Mr. WELLS said he desired to live at peace with everyone, but he could not tacitly listen to a proposal that would, in the end, prevent the law from being carried out. (Hear.) He knew from the letters of a great many druggists that they had confidence in the pharmaceutical chemists. Unfortunately, they had not yet been assured that the representatives of the druggists on the Council were prepared to help them to see the Pharmacy Acts fairly administered. Without meaning any disrespect to Mr. Gibson, he would ask him to bear in mind that only a very little time ago they prosecuted a friend of his, and Mr. Gibson sat beside him in court. He (Mr. Wells) must protest against a member of the druggists' body being put on the Law Committee, for the present at all events.

After some further discussion, the following gentlemen were unanimously elected the Law Committee: Messrs. Charles Evans, Grindley, Downes, Wells, Montgomery, Sumner, and Conyngham.

On the motion of Mr. WHITLA, the following were elected the Certificates Committee for pharmaceutical chemists: Messrs. Conyngham, C. Evans, Grindley, Simpson, and Sumner.

On the motion of Mr. BAXTER, seconded by Mr. WHITLA, the following were unanimously elected the House and General Purposes Committee: Messrs. Downes, Boyd, Grindley, C. Evans, Hodgson, Wells, and Professor Tichborne.

On the motion of the VICE-PRESIDENT, the following were unanimously elected the School Committee: Messrs. Grindley, Hodgson, Tichborne, Dr. Burnes (hon. treasurer), Downes, Wells, and Boyd.

On the motion of Mr. CONYNGHAM, seconded by Mr. MERRIN, the following were unanimously elected the Declarations Committee: Messrs. Boyd, Gibson, Grindley, Montgomery, and Wells.

THE COUNCIL AND THE CASTLE.

The next subject on the agenda-paper was the correspondence between the President and the Lords Justices of Ireland in reference to the case of Mr. Cosgrave, chemist and druggist, which has already been published.

The PRESIDENT: Gentlemen, you have already seen these letters in the journals; do you desire that they should be read now?

Mr. WELLS: We may take them as read.

CORRESPONDENCE.

A letter was read from Mr. Arthur L. Doran thanking the Council for their kind expression of condolence with him and his family on the occasion of the death of his father, Mr. A. E. Doran.

A letter from Messrs. Casey & Clay, solicitors to the Council, stated, in reference to the case of Messrs. Boyd & Goodwin, that the defendants had served notice that they did not intend to proceed further with their appeal against the decision of the magistrates, and that they had paid a proportion of the penalties.

A letter was read from Mr. Spencer Todd, Agent-General of the Cape of Good Hope Government, accompanying which were copies of the *Cape Government Gazette*, containing medical and pharmacy regulations in force in that colony.

A letter from Mr. L. J. Nightingale, secretary to the Pharmacy Board of Cape Colony, enclosed a copy of the regulations of that Board, under which the certificates of the Pharmaceutical Societies of Great Britain and of Ireland are accepted by the Board as sufficient evidence of the competency of any person holding same to practise as a chemist and druggist in the Colony without further examination. The writer stated that the Board would always be glad to keep in touch with the Pharmaceutical Society of Ireland, and requested a copy of the register for the current year.

Mr. FERRALL said he had already forwarded a copy of the Calendar to the secretary of the Cape Pharmacy Board.

The PRESIDENT said it was very gratifying to find their Society recognised all over the world. He only wished they received the same help from their Government that the pharmaceutical societies of other lands did from theirs.

Mr. DOWNES moved a resolution thanking the Pharmacy Board of the Cape of Good Hope for their communication, and stating that the Council would always be happy to reciprocate their disposition to fraternise.

Mr. CHARLES EVANS seconded the resolution, which was unanimously agreed to.

Reports from the Law Committee, Certificates Committee, and House and General Purposes Committee, were adopted.

APPLICATIONS FOR REGISTRATION AS DRUGGISTS.

The REGISTRAR submitted a list of seventeen names of applicants for registration as druggists under the Amendment Act which were still remaining undisposed of. This list was furnished at the request of Mr. Boyd.

The PRESIDENT: All these gentlemen have been written to for further information as to their qualifications, and in the event of their not furnishing it their fees will be returned.

Mr. BOYD: I think the sooner something definite is done with respect to their cases the better. They should be either accepted or rejected.

The PRESIDENT: I quite agree with you.

Mr. BOYD: I think that before their fees are sent back it might be well to give them another chance.

Mr. GIBSON: Give them seven days more, and if they don't supply the requisite information within that time let their names be struck off.

The REGISTRAR was directed to write to the applicants to that effect.

Mr. BAXTER moved that the following gentlemen be nominated as associate druggists:—Mr. Robert Holmes and Mr. John Sanderson, both of Ballymena.

TRAVELLING EXPENSES.

Mr. Whitla suggested that it would be reasonable for the Council to pay the railway fares of its members who came from the country to attend its meetings. This was done by the English Society.

Mr. WELLS said he would give a notice of motion on the subject for the next Council meeting.

THE REGISTRAR.

Mr. WELLS moved that the best thanks of the Society be given to the Registrar, Mr. Ferrall, for the manner in which he had performed his duties during the past year. Mr. Ferrall had a great deal of work to do under the Amendment Act.

Mr. GIBSON seconded the motion. In all that he had had to do with the Registrar he found him very pleasant and most willing to oblige. He was a very worthy officer. (Applause.)

The PRESIDENT said that, as one who had had more to do with Mr. Ferrall than other members of the Council, he could speak from experience of him, and he must say that he could not have occupied his own position if he had not had at this post a man like Mr. Ferrall, whom he could implicitly trust, and who, he felt, would do his duty faithfully and efficiently. It gave him great pleasure to ask them to pass this motion by acclamation. (Applause.)

Mr. FERRALL briefly responded, and said he would try to serve them faithfully as long as he was there.

The Council then adjourned.

PRELIMINARY EXAMINATION.

October 3, 1892.

The following were the papers set:—

ALGEBRA.

(Candidates under New Regulations.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. Simplify the following:—
 $15x - \{4 - [3 - 5x - (3x - 7)]\}$.
2. Divide $9x^3 + 3x^2 + x - 1$ by $3x - 1$.
3. Multiply $(x^2 + xy + y^2)$ by $(x^2 + xy - y^2)$.
4. $\frac{2x-6}{3x-8} = \frac{2x-5}{3x-7}$, find the value of x .

ENGLISH GRAMMAR AND COMPOSITION.

(All Candidates.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. Give the past tense and past participle of hang, burst, teach, eat, shear, thrive.
2. How do you distinguish between prepositions, adverbs, and conjunction? Give examples.
3. Parse the following sentence:—
 "As you value the life of King William, do not let him hunt to-morrow."
4. Give six prefixes and six affixes, with their derivations.
5. When is a verb said to be in the infinitive mood?
6. Write an essay on either of the following subjects:—
 Electric lighting. Autumn. Emigration.

LATIN.

(All Candidates.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. Translate either of the following passages:—

VIRGIL.

Quare agite, O tectis, juvenes, succedite nostris!
 Me quoque per multos similis fortuna labores
 Jactatem hac demum voluit consistere terra.
 Non ignara mali, miseris succurrere disco.
 Sic memorat, simul Ænean in regia ducit
 Tecta, simul divum temples indicit honorem.

CÆSAR.

Ex concilio dimisso, iidem principes civitatum, qui ante *fuerant* ad Cæsarem, reverterunt, petieruntque, uti sibi secreto de sua omniumque salute cum eo agere *liceret*. Ea re impetrata, sese omnes fientes Cæsari ad pedes proiecērunt; non minus se id contendere et laborare, ne ea quae dixissent enuntiarentur, quam uti ea quae vellent impetrarent; *propterea* quod, si enuntiatum esset, summum in cruciatum se venturos viderent.

2. Parse the words in italics in the chosen passage.
3. What is meant by a Deponent Verb? Give an example.
4. Define the following:—Tense, mood, voice, finite verb.

CHEMISTRY.

(Optional Subject—New Regulations.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. How can the composition of water be shown:—(a) By analysis; (b) by synthesis.
2. What is the meaning of the following terms:—(a) acid, (b) salt, (c) base, (d) oxy-acid.
3. How is HCl obtained? What are its properties?
4. Ammonia can be obtained from quicklime and sal-ammoniac. Give the reaction.
5. What is sulphur dioxide? How can it be obtained, and what are its properties?

ARITHMETIC—WEIGHTS AND MEASURES.

(All Candidates.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. Divide $16\frac{100}{151}$ by $\frac{48}{49}$.
2. How many minutes are there in 46 years, 21 days, 8 hours, 56 minutes (not taking leap years into account)?
3. What is the value of 0.86875?
4. What is the interest of 72*l.* 6*s.* 4*d.*, for 8 months, at 6 per cent.?
5. How many English miles are there in 17,297,280 inches?
6. How many grains are there in—(a) An avoirdupois ounce? (b) an avoirdupois pound?
7. A man weighs 11 st. 3 lbs. How many kilogrammes does he weigh?
8. A man measures 1.76 metres. What is his height in English measures?

BOTANY.

(Candidates under Old Regulations—Optional

Subject under New Regulations.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. What are the functions of leaves? How are these functions performed in plants which are apparently leafless?
2. Explain the meaning of the following terms:—Cyme, stipule, peduncle, floral receptacle.
3. Describe the flower and the fruit of the poppy.
4. What is the difference between simple and compound leaves? Give examples of each.

PHYSICS AND CHEMISTRY.

(Candidates under Old Regulations.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. Describe accurately the structure of a spirit-level. What physical law makes it act?
2. Describe the structure of a mercurial barometer.
3. What is Boyle's law? If the volume of a gas is 270 cubic inches at a pressure of 27 lbs., what will its volume be if the pressure be raised to 30 lbs.?
4. Describe the flame of an ordinary candle, and explain why different parts of it have different appearances.
5. What is sulphuretted hydrogen? What are its properties? How is it prepared?
6. What is HCl? How is it prepared? What are its characters?

ELEMENTARY PHYSICS AND MECHANICS.

(Optional Subject—New Regulations.)

E. MacDowel Cosgrave, M.D., F.R.C.P.

1. What are the laws of the pendulum?
2. Illustrate and explain some of the principal phenomena of capillary attraction.
3. Give some examples of the practical application of centrifugal force.
4. How is it that a greenhouse becomes much hotter in summer than the surrounding air?
5. Why is the sound of a tuning-fork louder when it is placed on a box?
6. Describe and explain any arrangement for determining the relative strength of two lights.

MILK-AND-WATER is said to be the best thing for keeping linoleum bright. At 6*d.* a quart it appears a trifle expensive. As chemists, we should think sixpennyworth of furniture-polish would go further.

THE FIRST HALF-OUNCE OF QUININE which ever got into the United States was received, says the *Phar. Era*, by Mr. J. Milhan, chemist, of 183 Broadway, New York. The business started there in 1830 by that gentleman is still carried on by his son Mr. Edward L. Milhan.

Legal Reports.

UNQUALIFIED SELLER OF POISONS.

WE reported briefly last week an action in the Birmingham County Court against Alice Ada Young, brought by the Pharmaceutical Society. The defendant is the wife of Mr. Thomas Young, who trades as the Aston Drug Company. A summons for four penalties had been issued against Mr. Young for selling poisons without being duly qualified, but the case was adjourned. Plaintiffs' counsel (Mr. Gray) said that an agent of the Pharmaceutical Society had made purchases from Mrs. Young on March 15, April 2, and May 30. On the first occasion he asked to be supplied with oxalic acid, on the second for a preparation of belladonna, and on the third he purchased some oxalic acid. On analysis it was found that the purchases from Mrs. Young were innocent of poison and did not contain the substance which had been asked for. In the third case, however, oxalic acid was really supplied. Mr. Price, who appeared for the defence, said the customer was known, and he was purposely supplied with non-poisonous materials. If oxalic acid was supplied on the last occasion it was an accident. Mr. Gray said that by supplying a different article to that demanded defendant had rendered herself liable to a penalty of 50*l*. Mr. Gray produced the register, which did not contain the name of Mrs. Young. George S. Pitsley said that on May 30 he called at the Aston Drug Company's shop and asked Mrs. Young for a pennyworth of oxalic acid. She gave him an ounce packet. The Judge: Did you take any of it? (Laughter.) Witness: No. Mr. Price: This is not the first time you have acted as a spy for the Pharmaceutical Society? Mr. Gray: I object to such questions. Mr. Price: Is this the first case in which you have acted as informer? Mr. Gray said he objected to the question. His Honour said he did not see anything objectionable in the question. Mr. Price: When you went to the shop you represented to Mrs. Young that you were a friend of theirs. Witness: No. But you told them that you intended giving them tickets for the Winter Gardens? (Laughter.)—Something was said about that. Mr. Moon, in the employ of the Pharmaceutical Society, said he had analysed the packet bought by Pitsley, and found that it contained oxalic acid. Mr. Price did not call the defendant. He said that so far as she was concerned it was news to her that the packet contained oxalic acid. She did not intend to supply poison in any of the three cases. He would submit to judgment for 5*l*. in the case that had been gone into. The Judge said there must be judgment for that amount, adding that the case showed the danger of an unlicensed person selling drugs if she did not know whether she was selling poison or not. Mr. Price: But Pitsley represented that he was a friend of the family. The Judge: Yes, but it is a dangerous thing to supply poison even to the members or friends of a family. (Laughter.) She handed him anything out of any bottle he liked. Mr. Price said a registered chemist went down every week in order to attend to the sale of poisons, and in his absence— The Judge: It is exactly the same as Dickens's juryman. (Laughter.) While his mother was away the boy was left in charge, and handed out poisons all round. There must be judgment against the defendant, but unless she has a separate estate there will be nothing to levy upon. The case shows how recklessly poisons are dealt with. Verdict for plaintiffs for 5*l*.

ACTION UNDER THE POISONED GRAIN ACT.

AT the Hastings Police Court, on October 8, Samuel Thomas Morris was summoned by the R.S.P.C.A. for placing in an exposed place grain steeped in poison. Evidence was given that defendant had said to a little girl living at a house adjoining his, "If you find your ducks dead, tell your mother not to blame me, because I put poison on my garden." Inspector Fair detailed an interview with the defendant, who denied laying poison round the garden, but said he laid it round the manure-heap. It was, he said, rat-poison, and oats steeped in oxalic acid to kill cats, dogs, chickens, ducks, or anything that came on to his ground.

Mr. Atkinson said his case was that the oats were put down for the purpose of killing rats, with which defendant's stable was overrun. His client only buried one handful of oats. A lad dug it up and threw it in the garden. William Vidgen, Morris's apprentice, said he saw a boy named Thorn dig some of the oats up and throw it on the garden. The Magistrates fined defendant 3*l*. and all costs, total 4*l*. 14*s*., and intimated that in any future cases the full penalty, 10*l*., would be inflicted.

THE MEDICINE-LICENCE.

RICHARD AYBISS, patent-medicine vendor, of 116 Lockwood Road, Huddersfield, was summoned at the Huddersfield Police Court, on Wednesday morning, for selling certain medicines liable to stamp-duty without a licence. Mr. Lee (supervisor of Excise) conducted the prosecution. The purchase of a bottle of medicine was proved by an Inland Revenue officer.

Defendant: The contents of the bottle produced are for outward application, and that is not medicine.

Mr. Lee said the defendant was liable whether the medicine was for internal or external use.

Mr. Mills (magistrate's clerk), after reading the portion of the Act bearing on the point, decided that this was so.

Mr. Lee handed up to the magistrates the bottle purchased. It was labelled "Handyside's Rheumatic Cure," and the mere fact of the Government stamp being upon it rendered it liable. If the stamp was necessary the licence also was necessary.

Mr. J. A. Wallace (another Inland Revenue officer) stated that on July 25 defendant applied for a licence to sell patent medicines from the Red Lion Inn, Lockwood, and it was granted. Witness distinctly told him that he could only sell from the one place with it.

Defendant said he had been accustomed in other towns to sell from various places with only one licence.

Mr. Lee explained that up to three or four years ago one licence was sufficient to enable a man to sell at as many places as he liked in one town, but the law now required that for every separate premises there must be a separate and distinct licence. If a man had shops only two doors apart he would require a separate licence for each. The defendant's premises, which bore the appearance of a chemist's shop, were about 400 yards away from the place for which he held a licence.

In reply to the charge defendant said he had never sold a bottle of medicine from the shop, neither had he given anyone permission to do so. All he did was to store it there.

Mr. Mills said the defendant should not have kept the medicine in the shop.

Mr. Lee asked for a substantial penalty. Defendant was a man who drove about in a painted chariot, and might be here to-day and gone to-morrow.

The Bench inflicted a fine of 2*l*., with 7*s*. costs.

Defendant said he would pay the money under protest.

NO STAMP IN HIS POCKET.

IN the City of London Court on Monday, before Mr. Commissioner Kerr, Mr. Hy. W. L. Robinson, trading as W. E. Spencer & Co., chemical manufacturers, 68 North Street, Gore Wharf, Hackney, sought to recover the sum of 7*l*. 10*s*., the balance of 30*l*. alleged to be due for chemicals supplied to the Anthyodor Compound Company (Limited), of 63 Chancery Lane, E.C.

The question in dispute was whether or not the plaintiff agreed to allow 25 per cent. deduction. It was alleged that after the goods had been sold the business of the company was taken over by a Mr. Waller, who offered to pay the debts if the creditors would accept a 25-per-cent. deduction. A traveller in the employ of the plaintiff denied, on cross-examination, that he ever had an interview with Mr. Waller when he made this proposal.

Mr. Commissioner Kerr: Suppose he made a contract to take 25 per cent. off, what consideration was there for such a proceeding? How could he bind the plaintiff?

Mr. Elliott, counsel for the defendant, replied that the plaintiff would have received nothing for his account out of the old company, and Mr. Waller was willing to take over the business if he could get the trade-creditors to take a

reduction of 25 per cent. All of them did so, and the defendants' case now was that the plaintiff agreed as well.

Mr. Robinson: The plaintiff said he never made any arrangement to take off 25 per cent. It was true he accepted 22½ 10s., but that was on account.

Mr. Commissioner Kerr: Why did the defendant not take a receipt in full discharge?

Mr. Elliott: Because neither party had a receipt-stamp in his pocket.

Mr. Commissioner Kerr: Good gracious! Neither of two business-men in this enlightened age having a penny stamp in his pocket!

Mr. Waller, the defendant, detailed an interview he had had with plaintiff's traveller when this offer was agreed to.

Mr. Commissioner Kerr said at present it was oath against oath. He would find for the plaintiffs for the amount claimed, but the defendants could have the case tried by a jury if they were so inclined.

CARRIAGE OF OIL OF PEPPERMINT.

On Tuesday Mr. Commissioner Kerr disposed of a case in the City of London Court of some importance to the drug trade, in which the plaintiffs, Messrs. Charles Gross & Co., chemical merchants, 9 Mincing Lane, E.C., sought to recover 5½ 0s. 6d. from Messrs. H. J. Perlback & Co., shipping agents, 113 Fenchurch Street, E.C., for damage done to four casks of oil of peppermint, *en* the ss. *Roland*, at Hamburg, which was alleged to be caused through the defendants not exercising reasonable care and trouble.

Mr. E. B. Tattershall, who appeared for the plaintiffs, said the defendants had exhibited a great want of diligence in conveying the oil of peppermint from Hamburg to London. On its arrival it was discovered that the oil of peppermint had been leaking on the voyage, with the result of a loss.

Mr. Commissioner Kerr: But are the defendants liable for leakage of casks on voyages? I don't think so.

Mr. H. E. Farnfield, who appeared for the defendants, said they were protected from anything like liability by the bill of lading. There were several clauses exempting them under the circumstances mentioned.

Mr. Tattershall said the bill of lading could not exempt the defendants from having to pay for a want of reasonable care.

Mr. Commissioner Kerr: What do you call reasonable care? That is what it comes to.

Mr. Tattershall said the cases were properly packed, and, seeing the condition in which they arrived, there must have been want of care or want of skill to have caused the damage. That was the only way in which it could have happened.

Mr. Commissioner Kerr: You must go a little further than that.

Mr. Tattershall said the defendants in one of their letters had asserted that the damage arose owing to the cases not having been properly soldered, but he was in a position to show that there was no ground for the suggestion.

Mr. Commissioner Kerr feared he was too much accustomed to these cases not to be quite sure about the point. He thought shipowners and agents had exempted themselves from liability for simply everything in the present day that might happen. Merchants could not recover for scarcely anything which was damaged while on the sea. The only chance they had was to show that the captain and the crew danced a hornpipe on the cases of oil of peppermint. (Laughter.) Nothing short of that would enable the plaintiffs to recover.

Mr. Farnfield said in this case even that would not do, because under the bill of lading "the captain, officers, and crew of the vessel in the transmission of the goods as between the shipper, owner, or consignee thereof and the ship or shipowners will be considered as the servants of such ship, owner, or consignee." The plaintiffs in this case were the consignees, so that the defendants were really plaintiffs' agents. Instead of the defendants being liable to the plaintiffs it was the reverse.

Mr. Commissioner Kerr laughed heartily, and said it was so. By-and-by, shipowners would stipulate that if any damage was sustained the owners of the goods, whether oil

of peppermint or otherwise, would have to pay the ship-owners. That was what it was coming to.

Mr. Tattershall: Very likely, sir.

Mr. Farnfield: At present all we suggest is that the plaintiffs shall pay us for coming here.

Mr. Tattershall: I hope they will be more merciful to us over the costs than they have been over our oil of peppermint.

Mr. Commissioner Kerr said he had no alternative but to enter judgment for the defendants, with costs.

LINCOLNSHIRE SHOPKEEPERS AND THEIR TINCTURE OF RHUBARB.

In the report of two cases at Spalding, which we published last week, the fines imposed were stated to be 5*l.* and 10*l.* respectively. They should have been stated at 5*s.* and 10*s.*

Foreign and Colonial News.

AUSTRIAN QUICKSILVER.—The Austrian quicksilver-mines produced 570,200 kilos. quicksilver in 1891, against 541,600 kilos. in 1890. The number of hands engaged in the industry is 1,116.

EXPLOSION IN A COMO PHARMACY.—In Guffoni's pharmacy, at Como, Italy, an oxygen-apparatus has exploded. The pharmacist and a medical man, Dr. Cantoni, were killed on the spot, while two other persons suffered severe injuries.

DISINFECTANTS IN AUSTRIA.—Stirred up by the fear of visitation by cholera, the Austrian provincial Parliaments are voting considerable sums for the purchase of disinfectants and the taking of preventive measures. The Landtag of Lower Austria, for instance, has voted 15,000 florins, that of Upper Austria 3,000 florins, of Salzburg 1,000, of Moravia 2,000, and of Silesia 2,000 florins.

POISONING BY LYSOL.—The Criminal Court of Bremen, Germany, has sentenced to fourteen days' imprisonment a druggist's assistant who had dispensed, by mistake, pure lysol instead of a 1-per-cent. solution of the drug, which was prescribed for outward application for a child suffering from burns. The pure lysol penetrated the skin and caused acute poisoning, from which the patient died.

NITRATE OF POTASH AND PLUMBAGO IN MASHONALAND.—The British South Africa Company has received a report from Mr. Griffiths, mining engineer of the De Beers Syndicate, stating that he has made a valuable discovery of nitrates near Mount Darwin, in the direction of the Hunyani River. The deposit, which consists of pure nitrate of potassium, lies in beds varying in thickness from 3 feet to 20 feet, and extending over an area of some twenty miles. He has also discovered a rich bed of plumbago in the same neighbourhood. This latter lies in the alluvium, but is very pure, and he says there is a sufficient quantity to be worked for fifty years.

PROJECTED SULPHURIC-ACID SYNDICATE IN GERMANY.—Negotiations have been in progress for some time to unite the whole of the sulphuric acid manufacturers in Germany into a syndicate to regulate the production and the price of the acid. It seems that the object of these negotiations has now been all but satisfactorily accomplished, and that an agreement between the manufacturers is on the point of being signed. It is not intended to raise the price of sulphuric acid excessively, but care will be taken to restrict the production to the actual requirements, and each factory is to have a certain district assigned to it where the sale of its produce will not be interfered with by other members of the Union.

DERMATOLOGISTS AT THE HUNYADI JANOS WORKS.—The international congress of dermatologists which lately met at Vienna closed its meetings with an excursion to Budapest, at which the principal places of interest in and around the Hungarian capital were visited. In the course of their sight-seeing the party were conveyed by special train to the Hunyadi-János springs and shown over the establishment

by one of the proprietors, Mr. Audor Saxlehner. The practical character of the installation and the magnitude of the works provoked enthusiastic encomiums on the part of Mr. Saxlehner's guests. The visitors were afterwards entertained at luncheon by Mr. Saxlehner. Mr. Jonathan Hutchinson (London), Dr. Allan Jamieson (Edinburgh), Dr. Hardy (Paris), and Dr. de Amicis (Naples) were of the party.

MURDER AND SUICIDE OF HUNGARIAN PHARMACISTS.—What may be the cause of the fearful prevalence of suicide among pharmacists in the Hungarian provinces of Austria? Over-competition and poor pay have something to do with it, no doubt, but they can hardly be responsible for all, or even most, of the instances. Last week our Austrian exchanges mention only two cases, which is a rather scanty budget, but often there are many more recorded. Laboratory-assistant Joseph Cseh, engaged in Pillich's pharmacy in Budapest, took morphia at the close of his day's work, and died within an hour. It was at first thought that his was a fatal case of cholera, and a considerable commotion was created in the city. Cseh did not live happily with his wife. About the same time Assistant D. Hazay, in Duna-Földvár, took a fatal dose of strychnine. No reason is assigned for this deed. From Gross Wardein, on the Danube, news came almost simultaneously that Assistant Franz Knorr, from Sarkad, was found murdered near the railway station.

CHLORODYNE IN CANADA.—The Ontario College of Pharmacy has succeeded in a prosecution against a Toronto limited company for the sale of chlorodyne and Boschee's German syrup, the former containing $2\frac{1}{2}$ grains of morphia in each ounce, the latter $\frac{3}{5}$ grain. They were not labelled "Poison." Referring to the syrup, the Magistrate said that the Act specified the salts and solutions of morphia. He presumed that a compound containing a very little morphia could hardly be called a solution, and the question arose whether one would be justified in labelling a very dilute solution as poison. He ultimately decided that the charge of selling poison without proper labelling and registration had been proved, and imposed a fine of £20 and costs. A similar fine was imposed upon the company for keeping open shop for the sale of poisons, but the Magistrate objected to multiplying cases against the defendants, who had already been punished. However, observing the fact that an unqualified person (a girl) had handed over the poisons, he followed the English decision in regard to "the seller," and imposed the fine, giving leave to appeal.

PHARMACY PRICES IN GERMANY.—A standing heading in the German druggists' journals, which are always anxious to exhibit pharmacists as an unfairly privileged class, is the large increase in the value of chemists' shops. Thus we are told that the Apotheke at Langenols, which was established twenty-five years ago, and was sold a few years later by its original owner for 1,500*l*., has now changed hands again for 6,250*l*.. The Lion Pharmacy in Thorn, which was sold in 1879 for 6,000*l*., and resold in 1887 for 13,750*l*., has just changed hands for the third time for 15,750*l*.. At Münsingen the apotheker has just disposed of his business, which cost him 5,000*l*., for 8,200*l*.. It must be remembered that under the system of State concessions, which limits the number of pharmacies to one to every 10,000 of population, and in a country where doctors may not dispense, an apotheker in one of the small places here mentioned has a monopoly of the dispensing business in his district. Nevertheless, the prices show that—in Germany, at all events—the happy elect who are able to secure a "concession" are thereby given a long start on the road to fortune.

THE KIMBERLEY EXHIBITION.—From an account of the opening of the Kimberley Exhibition in the *Cape Argus*, we see that a good many British firms known to our readers are represented in the South African Diamantina. Among those to whom special reference is made are Sutton & Co., the seedsmen; Morris, Little & Co., the sheep-dip makers; W. A. Rose & Co., of lime-juice fame; Carter & Co., the seed-merchants; the Nicotine Excelsior sheep-dip; Idris & Co.'s mineral-waters; Edwards's desiccated soups; Root's cuca coca; and F. C. Calvert & Co., of Manchester. Messrs. A. B. Fleming & Co., the oil-refiners, have left no stone unturned to bring their wares to the notice of the visitor. The Cape Town Soap Factory, of which the Hon. Mr. Graaff is the proprietor, have the biggest soap show in the Exhibition. Their trophy weighs over 10 tons, and they also have

a fine exhibit of "berry wax" in all colours. This will be transported from Kimberley to Chicago. Colonial industry is represented by Mager & March, of Queenstown, who make a large display of druggists' goods; by Turner & Co., of Durban, Natal, who are exhibiting infants' food manufactured by the Cornilla Africana Manufacturing Co., and called the Cornilla Africana Food; and by eucalyptus oil and cordial manufactured by Y'Brad & Co., of Durban. This oil has recently been introduced into England. There are also some samples of an entirely new colonial industry, such as essence of beef, beef-tea jelly, and concentrated tea.

QUININE FOR THE MILLION IN INDIA.—The annual report of the Director of the Indian Government cinchona plantations states that in the year 1891-92 the crop collected amounted to 285,560 lbs. of dry bark, against 293,972 lbs. in the previous year, of which 80,430 lbs. were red bark, 114,540 Ledgeriana, 70,870 hybrid, 19,170, Verde and Morada, and 550 Officialis bark. In other words, the crop was composed of 205,130 lbs. of the quinine-yielding, and 80,430 lbs. of the febrifuge-yielding, barks. The whole of this crop, with the exception of a small quantity supplied on indent or sold to Government institutions, was made over to the febrifuge factory for disposal. The output of the factory was 4,586 lbs. of sulphate of quinine and 4,190 lbs. of febrifuge, against 4,010 and 4,031 lbs., respectively, in 1890-91. The entire quantity was manufactured by the fusel-oil process, which continues to work satisfactorily. The net profit on the working of the estate amounts to 7,962*r*. 12*s*. 8*d*., against 17,040*r*. 2*s*. in 1890-91. Under the orders of the Government of India, the sale price for locally manufactured quinine supplied to Government is to be the same as the rate in England of Messrs. Howards & Sons' quinine on January 1 each year, converted into Indian currency at the official rate of exchange. The price of the quinine supplied to Government officers and local authorities is, however, slightly higher than that charged to medical depôts, and the question is under consideration whether the former should not be placed in the same position as the latter.

DISPENSING-CHARGES IN ITALY.—The new Italian pharmacy law has established an official retail price-list for drugs which has just come into operation. The list gives the maximum figures which a pharmacist is allowed to charge for all the drugs mentioned in the Pharmacopœia, as well as for the dispensing of prescriptions. The maxima are said to be much higher than those fixed by the German and other continental Governments, and the Italian chemists rejoice accordingly. For the work of dispensing (exclusive of drugs or packing) the maximum charges allowed are as follow:—

	Charge for	37 oz. 3 <i>l</i> oz. 2 <i>l</i> drs.	
Mixing powders and liquids	4 <i>s</i> .	2	1
Cold solution of one or more ingredients	5	3	2
Ditto, hot	7	4	3
Simple emulsion	6	4	3
Oil emulsion	10	5	3
Maceration of one or more ingredients	6	4	2
Digestion of ditto	13	5	2
Infusion of ditto	6	4	2
Decoction of ditto	8	5	—
Filtration	2	1	1
Brui-log	8	4	2 <i>½</i>
Powders, coarse	8	4	2
" fine	15	5	3
" very fine	25	8	5
Preparation of pastilles	40	10	—
" cold ointments	20	6	3
" hot	30	8	4
" syrups	25	5	3
" spirituous tinctures	40	20	10
" ethereal	40	20	10
Distillation of aqueous liquids	14	6	4
" alcoholic	20	10	7
Preparation from aqueous extracts	—	7	3
" alcoholic	—	100	60
Preparing pills (inclusive of mass)	100	10	1
" and silvering	10	3	1
" suppositories	1 3 4	4 2 10	3

Making plasters—1 square decimetre, on leather, 2*d*.; on silk or linen, 1*d*.; from 1 to 10 square decimetres, on leather, 6*½d*.; on silk or linen, 3*½d*.; from 10 to 100 square decimetres, on leather, 2*s*. 2*d*.; on silk, 1*s*. 4*½d*.

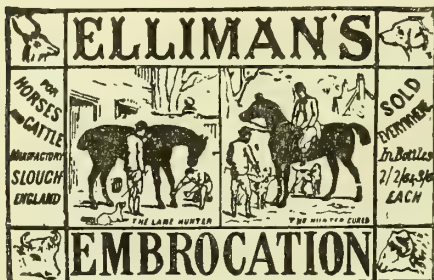
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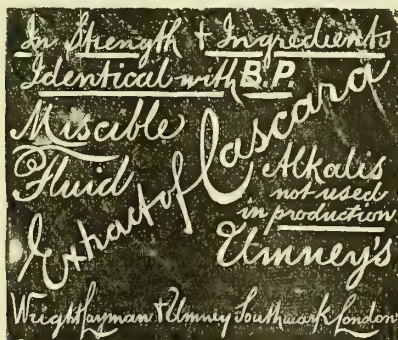


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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Editorial Comments.

WORK AT THE SOMERSET HOUSE
LABORATORY.

FROM the report by Dr. James Bell appended to the annual report lately issued by the Board of Inland Revenue, we gather some interesting facts concerning the work done in the great chemical laboratory under his direction at Somerset House. The report refers to the work of the year ending

March 31, 1892. In that period the total number of samples analysed by the Somerset House chemists amounted to 48,566, which is 130 more than in the previous year.

Tobacco and beer samples account for nearly 40,000 of these, and a large part of the rest of the work is the examination of goods bought by the Board of Trade, Admiralty, India, and other Government Departments.

The development of the export trade in spirituous medicines is very gratifying. The concession of drawback on this business was made in the latter part of 1888. In 1889 the samples examined numbered 1,759, in 1890 they increased to 2,947, and in 1891 to 3,819.

The laboratory chemists are now engaged in repeating their investigations into the character of the milk now generally produced, in order to ascertain whether any material changes have taken place since their previous enquiry ten years ago into its composition which would affect the standards of quality hitherto relied on as a guide in dealing with samples suspected to have been tampered with. This work has been undertaken in view of their position as referees under the Sale of Food and Drugs Acts.

By microscopical investigation two extensive frauds on the Revenue, by evasions of the duty on coffee mixtures, were detected during the year. Mixtures of coffee and chicory believed to contain a large proportion of caramel, were being sold in the north of England without payment of the packet duty. The samples purchased did not confirm the statement as to the use of caramel, but several were found to contain an admixture of ground and roasted cocoa husks. Investigation led to the seizure of over 20 tons of chicory mixed with ground cocoa husks on the premises of two manufacturers. The mixed chicory was subsequently restored on the payment of penalties amounting to 500*l.*, and on the manufacturers undertaking to put the same into packets bearing a proper duty label.

The samples referred to the Laboratory by magistrates, under the Sale of Food and Drugs Acts numbered forty-five, and comprised butter, butter-milk, coffee, dandelion-coffee, lard, linseed-meal, milk, mustard, whisky, white pepper, and rum. In seven samples of milk, two of butter, and one of whisky the Laboratory chemists did not agree with the analysts' reports.

An important series of experiments on disinfectants undertaken for the Board of Trade is mentioned. The object was to fix a standard of efficiency for disinfectants intended to be used on board passenger and merchant-ships, and to revise the list of disinfectants in the medical scales of the Board of Trade. It was decided to adopt as standards a solution containing 80 per cent. of carbolic acid, and a powder containing 20 per cent. of carbolic acid. Every disinfectant on the Board of Trade list was examined bacteriologically, in order to determine whether it was equal in value to the standard as an antiseptic and disinfectant. The experiments extended over several months, the result being that nearly every liquid disinfectant on the list was found to be inferior to an equal bulk of the carbolic-acid solution, and in the case of powders to an equal weight of the carbolic-acid powder. Revised medical scales have now been issued by the Board of Trade embodying the recommendations of this committee.

Contractors still seem to hope against hope for the old days when they could plant inferior goods on Government Departments. To the Admiralty somebody supplied pills which were found not to correspond to the formula of the B.P. Some linseed oil supplied to the Home Office was found to be largely adulterated with resin oil, and some white lead contained 21 per cent. of barium sulphate; while out of 539 general samples submitted to the laboratory by the India Office, 111 were either not genuine, or so inferior

in quality that they could not be approved. Among the articles were rape oil adulterated with mineral oil, pearl barley faced with chalk, white lead mixed with barium sulphate, zinc white adulterated with white lead, and lamp-black containing a large excess of mineral matter; but the most glaring case of non compliance with the terms of the specification were two samples of brass tubing, the lining of which, though submitted as being pure tin, contained 52 and 59 per cent. respectively of lead, and two samples of verdigris which were adulterated with 40 per cent. of sodium sulphate and 25 per cent. of cupric sulphate respectively. The chemists have to resist attempts of an opposite character by the methylators, who aim to get naphtha passed as pure as possible, the revenue authorities insisting on a high standard of impurity. Attempts to obtain approval for such naphtha during the past year have been exceptionally numerous, and have resulted in a large number of the samples being rejected.

Dr. Bell mentions the change made during the year in the character of methylated spirits allowed to be sold by retail. In order to prevent the use of such spirit as a beverage, the Board decided, at his suggestion, that while methylated spirit for general use in the arts and manufactures should be still allowed as hitherto, that portion sold by retail to the general public should contain a small addition of petroleum. This admixture renders the methylated spirit turbid when diluted, and also more offensive in character. The retail sales since its introduction have largely fallen off, and there is every reason to believe that the practice of using such spirit for drinking purposes has been extensively abandoned, if not altogether stamped out. By the course adopted it is further stated a more effective control can now be exercised over the uses to which the spirit is applied.

From the requests made to the Board for the use of ordinary methylated spirit, it has been evident in some cases that the applicants had hitherto been making an improper use of such spirit.

WANTED: A SCIENCE REFORM.

WE have always thought the Royal Society a harmless though dignified body. It is so far above the mass of scientific mankind that they can afford to admire it from afar, and leave the extremely ambitious and abnormally clever few to struggle through its narrow portals. Nothing but the very richest cream is served with its afternoon tea, its records are centuries old, and its councillors the most gifted of men. Such a rare old institution is something for a nation to be proud of. But here comes a reformer—yclept "A Free Lance"—having neither respect of persons nor honour of days, who talks flippantly, if cogently, of remodelling the Society's functions. A very bold anonymous person he must be; but there is some sense in his pamphlet on "The Organisation of Science." Science, British science, according to him, is wholesale robbery from beginning to end; this society steals the food of that; this journal poaches on the preserves of that; there is need of a well-organised detective force to stop pilfering and to recover the stolen property, and on the principle of setting a thief to catch a thief our "free lance" nominates the Royal Society to the part of the Howard Vincent of science. We may lose nothing at this beginning of our own science session by considering what he says.

First, then, the argument. Two hundred and thirty years ago the Royal Society was founded, and, as the sole representative of science, everything was gathered into its net, and men knew where to look for all that was new. As science grew the Royal net was found to be inadequate, and other

smaller nets, in the shape of the Linnean, the Chemical, the Geological, and many other societies were formed. Each was instituted for the purpose of monopolising a special branch of knowledge; but, knowledge having no boundary, and being subject, like other things, to differentiation, society-making has not stopped there, and we have the spectacle of such a society as the Linnean having its vitals sucked by the Zoological, the Entomological, the Microscopical, and dozens of similar societies and field-clubs throughout the provinces. Meanwhile, the Royal and the Linnean pursue their old courses. We have said that the Royal is a robber—the argument rather shows that it is the robbed; but that is where our pamphleteer's superior logic gets the better of us. He argues that when the Linnean Society was founded the Royal should have ceased to receive papers on biological subjects; when the Chemical was founded no more dissertations on chemistry should have gone to the mother of the societies; and so with all the rest. And to the extent that the Royal Society receives papers of any kind, it is eating the food of its offspring.

This savours of madness, but whatever "Free Lance's" argument may be, his objects are business-like, and they are, first, to bind the multitude of societies together, and, second, to reduce the number and systematise the nature of society publications. As science is so well looked after by specialised bodies, the Royal Society could now afford to give up its ancient functions and, with its ample resources, undertake the organisation of the work of its offspring. As to the work of union, there should be common centres for each department of science. Taking the Society of Chemical Industry as the model, each of the old societies should have sections in the provinces wherever there are a sufficient number of members to form a section. This would, of course, mean the annihilation of local science clubs and societies; but there is nothing to regret in that, says our pamphleteer—he is a Londoner, and knows not that "our local science club" is always second only to the Royal. But it is the journalism of science that is most at fault. This is how "Free Lance" puts it:—

If we examine the organisation of even the most happily circumstanced branch of science, we shall arrive at this dolorous result, that researches and papers relating to it may be published, not only in their sole proper place—viz., the journal of the specialist society concerned in such studies—not only, also, in the Royal Society's journals, but perhaps in the journals of the Royal Society of Edinburgh, or the Royal Society of Dublin, the Philosophical Society of Manchester, the Philosophical Society of Glasgow, the Philosophical Society of Cambridge, and several other such bodies. Is not this state of affairs—this shocking disunity and disorganisation—as lamentable as it is disgraceful? How, in the name of common sense—the bewildered reader may well cry—can any worker possibly hope to keep in touch with all the latest results of his own special science if the work is distributed over a dozen different journals, the majority of which are nine-tenths full of matters that neither interest nor concern him, a tenth only being of importance to his studies?

The remedy is that each local society should cease to publish its proceedings; that the British Association and others of that ilk should follow suit; and that each central specialised society should select and publish papers of importance, no matter where they have been read. This sounds like a chapter from "Looking Backward," and impracticable because it is not made a penal offence to disturb the simple simplicity of the scheme. So far no harm has been done by the multiplicity of societies; they serve to bring men together, the best of whom allow their best work to gravitate to the metropolitan centre, whence its existence becomes known to all who are interested. The multiplicity

of publications is about equally serious, and it must be irritating to the busy men who spend their whole time in laborious research to hunt up references in dusty journals. But that inconvenience needs some nursing, for as a matter of fact there is generally one publication in each branch of knowledge which does the sifting work thoroughly, and is relied upon by those attached to the branch. Need we go further than THE CHEMIST AND DRUGGIST for an illustration of that?

THE VIVISECTION DEBATE.

THE vivisection debate which enlivened the Church Congress at Folkestone last week was intense enough on both sides, but was curiously inconclusive. The real question at issue in the controversy never came into evidence throughout. The subject for debate was set down thus: "Do the interests of mankind require experiments on living animals, and, if so, up to what point are they justifiable?" The question in this form seems to an outsider one peculiarly capable of calm discussion. But there was nothing calm about those who took part in the debate. Dr. Samuel Wilks, who opened it, filled up most of his time with a tirade against the cruelties inflicted on animals by sportsmen and cooks—an argument which is obviously devoid of the smallest shadow of logic. Mr. Lawson Tait, who was expected to lead for the opponents of the practice, had turned out to be not eligible on the ground that he was not "a *bonâ fide* Churchman." The case for the anti-vivisectionists was therefore opened by Bishop Barry in a highly-coloured but, on the whole, an eloquent defence of humanitarian ideas as opposed to the claims which modern science puts forward. Mr. Victor Horsley, professor of pathology at University College, London, and well known as one of the most uncompromising advocates of the unrestricted freedom of medical men to do what may seem good in their eyes with the brute creation, followed the bishop. He made an impassioned speech, and no doubt secured the sympathy of the majority of his audience. He set himself to prove that Bishop Barry was ignorant, and culpably ignorant, and that Miss Cobbe's assertions were fraudulent, and her book on the subject one of the rankest impostures that had for many years defaced English literature. Mr. Lawson Tait, whose opposition to vivisection has been a serious stumbling-block to the experimenters for years, was declared to be the only man of professional position among medical men who opposed it, and he, though a surgeon of great dexterity, was ignorant of science and her requirements. Lastly, in order to expose the inconsistency of a vice-president of the opposing society, Mr. Horsley made public a consultation between himself and a patient, a proceeding which even his colleagues will scarcely defend. The cause of vivisection was more logically defended by M. Pasteur's herald, Dr. Armand Ruffer, who claimed that his hero had rendered services to humanity such as had perhaps never been rendered before by any one man. Mr. F. S. Arnold, of Manchester, and Dr. John H. Clarke, of Mayfair, ably maintained the controversy on the other side, the latter endeavouring to demonstrate that "medical opinion was never to be as much suspected as when it was unanimous." Weighty letters from Sir James Paget and Sir G. M. Humphry recorded the conviction of the writers that experiments on living animals are necessary to the progress of medical science.

Impartial listeners no doubt considered that the supporters of experiments on animals scored a rhetorical victory at Folkestone. But it cannot be said by any careful reader of the debate that they established by any fraction of proof what we understand to be their claim, that the Cruelty to

Animals Act should be repealed. They paraded effectively, but they scarcely met the question at issue. Within the past few years they have chosen three great battlefields, and have proclaimed conclusive victories in advance. They have little enough to say now about Koch's tuberculin, the famous Hyderabad Commission, which was to result in the future safety of the use of chloroform, has been followed by certainly no diminution of fatal accidents from the anæsthetic, and finally M. Pasteur's amazing theory of inoculation against hydrophobia after the bite, which is yet far from being conclusively established by results. In a letter published in Wednesday's *Times*, Mr. Lawson Tait touches the vital point of this discussion. He says:—

The vague statements made by Sir James Paget, Sir George Humphry, Sir Andrew Clark, and Dr. Samuel Wilks, that great advances in curative and preventive medicine have been made by experimentation on living animals are not enough for those who have, like myself, given a great deal of trouble to the critical investigation of such assertions. Uniformly they have been found quite destitute of historical foundation.

These gentlemen are very eminent members of my profession, and severally and collectively they have done much to advance its objects. I challenge them one and all to point out a single instance, in their own works, where they have adopted this method of research with any advantage.

Such assertions as they make must surely have some foundation in their own immediate experience, and cannot altogether depend upon information obtained from second-hand, and probably German, sources.

We await with interest the reply to this daring challenge, which we cannot doubt will be forthcoming.

COMMENTARY.

EXAMINERS' LATIN.—We notice four errors in the Latin quotations set for translation in the Irish Preliminary examination, which we publish this week. We shall be glad to receive postcards from students indicating these.

SELLERS OF MEDICINES SHOULD BE QUALIFIED.—The *Financial News*, in commenting on the *Sequah* meeting which was reported last week, says:—"With a professed thought-reader concerned in the business one would have expected that *Sequah* (Limited) might have foreseen the troubles which have overtaken the company in nearly every country where it introduced the system of selling medicines of unknown composition from itinerant waggons. We cannot agree with the chairman that it was 'a crying shame' for Parliament to put a stop to this traffic. The whole tendency of public opinion and legislation has long been to require that those who sell or dispense drugs should be qualified and responsible. No exception should be made in favour of a company making large profits out of the sale of bottles filled with unknown ingredients, merely because shareholders have put their money in a business which experience has taught us should be subject to direct and reasonable control."

SHIPS' MEDICINE-CHESTS.—Under the new scale for merchant ships which has recently come into force we notice that carbolic acid and Crimson Fluid are the only disinfectants specifically named. Formerly in the case of carbolic acid it was stated that it should contain 80 per cent. of carbolic and cresylic acids and their homologues; now the homologues are dropped out, and to further show their respect for efficient disinfection the Board of Trade state that "samples of the disinfectants supplied will be occasionally taken for analysis, to determine whether they fulfil the requirements of the Board." Jeyes' purifier, sanitas oil, Tuson's disinfectant, Fletcher's pino-phenol, Baird & Co.'s

neosote, Garroway & Co.'s disinfectant, Penny's disinfectant, and Burnett's fluid are now omitted from the scale, but it is probable that these and other disinfectants may be included in the term "other disinfectants of approved quality." We take it, therefore, that any disinfectant other than carbolic acid for merchant ships must be specially approved by the Board of Trade if it is to take the place of carbolic acid. The action of the Board appears to be due to a desire to purge the scale of the names of firms, for the name "Condy" also no longer appears before "Crimson Fluid." Apart from this the chemical advisers of the Board have had something to do with the matter. The Board still adheres to the British Pharmacopœia, 1887. It would be better if they now recognised the 1885 edition.

REVIEWS

The Hand-camera and How to Use it. By Walter D. Welford. London: Iliffe & Son. 1s.

CONTAINS 158 pages of text; rather garrulous; a dozen specimen hand-camera photographs, themselves worth the cost. The book is not written for the novice who wants to buy a hand-camera or has just bought one, and to whom we should have expected it would have been of most use, but is "written for photographers, who, whilst they may be novices at hand-camera work, are certainly no novices in the art generally." To such it may be amusing, but it can hardly be of service. A carefully-written guide to buyers of hand-cameras is wanted, but this one does not meet the requirement.

A.B.C. Medical Diary and Visiting-list, for 1893. London, 1892: Burroughs, Wellcome & Co. 2s. 6d.

THIS "Diary" is similar in size and style to those previously published by the firm. It contains space for recording visits to either 56 or 112 patients, pages for cash accounts, obstetric and vaccination engagements, engagements under Factory Act, memoranda, &c. With this is bound, on thin toned paper, the "Excerpta Therapeutica." This is a valuable section of the book for the busy practitioner, as it contains an exceedingly succinct record of recent advances in therapeutics, and such particulars in regard to posology and treatment as may be of material assistance to him in prescribing. From the pharmaceutical point of view, we look at the "Diary" as one which chemists may sell or present to their medical friends, according to the relations existing between them.

SCIENTIFIC MYSTERIES.

CHEMISTS are advised to stock and show this book in anticipation of the winter evenings. It contains particulars of 200 chemical and other experiments, is freely illustrated, and is the cheapest, most comprehensive, and most clearly described collection of experiments and illusions ever offered to the public.

It sells at 1s., and we supply it in one-dozen parcels with show card for 8s. 6d. It may be obtained at the same price from the following firms—

Ayrton & Saunders, 149 Duke Street, Liverpool
Barclay & Sons (Limited), 95 Farringdon Street, E.C.
Edwards, Wm., & Son, 157 Queen Victoria Street, E.C.
Evans, Lescher & Webb, 60 Bartholomew Close, E.C.
Evans, Sons & Co., 56 Hanover Street, Liverpool
Ismay, John, & Sons, Newcastle-on-Tyne
Maw, S., Son & Thompson, Aldersgate Street, E.C.
May, Roberts & Co., 9 Clerkenwell Road, E.C.
Newbery, F., & Sons, King Edward Street, E.C.
Thompson, John, Hanover Street, Liverpool
Woolley, James, Sons & Co., Manchester
Wyleys & Co. (Limited), Coventry

The advantage of stocking and selling this book is that it encourages and develops a new and profitable business in chemicals and chemical apparatus.

"SCIENTIFIC MYSTERIES."

OUR antipodean colleague, *The Chemist and Druggist of Australasia*, had the happy thought of offering a prize for the best outline of a lecture by a chemist to illustrate "Scientific Mysteries," and to induce the public to buy the book, the chemicals, and the apparatus, the sale of which it was published to promote. The prize was awarded to Mr. J. H. Niemann, Warracknabeal, Victoria, and his lecture, which was entitled "Colour and Chemistry," is published in full in the August number of the journal named. We reproduce it in a somewhat abbreviated form.

"Chemistry," says the author, "is such a very wide subject, that one cannot do more than treat one branch of it in a single address. I have chosen to treat in a general way some of the parts that *colour* bears in chemistry. This jar (*vide p. 1 Sc. My.*) contains different liquids mixed up in such a manner that their condition is indicative of chaos. On allowing it to stand for a little while, you see order gradually evolved. The chaotic fluid resolves itself into four different liquids, distinguished by their different colours. The ancients believed that the world consisted of four elements—earth, air, fire, and water. We know now, however, that each of these is actually composed of a number of different elements. The earth contains over sixty. Water and air also contain a large number—three in practically constant proportions, and a number of others, varying in quantity according to circumstances; while fire is merely the outward and visible sign of certain chemical actions with which we have at present nothing to do. The actual number of known elements amounts to sixty-six, and nature has made each one different in colour. Some resemble each other very closely, but there is a difference, apparent on examination, which becomes more strongly marked when seen through the spectroscope, or when each is brought into chemical combination with other elements. This paper (*vide p. 50 Sc. My.*) has been soaked in a solution of saltpetre and strontia. You see it imparts a rich crimson tint to the flame. This other has been soaked in saltpetre alone, and gives a violet tint. In the first example shown the violet of the saltpetre was obscured by the crimson of the strontia. The spectroscope would separate both colours and enable them to be distinguished, even in the first experiment. The coloured fires (*vide p. 97 Sc. My.*) sometimes used in theatrical performances, &c., are other instances of flames coloured by different chemicals. As the smoke from them is not very agreeable, we will content ourselves with one sample only—a green fire. The green is produced by, and is evidence of the presence of, nitrate of barium, or some other salt of that metal. It is possible to detect a number of chemicals in one flame by means of this little boiler (*vide p. 75 Sc. My.*), which contains spirits of wine and four chemicals—nitrates of copper, strontia, and barium, and chloride of copper. On boiling the spirit and turning on the tap, the steam may be ignited (in this way). The four colours seen—green, red, yellow, and blue—are due to the presence of the four chemicals previously mentioned. Sulphur when burnt in the air gives (as you see) a scarcely visible flame, but when burnt in oxygen it yields a flame of a bright blue colour, as we will proceed to demonstrate (*vide p. 7 Sc. My.*). This leads to the production of and some comments on oxygen. We have seen the effect of oxygen in giving brilliancy to burning sulphur, and you will now see that the effect of burning phosphorus in the gas is quite dazzling. The reason is that oxygen has a powerful affinity for other elements, and the process of chemical combination is frequently a violent one, causing, in the experiments shown, both light and heat. Parents will recognise a resemblance between oxygen and their boys and girls, since they have a powerful affinity for certain of the opposite sex, and when brought together they frequently 'go off.'

"The next illustration over which we will spend a moment is designed to show the effect of a certain gas in *destroying* colour. In this bottle (*vide p. 21, Sc. My.*) we have some oxide of manganese. When we pour on this chemical some hydrochloric acid (commonly known as 'spirits of salts') and gently heat it (in this way), chlorine gas is liberated and collects in the smaller bottle. This gas has a strong affinity for, and will remove hydrogen from anything containing it with which the chlorine is brought in contact, changing the

colours at the same time, even as hydrochloric acid will change the colour of your black suit to red, if you should happen to spill some on your clothes. The gas is very poisonous, but is easily mixed with water (in this way), when its properties may be studied with safety. If this chlorine water is placed in a plate and covered with a bell-glass, a coloured flower placed under the cover will shortly begin to lose its colour, and will, after a while, become quite bleached. A quicker way of showing its action is to put some into this wine and ink. The colour, you see, is speedily discharged. We have here in one glass a little hydrochloric acid (*vide p. 56, Sc. My.*), and in the other some ammonia. Each gives off a little visible gas, but when the two glasses are brought together they are filled with a thick smoke, the invisible chlorine and ammonia combining to form chloride of ammonium. By the way, it has been ascertained that Italian air contains more chloride of ammonium than that of any other country, and Italy is said to owe its large percentage of singers to the effect of this chemical on the voice; an apparatus is, in fact, sold for inhaling it. Local amateurs might take the hint. A neat little bit of parlour-magic may be done with glasses charged in this way. Hold them apart, blow the smoke of a cigar between the two, bring the glasses together, pretending to catch the smoke, cover them with a handkerchief, and command the smoke to multiply, which it will do in true conjurer fashion.

"We now come to a different series of experiments. The first we will take is as effective as the last, from the parlour-conjurer's point of view, and is as easily performed. Red iodide of mercury is rubbed on a piece of paper with a cork (*vide p. 46, Sc. My.*), and the paper is then held over a lamp until the red colour disappears. Now, if anyone will call out a word I will write it on the apparently blank paper in blood-red characters with a piece of wood, or anything else handy. The explanation is that heating the chemical melts and flattens its crystals, and when their shape is altered their colour is altered also—a good illustration of the fact that the colour of any article is not one of its inherent qualities, but is dependent entirely on its ability to absorb certain rays of light, and to reflect others. When the crystals are touched, they are restored to their original shape and colour. I remember startling a worthy old gentleman who handed me a coin to write with when I was performing this trick in public. I mentioned that the colour of the writing done with the coin would reveal its previous history, and then when the red writing appeared, I proclaimed that the money had been received in payment for blood. He was starting to explain how it came into his possession when I exposed the secret and the joke. The effect of heat on colour is made use of in magic inks. This paper (*vide p. 35, Sc. My.*) has been written on with weak sulphuric acid. The writing is invisible; but on holding it over the lamp the characters appear in black. The paper is charred, the corrosive action of the acid being developed by the heat. A more effective ink for invisible correspondence is a solution of chloride of cobalt (*vide p. 35, Sc. My.*). The writing done with this fluid is also invisible until heat is applied, when, as you see, it appears in blue, to disappear again, however, if it is simply breathed on. An application of the colour-changing property of cobalt is to be found in window-panes painted with a solution of the chemical, or fabrics dyed with it as in the case of this specimen (*vide p. 85, Sc. My.*). In dry weather the material is of a blue tint, but when the atmosphere becomes damp it acquires a pink colour, a very neat barometer being thus formed. A fine spray of water on this specimen will show you how it acts.

"If you are handy with your paint-brush you may produce some startling effects by sketching a landscape with solution of bromide of copper (*vide p. 37 Sc. My.*), when you will have a representation of a winter scene (as you see). On heating it, however, it is miraculously transformed into a picture of spring, because the trees and grass were afterwards painted over with muriate of cobalt, which turns green when heated, and the sky and water with acetate of cobalt, which turns blue. A picture even more interesting, I think, is this engraving of Deeming (*vide p. 36 Sc. My.*). This wretched criminal was never known to blush during his lifetime, but his spirit is cast in a different mould. When I point the finger of scorn at this portrait of him (wherein his spirit resides), you see he blushes violently, realising, no doubt, what a vile creature he is alongside such a superior

being as myself. I may as well explain at once, lest you should think there is really something uncanny about the portrait, that its cheeks have been painted with a solution of a chemical bearing the unpretentious name of phenolphthalein—a chemical which possesses the property of turning crimson in the presence of ammonia, some of which I had on my finger. You will observe that the blush disappears when the finger (and ammonia) is withdrawn. I have heard of an itinerant quack who created a sensation by utilising these chemicals. He held forth somewhat after this fashion:—‘Ladies and Gentlemen,—You see here some poverty-stricken blood [an almost colourless solution of phenolphthalein] taken from the veins of a man supposed by the doctors to be dying, but now happily restored to health by my great rejuvenator. The doctors said that his blood had become so poor that he could not live; but they didn’t know I was about. When I pour a few drops of my rejuvenator [ammonia] into this worn-out stuff, you see it instantly transformed into fine rich blood. That is the way it acted on Mr. Jones, and that is the way it will act on you. Five shillings a bottle, please.’ And he sold dozens.

‘The next experiment I have to show you is a conjuring trick, introduced by the great Heller, and is somewhat similar in principle to the last. The chemicals he used were different, but the phenol and ammonia might have been used with equal success. On these cards (*vide p. 43 Sc. My.*) we have a number of ladies’ names; one of the audience will please select one and retain it. Now, if someone will step on the platform, I will reproduce on his arm, without touching it, the name on the card. Of course, a few passes must be made in front of it, and the aid of a few magic words invoked. Now, you see, the name has appeared on the arm, and you can see that it is the same as the one on the card. You will be partly prepared for the explanation, which is simple. The cards all had the *same* name written on them. That name was painted on the arm beforehand with tincture of iron, which became invisible on drying. In my hand I held a little indiarubber ball containing a solution of sulphocyanide of potassium, which I sprayed on the iron, producing the blood-red writing on the arm. A trick with the spray may be performed by anyone as follows (*vide p. 64 Sc. My.*):—Sprinkle over a dry white rose some fine aniline dye (red by preference), then shake off the bulk of it. What is left will not be noticeable. Then spray some water on the flower, and it will be transformed into a coloured one, a very small speck of the dye being sufficient to colour a quantity of the liquid.

‘To show the effects of colour in analytical work the following experiment may be performed:—We have here (*vide p. 39 Sc. My.*) some solution of prussiate of potash. A little poured into this—solution of sulphate of iron—turns it blue; poured into solution of nitrate of bismuth, the latter turns yellow; while solution of sulphate of copper turns brown. Again, look at the results of the mixture of the contents of these five test-tubes (*vide p. 38 Sc. My.*). The first one, a colourless solution of iodide of potash, is poured into a solution of bichloride of mercury, also colourless. The result is the production of a scarlet colour, owing to the formation of iodide of mercury. The third tube contains a *strong* solution of iodide of potash, which possesses the property of re-dissolving the iodide of mercury. When this clear fluid is added to the contents of the fourth tube, which contains oxalate of ammonium, a white chemical is formed, which is turned black as it comes in contact with the sulphide of ammonium in the fifth tube.

‘Now take a sheet of paper (*vide p. 35 Sc. My.*), and write on it with some solution of sulphate of iron, a practically colourless solution, representing the river-water impregnated with iron. Now, if the writing is sponged over with this solution of tannin, it turns black at once, real ink being formed. We will presently see how this combination is utilised by conjurers; but while we are treating of inks I will show you how to produce a blue ink in the same way, with two colourless solutions. On this paper (*vide p. 36 Sc. My.*) I will write down any suggested word with the solution of iron. After drying it I spray on it a little solution of ferrocyanide of potash. The result, you see, is to produce visible blue letters from invisible ones, a new chemical being formed by the combination of the other two, which is distinguished by a blue precipitate, as the tannate

of iron is by a black. Now for the promised conjurer’s trick (*vide p. 49 Sc. My.*). We have here two bottles filled respectively with ink and water, and we desire to make them change places. They must be covered with handkerchiefs, and the conjurer’s wand brought into play. Watch me closely. We will put in the corks so that nothing can possibly be introduced into the bottles. The magic having worked sufficiently, I lift the handkerchief covering the ink, and we see that the ink is changed to water, with fish swimming in it to show that it is the genuine article. On lifting the other handkerchief we find that the opposite change has taken place—the water being changed to ink. The ink is produced, as you may guess, by having a little bottle of iron concealed in the cork and emptying it into the water, in which some tannin had been previously dissolved. Real ink might have been used for the other bottle and made colourless with oxalic acid, or another chemical, but we could not then have displayed the fish; the bottle, therefore, was lined with black silk, which was withdrawn with the handkerchief.

‘Everyone is familiar with the use that is made of blue in the laundry, but not everyone stops to think of the reason why it is used. This bottle (*vide p. 36 Sc. My.*) contains indigo dissolved in dilute sulphuric acid and mixed with some carbonate of potash. Observe the effect it has on these fabrics. The white cloth becomes blue, the red changes to violet, and the yellow to green. The blue indigo dissolved in the manner indicated acts on the colours of the fabrics as you have seen, one colour blending with another to produce a third. Time is nearly up, but you may have patience enough to give your attention to another trick sometimes performed by conjurers, and based also on chemical colour changes—I mean the pouring of a number of different fluids from one bottle (*vide p. 46 Sc. My.*). We will fill this bottle up with pure rain-water. Now we will fill up the glasses, putting something different into each. The first is port wine, then comes sherry, then claret; now we have milk, now champagne, and ink. Into the last glass we pour water to show that there is no deception about this magic bottle. The magic was performed by a little iron I had previously put in the bottle, and by small quantities of different chemicals put in the glasses, the iron acting on these developing the various colours. The last illustration I will bring under your notice will be connected with photography, perhaps the most important application of chemical colour changes. This photo of a leaf (*vide p. 82 Sc. My.*) was taken after this fashion: A sheet of paper was brushed over, by candle-light, with a solution of citrate of iron and prussiate of potash, then the leaf was laid on the prepared paper, covered with glass, and exposed to sunlight. The action of the light darkened the parts of the paper exposed to it, and produced the impression.

‘I have attempted to show you, in the course of this lecture, how colour and chemistry work together. I might have adduced more striking facts, perhaps, than those chosen, or have selected more striking experiments, but I have confined myself to illustrations which could not only be readily understood, but readily performed, by anyone having an inclination that way. With this object in view, too, I have selected experiments which may all be found in a cheap little book entitled ‘Scientific Mysteries,’ published by the proprietors of THE CHEMIST AND DRUGGIST. Besides those I have shown you, this book contains a thousand and one other experiments, each one interesting and instructive, easily performed, and capable of affording no end of entertainment. In conclusion, I beg to remind you that this is an age of advertising, and you will admit that there are few business men—certainly very few chemists—who could stand before you for an hour without advertising their goods in some way. I think, therefore, that I deserve great credit for not mentioning that I have these books on sale, and for not drawing your attention to the fact that my liver-pills are the best in the world—price, one shilling per box. Try—Excuse me, I was nearly forgetting myself then, and, for fear I should do so again, will thank you for your attention, and retire.”

FUCUS VESICULOSUS.—Dr. Urquhart, of the Perth Asylum states that he has recently treated a patient with liquid extract of fucus, and the first week the weight decreased, but afterwards it increased steadily.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lask, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," September 23, 1892.)

Device of dragon and ball; for veterinary preparations. By W. S. Robson, trading as Robson & Son, 19 Eastborough, Scarborough. 166,658.

"ST. WINTA'S OIL"; for medicinal preparations for human use. By W. Stead, 79 Peel Street, Tranmere, Cheshire. The essential particular is "St. Winta's." 166,447.]

Device of shield, scarf, and buckle; for aerated and mineral waters. By J. H. Drayton, trading as H. J. Roydant & Co., 75 Acre Lane, Brixton. 166,128.

Device of life-buoy floating on water; for mineral and aerated waters. By the Johannis Company (Limited), 25 Regent Street, London. 166,419.

"D. W. G." on diamond-shaped design; for all kinds of toilet-soap. By D. & W. Gibbs, City Soapworks, Finsbury, E.C. 164,206.

"ZOËLIA," and wording on square label; for a toilet preparation for curling hair. By N. H. Backhouse, trading as Roberts & Co., 76 New Bond Street, London. 165,464.

(From the "Trade Marks Journal," October 5, 1892.)

Device of four lilies, and the word "PURITAS"; for a disinfectant in solid cones, crystals, powder, and fluid. By J. Adams and M. Adams, trading as the Puritas Company, 151 Brooke Road, Clapton, London. The essential particular is the device. 156,501.

Device of shield, with outstretched wings above; for perfumery and toilet articles. By E. A. Uhlmann & Co., Plauen, Germany. 165,681.

Geometrical design composed of circle and half-circles; for perfumery and toilet articles. By W. & C. Dunlop, 46 Peckover Street, Bradford. 165,754.

(From the "Trade Marks Journal," October 12, 1892.)

Device of trotting race-horse, driver, and carriage; for chemical substances used for agricultural and veterinary purposes. By J. Wilson, Green Walk, Bermondsey. 163,387.

"SÉDATINE," and device of peacock, with wording, on oval label; for chemical substances used in medicine and pharmacy. By the Société Anonyme des Matières Colorantes, &c., 105 Rue Lafayette, Paris. The essential particular is the device. 166,651.

"QUINA DE MURRAY," sketch of a spider on label, and wording; for a quinine medicinal wine. By Sir James Murray & Son, Graham's Court, Temple Street, Dublin. The essential particular is the device. 166,662.

"MOTHER SHIPTON AND TANDEM"; for perfumery and toilet articles. By Goodwin Bros., Ordsall Lane Soap Works, Manchester. 166,724, 166,725.

BANKRUPTCY REPORTS.

Re SAUNDERS & SAUNDERS, Westgate Works, Cleckheaton, Chemical Manufacturers.

A PETITION in bankruptcy was filed on October 5 on behalf of the debtors at Bradford. The liabilities are estimated to reach 30,000*l*. Application has been made for the appointment of a special manager to carry on the business pending the first meeting of creditors. It is expected that arrangements will in the meantime be made whereby the business may be carried on.

Re C. B. SPRAGGE NORTON, 78 Castle Street, Bristol, Chemist and Druggist.

At the Bristol Bankruptcy Court, on October 7, this bankrupt applied for his discharge. A similar application was made some time ago, when his Honour directed that the application be made again a year later. The Official Receiver said that the wife had died recently, and on inquiring into the affairs of her business he found that there was nothing which cast reflection on the debtor, and that he had withheld nothing from his creditors. The arrangement with the three persons which brought about the bankruptcy was a stupid one, because debtor entered into a matter about which he knew nothing. The debtor became insolvent four years ago, and there were allegations against him that he had failed before, and that he had contracted debts which he knew he could not pay. The Judge directed that the bankrupt receive his discharge in a month.

Re ROBERT MARKHAM JESSUP, Swinefleet, Goole, Chemist and Druggist.

A PETITION in the Wakefield Bankruptcy Court has been filed by Mr. Everatt, solicitor, on behalf of Robert Markham Jessup, lately carrying on the business of a chemist and druggist at Swinefleet, Goole. The gross liabilities are returned at 535*l*. 12*s*. 4*d*., there being a deficiency of 390*l*. 10*s*. 3*d*. The debtor attributes his failure to long illness caused by an accident, and being placed on the list of contributories to the Grimsby Abbey Walk Building Company (Limited).

Personalities.

MR. A. F. FRYER, B.Sc., has been appointed demonstrator in the chemical department of the Liverpool College in succession to Dr. W. H. Ince.

MR. W. LLOYD WILLIAMS, A.I.C., Phoenix Mills, Dartford, has been admitted a Fellow of the Institute of Chemistry on the recommendation of Messrs. Burroughs, Wellcome & Co. and Mr. John Moss.

MR. G. C. EWING, dispenser in charge of the stores at the Royal Naval Hospital, Stonehouse, having reached the age of 60, is about to be retired. The vacancy will probably be filled by the appointment of Mr. Gardiner, dispenser at Chatham Hospital, or of Mr. O. A. Reade, from Malta Hospital.

PROFESSOR CARL SCHMIDT, who has occupied the chair of chemistry at Dorpat University for forty-five years, has retired from that position. The Professor, who is now seventy, is the son of the late Apotheker Schmidt, of Mitau, in Russia. He was intended for a pharmaceutical career, but, after studying in Germany under Liebig and Wöhler, decided to devote himself exclusively to the pursuit of chemistry.

SIR BAGHVAT SINGH JAREJA, the Thakore Sahib of Ghoudal, recently obtained the degree of Bachelor of Medicine of the University of Edinburgh. He is the first of his class to take up medicine and obtain his degree. His subjects, it is said, propose to signalise the event by erecting a statue to their ruler in his capital in Ghoudal, in which the newly made medical prince will appear in the gown and hood of his degree, worn over his full native costume.

MR. E. H. SANITER, who has suddenly made a name for himself in metallurgy, is a young man under 30 years of age. He is a native of Redcar, was educated at the Coatham Grammar School, studied analytical chemistry in the laboratory of Mr. J. E. Stead, at Middlesbrough, and afterwards became assistant chemist to Mr. C. H. Ridsdale, at the North-Eastern Steelworks, Middlesbrough, whence he went to the works of the Wigan Coal & Iron Co., where he has developed and perfected his new process of desulphurisation.

MISS JESSIE HARRISON, of Pant, near Merthyr, whose father (now deceased) was formerly a chemist in business at Dowlais, has gained a scholarship at South Kensington School of Art, tenable for two years. Miss Harrison is the

first young lady from Wales who has had a scholarship of this class awarded her. A few months ago she was awarded the silver medal, the highest award for drawing from life, at the annual competition at South Kensington; and this year she has had two awards of prizes in the competitions for studies of drapery arrangements on the living model.

THE late Chief Inspector of Inland Revenue, Mr. John Molineux, C.B., was entertained at dinner at Wingrove's Royal Hotel, Purfleet, on Thursday of last week. Mr. Thos. Tyrer (who was chairman of the Chemical Section of the London Chamber of Commerce at the time of the concession of drawback on alcoholic medicinal preparations) presided. He eulogised the courtesy and ability of Mr. Molineux all through his conduct of the affair. He had known Mr. Molineux for nearly thirty years, and on his own behalf and for the representatives of the trade present he thanked him for the part he had taken in the matter. Among those present were Messrs. Arnold Bais, R. H. Davies, G. B. Francis, W. H. Francis, Frank Clarke, Alfred Preston, John Moss, J. Gosnell, Holdsworth, Charles Umney, T. Donald Watson, F. J. Shaw, Kenrick B. Murray (secretary of the Chamber of Commerce), and Charles T. Tyrer. Expressions of regret at inability to be present were sent by Messrs. Farries, Hewlett, Dakin, F. H. Lescher, E. A. Webb, A. H. Mason, A. C. Wootton, and others.

Trade Notes.

MESSRS. PHILIP HARRIS & CO. (LIMITED), Birmingham, have published a neatly-bound and well-illustrated price-list of surgical instruments and appliances.

MR. JOHN MILNE, of Ladywell, S.E., has just issued a new price-list of the antiseptic surgical dressings manufactured at his factory, comprising such as those prepared for Sir Joseph Lister under his directions.

MR. H. SILVERLOCK, of 92 Blackfriars Road, has sent us samples of half-a-dozen varieties of almanacs and card-calendars for 1893, all produced in the excellent style for which his firm has so long been famous.

IN an advertisement, published this week, Messrs. Blyton, Astley & Co., of Manchester, bring prominently before the trade the fact that they accept no orders for their lozenges from other dealers than chemists. Such firms deserve the support of the trade.

THE Blackfriars Photographic & Sensitising Co., 1 Surrey Row, Blackfriars Road, have been appointed sole London agents for Messrs. Walter Griffiths & Co.'s detective, enlarging, and lantern-slide cameras. They intend to cater more for the lantern trade than they have done hitherto.

MESSRS. KNOLL & CO., of Ludwigshafen a/Rhein, have entrusted Mr. B. Kühn, 36 St. Mary-at-Hill, London, with the exclusive sale in Great Britain of their salol and the allied products, Messrs. R. Morrison & Co., of 2 Fen Court, London, continuing their agency for cocaine, lithia carbonate, and other preparations.

WE have received a rather entertaining and decidedly instructive pamphlet on "Lanoline," which consists of a *résumé* of the literature on lanoline, and a selection of formulæ having it as a basis. It is unnecessary for us to refer to the pamphlet at length, as any chemist may obtain a copy on asking Messrs. Burroughs, Wellcome & Co. for one. It is worth having. "From 'Oesypum' to 'Lanoline'" is the title.

MESSRS. W. B. FORDHAM & SONS (LIMITED), of York Road, King's Cross, have introduced some new and ornamental patterns of dishes of their patent unbreakable pulp-ware suitable

for containing articles for chemists' counter or window display.

ANTIPIRYN AND THE TEETH.—An American dental journal is responsible for the statement that antipyrin blackens the teeth. The more imperfect the enamel the more effect antipyrin has upon it.

NEW COMPANIES

THE WESTERN INFIRMARY OF GLASGOW (INCORPORATED).—Registered in Scotland to extend the general hospital accommodation, provide the means of clerical instruction, take over, provide, maintain, or contribute to a convalescent home or homes, and to do all such lawful things as may be conducive to the attainment of the above and similar objects. Every member of the Association undertakes to contribute to the assets of the Association, in the event of its being wound up, to the extent of 1*l.*, or in case of his liability becoming unlimited, such other amount as may be required, the word "Limited" being omitted from the title by licence of the Board of Trade.

NEW SULPHUR RECOVERY SYNDICATE (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Object: To acquire certain patents and inventions relating to an improved process for the recovery of sulphur, and the by-products arising therefrom, and apparatus therefor, and as dealers in aluminium, magnesium, &c. The first subscribers (who take five shares each) are:—F. A. Frieland, 11 Richmond Road, Barnsbury, N.; S. Willington, 28A Basinghall Street, E.C.; C. E. Joly, 29 St. George's Road, N.W.; H. Russell, 74 Chancery Lane, E.C.; L. Kerr, 49 Grosvenor Road, Highbury New Park; C. H. Russell, 34 Chaplet Road, N.W.; and J. T. Shives, 337 High Holborn. Registered without special articles of association.

NORRIS'S MAGNETIC EMBROCATION (LIMITED).—Capital 20,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on by N. H. Walker and the name of Norris's Magnetic Embrocation, with the recipe used in its manufacture, and to carry on business as manufacturers and vendors of and dealers in drugs and patent medicines, wholesale and retail chemists and druggists, &c. The first subscribers (who take one share each) are:—J. H. Wilkinson, Castle Manor, Southport, accountant; J. M. Martin, 18 Pembury Road, N.E., gentleman; E. Long, 2 Algernon Road, Birmingham, accountant; A. B. F. Burnett, Willesden Green, gentleman; T. Westwick, 28 St. Mary-at-Hill, E.C., merchant; E. Collard, Fairholme, Herne Bay, surveyor; and H. O. Spencer, 57 Upper George Street, W., gentleman. Registered without special articles of association.

CLEANSINE SYNDICATE (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Object: To carry on business as cleaners, dyers, dyersalters, druggists, oil and colour men, dealers in proprietary articles, wool-washers, tallow melters and refiners, soap-boilers, dealers in medical and chemical preparations, coopers, tinmen, braziers, glass-workers, &c., company promoters, and the general business of a financial agency. The first subscribers (who take one share each) are:—H. G. Clarke, Ormond House, Wimbledon, solicitor; W. J. Matthews, 49 Arthur Road, Finsbury Park, accountant; S. R. Wilshire, Birch Lodge, Wimbledon, gentleman; C. Hamm, 70 Portland Place, Clapham, bookkeeper; A. Cunningham, 32 Victoria Street, S.W., engineer; H. Cox, 25 Albion Grove, Barnsbury, engineer; and R. B. Troup, 61 Chandos Street, Charing Cross, gentleman. There shall not be less than three nor more than five directors. Qualification, 50*l.* Registered office, 47 Victoria Street, Westminster.

THE INCORPORATED AGENCIES (LIMITED).—Capital, 10,000*l.*, in 10*l.* shares. Object: To act as agents generally for the members of the medical, dental, veterinary, and clerical professions, and for chemists and others, in relation to or in connection with the investment, loan, payment, transmission, or collection of money, and in relation to or in connection with, the purchase, sale, disposing of, or other dealing with improvement, development, or management of all kinds of real and personal estate or property, including medical, veterinary, and dental practices, &c.; to establish and carry on the business of partnership negotiators, and to procure partners, assistants, *locum tenens*, or pupils for the medical, veterinary, and dental professions respectively, or for chemists, &c. The first subscribers (who take one share each) are:—L. V. Jones, 2 Bennett Street, St. James's, M.B.; A. E. Stainforth, 215 Piccadilly, W., gentleman; J. F. Cridland, 215 Piccadilly, W., solicitor; A. W. H. Allen, Constitutional Club, Chiswick, manager; W. Consenso, 34 Victoria Street, S.W., secretary; F. H. Cridland,



263 Strand, W.C., accountant; and H. C. Clements, 215 Piccadilly, W., gentleman. There shall not be less than three nor more than five directors; the first being appointed by the above subscribers. Qualification, holding shares. Remuneration, 5 per cent. (divisible) of the net profits of the company in each year, after the payment of a dividend at the rate of 6 per cent. per annum.

COMPANY MEETING.

ASHLEY'S PATENT BOTTLE COMPANY is not in a satisfactory way yet. At a meeting of the shareholders, on Wednesday, Mr. Alfred Backhouse, the chairman, reported that the trading account for the past year showed a loss of 283*l*. 5*s*. 1*d*., but after paying debentures, &c., the net loss was 2,290*l*. 18*s*. 3*d*.. This was attributed to two causes—viz., the reduced price of bottles and the conversion of a gas-tank. In the course of the year the company produced 55,000*l*. worth of bottles—that is, 880,000 dozen—and about one-fifth of these had been made by the machines. The company needs more money, and to get this it was agreed to issue the balance of pre-preference shares.

DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1897. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Teahan, Timothy Thaddeus, 169 Clarence Street, Sheffield, surgeon.

Trustee, John H. Freeborough, Sheffield, accountant. Dated, September 25; filed, September 28. Unsecured liabilities, 223*l*. 15*s*. 9*d*.; estimated net assets, 75*l*. Composition of 6*s*. 8*d*. in the pound, debtor covenanting to pay to trustee 5*l*. per month, commencing November 1, 1892, until he shall have paid sufficient to meet said composition, secured by assignment to trustee to realise in default. The following are scheduled as creditors:—

	£	s.	d.
Eydes, Wm., Sheffield	19	0	0
Hobson, Henry Parkes, Sheffield ..	27	15	0
Lofthouse & Saltmer, Hull	24	9	1
O'Connor, J., Sheffield	33	0	0
Wolfe, Amelia, Sunderland	49	10	0

Troughton, Christopher, 72 Oldhall Street, Liverpool, chemist. Trustee, Arthur Thraves, 15 Victoria Street, Liverpool, accountant. Dated, September 27; filed, September 30. Unsecured liabilities, 375*l*. 1*s*. 11*d*. Estimated net assets, 113*l*. The following are scheduled as creditors:—

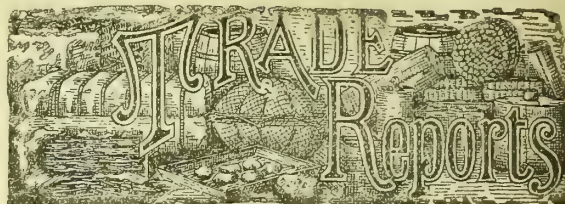
	£	s.	d.
Barron, Harveys & Co., London	40	0	0
Hiskath, —, Kirkby	10	0	0
Evans, Son & Co., Liverpool	95	0	0
Thompson, John	13	0	0
Jackson, H.	10	0	0
Ayrton & Lamders	12	0	0
Harvey, Miss Agnes	10	0	0
Harris, Isaac	14	0	0
Bickersteth, Dr.	20	0	0
Rogers, Miss Annie	16	0	0
Oliver, James, Billom & Co. (Rent), Liverpool ..	62	0	0
City of Liverpool (Rates)	17	0	0

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BLYTH—MACKENZIE.—On October 7, by special licence Mary Purves, only daughter of James Mackenzie, Leith, to John Blyth, chemist and druggist, Leith.

MATHER—REA.—On October 5, at the Congregationa Church, Godalming, by the Rev. John Mather, father of the bridegroom, John Henry Mather, pharmaceutical chemist, to Annie Buick, youngest daughter of T. Rea, J.P., C.C., of Bridge House, Godalming.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 12.

ACID CARBOLIC.—Prices again rule decidedly lower since last Thursday.

ACID (CITRIC).—The English makers continue to quote 1*s*. 6½*d*. per lb. for B.P. acid, but second-hand holders are willing to undersell them to the extent of about ½*d*. per lb. The market is decidedly weaker—"Merely in consequence of 'bear' speculation," say the sanguine ones; but nevertheless it is a fact that it is now possible to buy commercial (not guaranteed B.P.) acid at 1*s*. 6*d*. per lb. Juice is also less firm, and the quotations run from 21*l*. to 20*l*. 10*s*, f.o.b. According to Messina advices, dated October 7, juice for prompt delivery is very scarce, the stock, which amounts to 200 or 300 pipes only, being firmly held by speculators.

ACID (TARTARIC).—"In spite of the apparently neglected condition of this article," one of the makers told us, "there is a very good undercurrent of orders for consuming purposes, and buyers appear to be waking-up to the fact that the drug is really cheap at present." Second-hand stuff may be bought at 11*d*. to 11½*d*. per lb., according to brand; for English (B.P.) 12*d*. per lb. is asked. Crude tartaric material has advanced in Sicily, where the vintage is said to have yielded only one-half of last year's production.

ANISE (STAR), in common with most products from the Far East, is rather higher, and importers now require 85*s*, c.i.f. terms, for November-December shipment, and 87*s*. 6*d*. c.i.f. Marseilles. Offers of 82*s*. 6*d*. c.i.f. have been refused. None is offering on the spot (where 112*s*. 6*d*. was the last price paid), but some is due almost immediately.

ANTIMONY.—Regulus has advanced to 44*l*. 10*s*. per ton.

BENZOLE may now be had at 1*s*. 7½*d*. for 90, and 1*s*. 4*d*. for 50-per-cent.

BROMIDE OF POTASSIUM.—The European makers have all raised their prices ¾*d*. per lb. this week, 13*d*. per lb. being now their price for quantities of 10 cwt. Dealers mostly appear to think that there is some foundation for the rumours that the hatchet is about to be buried by the German and American bromine-makers, though at present the belief seems to rest upon intuition rather than fact.

CAMPOR (REFINED).—No change; English bells, 1*s*. 10*d*. per lb., usual terms; other shapes in proportion. German, 1*s*. 7½*d*. per lb. net.

CANARY-SEED.—Further sales of about 400 bags Turkish seed took place on Friday and Saturday at 80*s*., and since then holders have refused to accept that price.

CANTHARIDES.—For Russian flies, new crop, natural, 2*s*. 11½*d*., c.i.f. terms, is asked, and 3*s*. 3½*d*., c.i.f., for sifted ditto.

CARAWAY-SEED.—Advancing. For fair quality Dutch seed, 22*s*. 6*d*. to 23*s*. 6*d*. per cwt. is required, and for fine bright, 24*s*. per cwt.

CASCARA SAGRADA.—The firmness of holders has brought business to a dead stop. We believe that 45*s*. is the highest price paid, but 50*s*. per cwt. is generally asked for good quality.

CHLORATE OF POTASH is lower. Business has been done at 7½d. per lb. f.o.b. Liverpool, and holders are offering freely at 6½d. per lb. for delivery over next year, or at 7d. for next month.

CHLOROFORM.—Another circular was issued by the English and Scotch makers last Friday, raising the price for *methy-lated* to 1s. 4d. to 1s. 6d. per lb., according to quantity. *Ketone* chloroform is quoted at 1s. 8d.; *Warrington* at 1s. 9d. per lb.

CREAM OF TARTAR.—Best white French crystals may be had at 82s. 6d. per cwt.; powder at 84s. per cwt.

GALANGAL is scarce, and higher prices are quoted—viz., 26s. 6d. per cwt., c.i.f. terms, for best quality. This quotation comes from Hamburg.

GALLS (CHINA).—Prices are reported higher to-day, and a good business is said to have been done on the spot at 53s. to 53s. 6d. per cwt. The latter price has been refused since. The c.i.f. quotation is 47s. per cwt.

GLYCERINE shows some signs of increasing firmness, and makers want 42s. 6d. per cwt. for double-distilled s.g. 1260. We believe that the lowest price which was accepted lately was 40s. per cwt.

GUM OLIBANUM.—Prices have advanced considerably lately, and it is stated that a considerable amount of business has been transacted privately. At last week's auctions only a moderate quantity (450 packages) was offered, and of this about 270 packages sold, with a fairly good demand, at an advance of about 2s. per cwt. on good pale and reddish mixed to fine yellow drop, which brought from 26s. to 40s. 6d. per cwt. Yellow pea-sized siftings sold at 18s., and fair to good garblings at 11s. to 15s. per cwt.

GUM TRAGACANTH.—Fine qualities are scarce and firmly held. For good pale druggists' (firsts) 11½. per cwt. has been paid, it is said.

INDIARUBBER is firm, fine Pará selling in a small way at 2s. 10d. per lb. on the spot.

INDIGO.—At the periodical auctions of East Indian indigo, which were held this week, 2,764 chests were offered. These included 1,123 Kurpah and 932 Bengal and Tirhoot kinds, the remainder being Oude, dry leaf Madras, Bombay, &c. The auctions proceeded with a good deal of animation, and the bulk sold at an advance, as compared with the July rates, of 6d. per lb. on all kinds of *Bengal* and *Oude* indigo. This is the full level of the advance paid privately since that auction. Good *Kurpah* kinds sold at from 4d. to 6d. per lb. advance on the last sale prices, but common kinds are difficult of sale. The stocks of East Indian indigo here and on the Continent have been much reduced, and the supply to be expected from Bengal is estimated to yield only 86,000 maunds, against 150,000 maunds in 1891. On the other hand, the reports from Madras are favourable.

IPECACUANHA.—There has been an arrival of 4 packages *Cartagena* root from Panama this week.

LYCOPodium is very scarce, and from 1s. 6d. to 1s. 6½d. per lb., c.i.f. terms, is asked.

NUX VOMICA.—The arrivals upon the Calcutta market are very small, and the stock firmly held.

OPium.—Our Smyrna advices are dated October 1. They state that, as regards the position of the market during the month of September, the demand may be described as having been very active, the total sales amounting to about 450 cases, 100 of which were taken against sales to the Dutch Government, and 350 of the talequale qualities chiefly for America and the continental markets. The prices paid were from 7s. to 7s. 4d. for Karahissar, 6s. 6d. to 6s. 7d. for Yerli talequale, 6s. 3d. to 6s. 4d. for current ditto, and 6s. 4d. to 6s. 5d. for old ditto ditto, per lb. f.o.b. The sales to the Dutch Government amount in all to 650 cases, deliverable during the next three months, 400 of which have been sold by Smyrna houses, who have hitherto secured only about 100 of suitable quality, and it is probable that the sellers will have to pay more money to complete their requirements, the rejections being much larger than usual, not on account of want of intrinsic value, for the standard is good, but because the darkness of the paste is objected to by the Dutch Government. Thus far the season has been

very dry, and no progress has been made with the autumn sowings, which, in order to be successful, must be carried out next month. It is therefore probable that our market will go no lower than it now is, and it may advance if the drought continues. The total stock of new and old opium in Smyrna on September 30 was estimated at 3,000 cases.

QUICKSILVER is much firmer, although the principal importers have not yet raised their price above 6½. 7s. 6d. per bottle. In second-hand, however, 6½. 6s. 6d. has been paid.

QUININE.—On Friday last the activity of the market was in no wise diminished, and sales were made of B.&S. and Brunswick quinine, second-hands, at 9½d. per oz. on the spot, and up to 10½d. per oz. for delivery as far forward as February-March, 1893. Since then no further business has been reported, and the excitement has quite cooled down.

SAFFRON.—A Valencia correspondent writes:—"The lowness of the saffron prices has induced speculators to make further purchases; thus, in August of this year 2,759 kilos. changed hands, against 807 kilos. in August, 1891, and at the end of the month there remained a stock of only 2,800 kilos., against 7,000 kilos. in 1891. The sales from October 15, 1891 (beginning of the new crop), to August 31, 1892, were 30,455 kilos., against 25,680 kilos. in the corresponding period of 1890-91. It is not surprising that prices advanced slightly when these figures became known. The market closes very firm."

SHELLAC.—At the close of last week the delivery market showed a downward tendency, and prices closed lower, TN for November and December delivery being sold as low as 86s. per cwt. At the public sales on Tuesday 1,082 cases of lac were offered, of which about 700 sold at irregular prices, advancing towards the close, orange being generally 1s. to 2s. and garnet 1s. per cwt. dearer as compared with the last preceding sales, while button lac was steady. The following prices were paid:—Unworked, fair to good, 83s. to 86s.; ditto dark and livery, 82s. to 83s.; worked, good fair, 85s.; common livery to medium red, 81s. to 83s.; garnet, fine bright unworked AC, 74s.; button lac, fair to good second, 85s. to 88s.; ditto third, 76s. to 79s. per cwt. Since the auctions the market has been steady, but quiet, with small sales of October TN at 86s. 6d. per cwt.

SPICES.—The firmness of tone in several important departments of the spice branch, upon which we commented last week, has generally been well maintained. Early in the week a temporary depression showed itself in the delivery market for *Cloves*, and for October shipment 2½d. per lb. c.i.f. terms was accepted, but at the auctions there was a very good demand for Zanzibars, and out of 1,052 bags offered, 830 sold steadily at 2½d. to 3½d. per lb. for ordinary dark to good. The market for delivery is also rather steadier, with sales up to 3½d. per lb. for January-March. A considerable amount of business has been done this week. Good picked *Penang* cloves sold at auction at 1s. per lb. *Penang white pepper* has been in very strong demand privately, and during the early part of the week about 25 tons are said to have changed hands on the spot at 4¾d. per lb. At auction 105 bags were bought in at 4¾d. per lb., while for fair but somewhat dull Singapore 5½d. per lb. was paid. *Black pepper* is steady, but rather quiet; fair *Alleppey* sold at 3½d. per lb. at auction. *Pimento* is firmly held and slightly dearer, ordinary to fair selling at 2½d. to 2½½d. per lb. *Cassia Lignea* remains dull of sale, and may be had at 21s. 6d. per cwt. *Nutmegs* and *mace* are quiet. *Cochin Ginger* has been in demand privately, and about 1,000 packages of it were sold before the commencement of the auctions at 45s. to 48s. for rough and washed rough, 55s. for fine rough, and 60s. for cut. About 250 bags Bengal also changed hands privately at 29s. 6d. to 30s. per cwt. At the auction the tone was very firm, with sales of fair small to medium cut *Cochin* at 60s. to 70s. per cwt., good native cut bringing 67s. per cwt.

TONQUIN BEANS.—Fine frosted *Angostura* beans are quoted from Hamburg at 7s. 9d. per lb., c.i.f. terms.

TURMERIC.—*Madras* root is very scarce, and has realised as much as 32s. per cwt. for good bright finger. Higher prices are reported for *Bengal* root from Calcutta, and our market has responded sympathetically; for fair quality from 20s. 6d. to 21s. per cwt. is now required. At auction 137 bags of *Madras* turmeric were bought in at 35s. per cwt., nominally.

WAX (BEES').—Bleached *East Indian* wax is very dull of sale. White kinds are worth, nominally, from 7l. to 9l. per cwt., according to quality, and yellow from 5l. to 6l. per cwt. To effect sales, however, holders would have to reduce their quotations.

WAX (JAPAN).—Since the completion of the business at the low prices reported last week the market has improved considerably; for good pale squares, on the spot, 37s. per cwt. has been paid, and there are now no further sellers at that figure, while for delivery sales are reported at 33s. 3d. per cwt., c.i.f. terms—the closing price in that position being 34s. c.i.f.

Thursday's Market News.

42 CANNON STREET, E.C., October 13.

London. The drug business continues to be of a very satisfactory character, and since last week several articles have again advanced in price, some very considerably. To-day's drug sales passed off with an excellent tone, a very large proportion of the supply offered being disposed of. The following are the principal alterations:—*Tinnevely senna* is very much higher, *ipecacuanha* dearer both for Rio and for Carthage; *Loxa* and *Huanoco* barks dearer, *Sumatra* and *Siam benzoin* also higher. *Buchu* leaves brought a very considerable advance, and for star-anise, Russian anise, star aniseed-oil, Japanese peppermint-oil, Japan wax, Jamaica honey, cumin and caraway-seed, areca-nuts, calumba-root, gum ammoniacum, senega-root, galangal, musk, and kola-nuts higher prices must be conceded. China produce and to some extent, also, Japanese goods are generally all higher in price. Jamaica bees'-wax remains in small supply and at very high rates. *Cariamoms* in better demand. *Ergot-of-rye* is flat; gum kino and gum guaiacum slightly easier, and lime-juice also lower. In chemicals the principal alterations have been an advance in bromide of potassium, a slight rise in chloroform, and somewhat higher prices for glycerine. Citric acid and chlorate of potash are lower, and quinine has again become quite neglected. In outside articles we have to report a somewhat wavering market for shellac (which on the whole is rather easier), higher prices for antimony, gambier, canary-seed, China galls, gum olibanum, East Indian indigo, and cochineal. Spices remain firm, particularly cloves and white pepper. Quicksilver is slightly higher to-day. Linseed oil lower, rape oil quiet, and turpentine steady. The Bank rate remains at 2 per cent.; bar silver is quoted at 38½d. per ounce, and the Bombay and Calcutta Exchanges stand at 1s. 2½d.

New York. Our New York correspondent states in a communication dated October 5 that the drug trade is in quite a flourishing condition, a considerable volume of business being transacted and this for the most part at increased prices. The majority of inquiries are for consumption, though there is some speculative interest in one or two lines. Canadian balsam of fir is reported quite scarce, stocks have been concentrated, and, as a consequence, holders advanced to \$2 to \$2.10. Three thousand pounds *Pará copaiba* sold from first hands at 36c. *Cascara sagrada* has again advanced and is quoted at 10c., with sales of 10,000 lbs. at that figure (see cable of last week). *Tonquin beans* are firm though quiet at \$2.50 for Angosturas, and 75c. to 77½c. for Paras. *Vanilla* beans, Mexican are selling well at very stiff prices, which are difficult to quote because of the wide variation in the qualities. *Peppermint* oil is quiet; holders of HGH wanting \$2.65 to \$2.70, while \$2.60 is the limit offered by exporters. Wayne County (New York) growers seem confident of an advance, and but little is coming into the hands of local dealers. While the average in that section is reported smaller, the yield has been larger per acre than usual. *Gum chicle* remains firm at 22c. to 22½c. with jobbing sales, but no large business reported. *Senega* has rapidly advanced, and sales have been made at 45c. to 55c., the aggregate business during the interim both in the West and on the spot amounting to some 30,000 lbs. For further supplies 55c. to 60c. is wanted on the spot. There have been further arrivals of Mexican *Sarsaparilla*, and Tuxpan from first hands is now available at 8½c., while for

Tampico 9c. to 9½c. is wanted. In a jobbing way ½c. more is demanded. Honduras continues at 30c. to 40c. as to brand. *Jalap* is inactive, quotations ranging from 28c. to 36c. as to quality, quantity, and holder. *Guarana* is dull and easy at \$1.10. *Cream of Tartar* is in better supply at 23c. to 23½c. *Tartaric acid* is steady at 24½c. for crystals, and 25½c. for powdered with a fair demand. *Bromide of Potassium* was advanced last week, and is now quoted at 24c. for German and 25c. to 26c. for domestic in bulk. *Carbolic acid* is weaker and less active at 13c. to 14c. for crystal in drums. *Bleaching powder* is in better supply, and prices are declining, casks offering on the spot at 3c., and barrels at 4c., while even lower figures might be got to arrive. Domestic makers have advanced *Strychnine* 5 cents per oz. to \$1.15 for crystal in ½-oz. bottles in lots of 500 lbs., \$1.20 in lots of 100 lbs., and \$1.25 for smaller quantities. Powdered, 5c. less. The stock of Curaçao aloes is closely concentrated and firmly held at 2½c. to 3c. Domestic *Sugar of milk* is active at 18c. spot, and 17c. for forward contracts. The demand for opium is slack, and quotations unchanged. Quinine is in good consumptive demand, and moves out at unchanged prices of 18½c. to 19c. for foreign in large bulk, and 20c. for domestic in large bulk. Acetanilid is offering with increasing freedom, and bulk may be had at 45c. to 47c., short *buchu* leaves are scarce and wanted, stock is held at 12c. to 13c. 200 barrels of Norwegian cod liver oil sold at \$22 to \$22.50, and \$22.50 to \$23 is asked for additional parcels. *Cattle bone* is active at 13½c. *Shellac* is quiet at steady prices. *Camphor* is in demand at 48c. to 49c., and very firm. *Ipecacuanha* is in good jobbing demand, and has advanced to \$2.10 to \$2.25. *Rhubarb chips* have advanced to 26c. to 27c., and are sparingly offered. *Canary seed* has advanced on the strength of foreign advices, with sales of 200 bags of Smyrna reported at 4½c.; at the close 4¾c. to 5c. is asked.

ACONITE.—Forty-six bags Japan root were again bought in at 22s. 6d. per cwt.

ALOES.—No Cape aloes was offered to-day. Of Curaçao aloes, 80 packages were placed in sale to-day, and sold at 19s. 6d. per cwt. for dark brown; and 9s. 6d. for common drossy kinds. Fine qualities are scarce, and none were shown to-day. *Socotrine* aloes keeps steady at the recent decline: of 60 kegs offered to-day, 30 sold at 100s. per cwt. for soft brown rather darker ditto brought from 77s. 6d. to 80s.; and dull to blackish from 62s. 6d. down to 50s. per cwt. Two parcels, together 118 packages, Cape aloes have just been imported here from Mossel Bay.

ANISE.—Of 30 bags rather dirty Russian anise, 20 brought the very high price of 23s. per cwt., showing a decided advance in value.

ANNATTO.—For 2 bags of good bright Ceylon Seed 2½d. per lb. was paid privately, and two other similar parcels were also sold at 2½d. to 2¾d. per lb.

ARECA.—Thirty shillings was accepted for a small lot out of a parcel of 25 bags offered at to-day's sales, but afterwards 6 bags brought from 32s. to 32s. 6d. per cwt., showing some improvement in value. A parcel of chopped and wormy arecas was bought in at 25s. per cwt., a bid of 14s. being refused.

BALSAM (COPAIBA).—Four casks rather thin clear red brown balsam were bought in at 1s. 10d. per lb. Another parcel of 18 tons from Bahia, dull thick grey quality with a good deal of sediment, was bought in at 2s. per lb.

BALSAM (TOLU) is slow of sale. Good quality changes hands in a small way at 1s. 2d. per lb.

BUCHU.—In consequence of these scanty imports, coupled with the scarcity of supply here, prices went considerably higher at to-day's auctions. Eight bales of round leaves, just imported, of good flavour, but rather mixed with stalk and slightly off colour, realised from 7½d. to 8d. per lb. (1½d. to 2d. advance on the last sales). A dull lot fetched 6½d. per lb. For 7 bales false long serrate leaves, quite odorless, catalogued "without reserve," no bid could be obtained. There has only been one small import of 5 bales from Cape Town since our last report.

CALUMBA.—The market is improving, and at to-day's auctions a fair proportion of the stock offered sold at a

recovery of 2s. to 2s. 6d. per cwt. on the recent collapse. Thirty-three bags gray mixed to good partly pale sorts brought from 22s. 6d. to 26s., dark root 19s., and ordinary dusty chips 12s. per cwt. Another parcel of seven bags fine washed root was bought in at 40s. per cwt.

CANNABIS INDICA is somewhat difficult to sell. Out of a parcel of 41 packages offered to-day, 10 sold at 4d. per lb. for rather stalky tops of fair colour.

CARDAMOMS.—A considerable quantity was offered at to-day's auctions—the total consisting of 270 packages. The demand was excellent, much better than has been shown for a considerable time, and although prices were irregular, holders sold freely, and disposed of 291 boxes at the following prices:—*Ceylon Mysore*: Good to fine, medium to bold pale heavy, 3s. to 3s. 4d.; medium to bold yellowish ditto, 2s. 4d. to 2s. 5d.; good medium to bold long pale, 1s. 7d. to 1s. 8d.; small ditto, 1s. 2d.; medium to bold round and pale mixed, 1s. 10d. to 2s. 2s.; yellowish ditto, 1s. 7d. to 1s. 9d.; very small pale, 1s. 2d. to 1s. 3d.; medium size fair shape brownish, 1s. 3d. to 1s. 4d.; small, 1s. 1d.; *Tellicherry* rather lean brown medium, 1s. 2d.; common pale *Seed*, 10½d. per lb.

CASCARILLA.—Of 23 bales dusty thin and brown bark three sold at 20s. to 23s. per cwt. Another lot of 15 casks just imported *via* New York, very dusty small brown, was bought in at 20s. per cwt.

CASTORUM.—Several small parcels, altogether about 300 lbs. weight, were offered to-day, and about 127 lbs. of those sold at very high prices: mixed sizes partly damp, 42s. to 44s., ordinary to fair, 26s. to 36s. 6d.; very common pickings, 5s. per lb.

CINCHONA.—A parcel of 71 bales *Huanoco* and *Loxa* barks, just arrived from Payta, sold at to-day's auction with strong competition at from 3d. to 4d. per lb. above the valuations; fair to good bright *Loxa* realising 1s. 9d. to 2s.; medium, 8d. to 1s.; and ordinary broken dull *Huanoco* from 6d. down to 3d. per lb. A few damaged bales of spurious stout flat *Calisaya* brought 6d. to 7d. per lb. at auction, and further sales were made privately after the auctions. *Maracaibo* and *Cartagena* barks are scarce.

COCA-LEAVES.—Privately, about 4,000 lbs. *Huanoco* leaves offered. Strong brown mixed have recently been sold at 1s. 4d. per lb., and a small parcel of fine bright green *Truxillo* at 2s. per lb. Of the former, further supplies may still be bought at the same price; but of *Truxillo* leaves, of which very little is offering now, 2s. 1d. is asked.

COCCULUS INDICUS.—A parcel of 252 bags sold at auction to-day at 8s. 3d. to 8s. 6d. per cwt. without reserve, a rather better price than could have been anticipated.

COCHINEAL has advanced. For black *Teneriffe* grain, 11d. to 11½d., and for silver ditto, 11½d. to 12d. per lb. has been paid. The stock is now considerably reduced, being only 2,798 bags on October 1 against 3,619, 4,170, 4,255, and 4,444 bags respectively on the corresponding dates of the four preceding years.

CUBEBS.—A newly imported parcel of 30 bags, from Batavia, good brown and black, partly pale mixed, not stalky, was bought in at 6l. 10s. to-day. Up to 5l. 7s. 6d. was bid and refused. Ten bags slightly stalky, blue and rather dark mixed berries from Bombay, are held for 6l. per cwt.

CUMIN-SEED.—The principal holder of *Malta* seed states that he hopes to obtain 47s. 6d. per cwt. soon for good quality, old seed having been sold recently at 42s. 6d. per cwt. He maintains that, instead of 1,500 to 2,000 tons, the total output of seed of all kinds in ordinary years, there will not be more than 200 tons available this season.

CUSCUS.—One single bale of fair quality brought 13s. per cwt. to-day.

CUTTLE-FISH.—Steady at the low prices already ruling. The demand remains fairly good, and of 79 cases from Bombay offered at auction, 40 sold at 2½d. to 3d. per lb. for fairly good palish part broken.

DRAGON'S-BLOOD.—Holders of fine gum, of which there is very little to be had, stand out for high limits, about 10l. 10s. being asked for fine fiery saucers. At to-day's

auctions 28 packages, mostly rather inferior, were offered, but only sold at 80s. per cwt. This consisted of earth and other rubbish, coated with genuine gum. For rather dark drop from Bombay, 60s. per cwt. is asked.

ERGOT OF RYE.—There is not very much offering, but the market is flat, and it is very difficult to effect sales at the high limits now asked. At to-day's auctions good Spanish was bought in at 2s. 10d. to 3s. per lb., and for rather wormy German 2s. 2d. was asked without response.

GAMBOGE.—Although not one single case was offered at to-day's auctions, there is a fair supply of all kinds in the warehouse.

GUARANA.—Several parcels are offering privately at 4s. 3d. for ordinary, and 7s. 6d. for very fine quality. At to-day's auctions one case ordinary mouldy sold at a much lower price.

GUINEA-GRAINS.—Three bags brought the rather high price of 25s. 6d. per cwt. at to-day's auctions.

GUM AMMONIACUM is from 4s. to 5s. per cwt. dearer. Six cases small to medium good loose tear, partly blocky, sold at 40s. per cwt., and for a lot of pale drop, mixed with block and siftings, a bid of 45s. was refused.

GUM ARABIC.—We hear that small sales of good pale genuine Soudan sorts have been made privately at 75s. per cwt., which shows a steady market. A large quantity (but which is said to be below the standard as regards quality) is expected to arrive in the course of this month. Seventeen bales of Cape gum sold to-day at low prices: very dusty soft sorts, mixed with dark and amber pieces, at 38s.; grey to dark brown dull glassy drop, at 30s. to 34s. per cwt. Of Turkey gum several parcels sold at 7l. to 8l. 10s. for grey to fair small picked drop.

GUM BENZOIN.—Of *Sumatra* gum 97 cases offered at auction to-day, 33 of which sold at an advance of from 5s. to 7s. 6d. per cwt. Fine seconds, small to bold almondy centres, slightly false packed at sides, 7l. 10s. to 7l. 12s. 6d.; rather duller ditto, 7l. 2s. 6d. Some good bright almondy *Palembang* gum brought from 4½s. to 45s. *Siam*, which was in fair supply, also sold at an advance of about 10s. per cwt. as compared with the last sale price, fair small almonds, partly blocky, bringing 10l. to 10l. 2s. 6d.; darker and smaller ditto, 7l. 15s. to 8l. 2s. 6d.; dull grey blocky siftings, 5l. 12s. 6d.; and common grey siftings in block, 80s. per cwt. The arrivals of benzoin remain small, the *Sumatra* variety especially being scarce.

GUM (GUAIACUM).—Slightly easier; for fair bright block 1s. 4d. was accepted to-day, while common dark and broken very dusty mixed with dark sold at 3½d. to 6d. per lb.

GUM (KINO).—Three cases were offered to-day, one of which sold at 100s. per cwt. for fair Bombay. This seems slightly below the sales recently reported privately.

GUM (MYRRH).—From 75s. to 80s. was paid to-day for dusty to fair but rather drossy mixed Aden sorts, for fine pickings 52s. 6d. was refused, and good pale selected is held for from 7l. 5s. to 7l. 10s. per cwt., but there was no response at these prices. The new crop ought to be coming in now; but it is said that there will be little or none this year. Good pale myrrh is scarce, and firmly held.

HONEY.—*Jamaica* sells well at easier prices; 29s. to 31s. per cwt. (about 2s. advance on the last sale rates) being realised to-day for good to fine bright amber liquid, 25s. to 27s. 6d. per cwt. for fair clean brown, and 21s. for ordinary common. A parcel of 23 cases of a dark-brown liquid honey, not unlike *Jamaica* in appearance, imported from *Calcutta*, sold cheaply to-day at 14s. 6d. to 15s. per cwt. Of 40 cases *Australian* honey, 10 cases (each two 56-lb. tins) good clean yellow candied, sold at 30s. per cwt.

IPÉCACUANHA.—Forty-seven packages of *Rio* root were offered at to-day's sales by two brokers. The first parcel was one of exceptionally good quality, and realised 9s. 6d. to 9s. 7d. per lb. for fine stout sound root, and from 9s. 3d. to 9s. 5d. for fair quality. The second parcel was wiry and woody, and only a few serons of it sold at 9s. per lb. for sound rather thin, and from 9s. to 9s. 2d. for fair to good damaged. It is difficult to make any comparison between this sale and that of a fortnight ago, because the qualities

of the root offered were so dissimilar. On the whole, the first parcel may be said to have sold at an advance of about 3*d.* to 4*d.*, while the second was not quite up to the last sale price. *Carthagenæ* root, of which 20 packages were offered, is from 3*d.* to 4*d.* per lb. dearer. Only a few lots were sold, at from 6*s.* to 6*s.* 2*d.* for good stout quality.

JALAP.—None was offered at to-day's auctions, but privately sales have been made at the rate of 1*s.* 5*d.* per lb. for fair Vera Cruz. The market is firm.

KOLA-NUTS.—Some few packages *West Indian* kolas were offered to-day, all of which sold with good competition at rising prices—fine pale bold dried, 11*d.*; good, ditto, 9½*d.*; fair wormy, 7½*d.* per lb.

LIME-JUICE, both from Dominica and from Jamaica, is in large supply, but the article is quite neglected, and only one or two packages sold at the low figure of 8½*d.* per lb. for rather dirty quality.

MATÉ—We are asked to state that the parcel sold without reserve at the last auctions was very considerably sea-damaged.

MUSK.—In small supply. Only one caddy of first-pile *Tonquin* pods, well trimmed dry small to bold thin blue skin and underskin, sold to-day at 7*s.*, which is equal to an advance of about 3*s.* per oz.

OIL (CASTOR).—One hundred and twenty-four cases of good pale first Calcutta oil sold very cheaply without reserve, at 3*d.* to 3½*d.* per lb.

OILS (ESSENTIAL).—*Star-anise* oil is about 3*d.* per lb. dearer, 6*s.* 2*d.* per lb. being to-day's spot quotation, while 5*s.* 7*d.* per lb. "c.i.f." is asked to arrive. Oil of *cassia* is unchanged for shipment, and on the spot it is reported to have sold privately at 3*s.* 3*d.* per lb. *Menthol* is held at 10*s.* to 10*s.* 6*d.* per lb. on the spot, and Japanese oil of *Peppermint* is inquired for and higher. The crop in Japan is said to have been very small this season, and all available stocks there are reported bought up by Chinese dealers. Cocking's price is 8*s.*, native brands are quoted at 6*s.* spot, and from 5*s.* 9*d.* to 6*s.* per lb. c.i.f. South Australian *Eucalyptus* oil has been advanced to 3*s.* to 3*s.* 3*d.* per lb. (according to quantity). *Rose* oil from Bombay sold to-day at 6*d.* per oz. Fifty cases *Japanese* oil of *camphor* were bought in at 22*s.* 6*d.*, and one copper *Sandal-wood* oil (from Bombay) at 15*s.* per lb. For neither of these were there any bids. For English oil of *Cloves*, 2*s.* 4½*d.* to 2*s.* 6*d.* per lb. is now asked, according to quality, and for *Caramay* oil, similarly, from 5*s.* 3*d.* to 5*s.* 6*d.* per lb., but we do not believe that these prices have yet been paid.

ORANGE-PEEL.—Eight bags ringlets of fair quality were bought in at 7*d.* per lb. to-day.

PATCHOULY.—Twenty-six bales dull dusty brown leaves from Penang were bought in at 4*d.* per lb.

QUICKSILVER is firmer to-day, and it is expected that the price will be raised by the importers; both first and second-hands now hold at 6*l.* 7*s.* 6*d.*

QUINCE-SEEDS.—For one bag from the Cape a bid of 6½*d.* per lb. was refused.

QUININE, after having been altogether lifeless this week shows a little more animation to-day, although no business has yet been done; 9½*d.*, it is said, has been refused for a large quantity of second-hand German bulk, and 9¼*d.* is the lowest price.

RHUBARB.—Although a fairly large quantity was offered at to-day's auctions—namely, 94 cases—most of it is limited much above the present market value, and only 16 cases sold at firm prices, with an advance of about 1*d.* on good *Shensi* root. It is said that the bulk of the crop has now been imported, and some of the merchants talk of raising their limits. *Shensi*, round small to medium fair coat, three-fourths pinky, one-fourth dark in fracture, brought 1*s.* 8*d.* to 1*s.* 9*d.*; ditto, rather smaller and duller in coat, 1*s.* 6*d.*; bold pale coated, round, good grey pinky fracture, 2*s.* per lb. *Canton*, small to medium fair coat, three-fourths pinky fracture, one-fourth dark, round, 1*s.* 3*d.* per lb. *High-dried*, common stalks, 8*d.* per lb.; for small flat, slightly wormy, 1*s.* 2*d.* was refused; and for ordinary dull wormy, a bid of 8*d.* was also rejected.

ROSE-LEAVES.—Two boxes fine bold English leaves (from Bodicote) are offered at 6*d.* per lb., but that price was not obtainable at the auctions.

SARSAPARILLA.—Fourteen bales *Grey Jamaica* root were offered, but of these only six sold at 1*s.* 4*d.* per lb. for slightly damaged, showing no alteration in value. Native Jamaica, rather dull to common pale, sold at 12*d.* down to 9*d.* per lb. to-day.

SENEGA.—A decided advance was established at to-day's auctions, when 4 bales good bright chumpy root brought 2*s.* 10*d.* per lb. Up to that time 2*s.* 6*d.* per lb. had been, we believe, the highest figure paid.

SENNA.—The sensation of the auctions to-day was the sale of *Tinevelly* senna, of which the moderate supply of 415 bales, mostly of new import, was offered. Of this quantity 346 bales sold (mostly for export to the States), at prices which have rarely been equalled. The quality was better than at the last auctions, and there were several good parcels, though none of exceptionally fine quality. The prices realised were:—Very low dark and stalky to small yellowish specky, 1½*d.* to 3*d.*; ordinary to medium yellow and greyish, 3*d.* to 4*d.*; fair small to medium greenish, 4½*d.* to 6½*d.*; good bold mixed green, from 7*d.* to 10½*d.*; and good to very good bold, though specky mixed, from 11*d.* up to 1*s.* 5½*d.* per lb.; ordinary and medium kinds were steady, to about 1*d.* dearer, but fair to good kinds sold at from 4*d.* to 7*d.* per lb. above the valuations. *Pods* are fast becoming unsaleable, the quantities imported being far in excess of the demand. At to-day's auctions about 120 bales were offered, of which fully half sold at a fresh decline in prices—viz., 1½*d.* to 2*d.* for sound, partly dark, and from ¾*d.* to 2½*d.* for damages.

TEA.—Congous are quiet and though there has been some export demand for Saryunes the home trade inquiry is dull and buyers are indisposed to pay the recent advance on lower grades. Scented capers are in large supply and though the import this season will be substantially below that for last season the diminution is not sufficient to counterbalance the over-supply of last year, and large quantities of common old tea in dealers' hands bought at very low prices, are very hard to move. Indians are fairly steady at last week's prices for lower grades, but fine teas are irregular, in some cases easier. Ceylons are very firm, scarcely any clean leaf tea selling under 6*d.* per lb. in breaks, and medium grades are well competed for.

TONQUIN BEANS.—Small dull black Pará beans sold at 1*s.* 3*d.*, while for fair, slightly red mixed, 1*s.* 6*d.* per lb. is asked. Mouldy pickings brought from 3*d.* to 6*d.* per lb., and good black frosted Pará are reported to be selling privately at 1*s.* 11*d.* per lb.

VALERIAN-ROOT.—Belgian may be had at 32*s.* to 32*s.* 6*d.* per cwt.

WAX (BEES').—*Jamaica* wax is fully 2*s.* 6*d.* per cwt. dearer again. Of 41 packages 32 sold at 7*l.* 10*s.* for very fine yellow, 7*l.* to 7*l.* 5*s.* for good to fine orange, and 6*l.* 12*s.* 6*d.* to 6*l.* 17*s.* 6*d.* for grey to red mixed. *Madagascar* is in large supply, with small sales at 100*s.* to 107*s.* 6*d.* per cwt. for fair brown to good yellow. Of *Zanzibar* bees-wax 2 bags of fair brown colour, but slightly wormy, sold to-day at 100*s.* per cwt.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

THIS week's sales of opium upon our market amount to 40 cases manufacturing opium of the usual kind at the parity of 6*s.* 4*d.* per lb. f.o.b., and 30 cases Karahissar at the rate of 7*s.* 3*d.* per lb. f.o.b.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Is Water-analysis a Failure?

SIR,—The object of my paper, referred to in your issue of October 1, was chiefly to point out that, relying upon the analysis of a water alone, many samples were passed as "safe" by analysts when the source from which they were obtained would show, upon examination, that they were liable to intermittent pollution often from most dangerous sources. The examination of the sources of supply is one of the duties of a medical officer of health, and I therefore contend that when he considers the analysis of a sample of water desirable he should himself be able to undertake it. My experience has taught me that no one is justified in certifying that water from any source is "safe" unless the source has been carefully examined. If an analyst has had experience in such investigations, or if he insists upon having such an examination made by some competent person before giving an opinion as to the safety or otherwise of a water, there can be no objection to his expressing such an opinion. How often, however, does an analyst make any inquiry of this character? I have never seen a report yet from a chemist making any reference to it.

A mere chemical analysis, by whomsoever made, is often sufficient to condemn a water. There is no difficulty with such waters. The danger lies in certifying that a water is sufficiently pure for use for drinking and other domestic purposes merely because the free or albuminoid ammonia or some other factor happens to fall below some arbitrary standard fixed by the analyst.

In my Whittle report, referred to by Mr. Parry, the chemical evidence was merely adduced to support my previous statements that the subsoil was so polluted that the water furnished by it could not be considered a satisfactory supply.

My thoughts have been especially drawn to this subject recently by the fact that in two or three instances this year I have had occasion to attribute disease to the use of waters certified by analysts to be good, and which I found were subject to intermittent pollution; and on the other hand I have had to allay the alarm caused by the condemnation of a water which had never been known to cause any illness, and which it was almost absolutely certain could not be contaminated by any pernicious matter.

The one thing I wish to impress not only on chemists but also on medical men and the public, is that the thorough examination of the source and surroundings of a water-supply is of far greater importance than the results of an analysis. Your very able article of October 1 shows that you, Sir, incline to the same opinion.

The Limes, Chelmsford.

October 11.

J. C. THRESH.

SIR,—Sir G. Buchanan's experience appears to have been peculiar. So far as I have had opportunity of judging, analysts usually agree very closely in their results of water-analysis, and are generally in harmony as to the interpretation of the same. Of course, there is a debatable ground in water-analysis as in many other departments. There is, for instance, room for difference of opinion as to the amount of

albuminoid ammonia which should be held to condemn a water (other things being favourable), and the exact significance of nitrites and nitrates may be open to dispute. But to argue (as some medical officers seem inclined to) that because water-analysis is not perfect, and because it cannot answer biological questions, it is to be regarded as a failure, is a most inept conclusion, and contrary to all experience. I believe that in ninety-nine cases out of a hundred an unwholesome water will indicate its bad character to chemical analysis, and any chemist could give accounts of suspected samples which on examination abundantly displayed their evil nature. In some exceptional cases a water which has been considered passable by the chemist may be found to contain bacilli capable of causing disease. Yet the medical officer will admit that water which is highly charged with organic nitrogenous matter is more likely to act as a nursing medium for dangerous organisms than is pure water; so that on this ground alone chemical analysis would seem to be of some value. Not long ago the inhabitants of a certain village complained of the quality of their water-supply. On analysis it gave only one unfavourable indication—viz., '22 part per million of albuminoid ammonia. This is one among many proofs we have had of the justness and accuracy of Mr. Wanklyn's conclusions as set forth in his treatise on water-analysis.

I am, sir, yours very truly,

Edinburgh, October 6.

D. B. DOTT.

Liquid Extract of Cascara.

SIR,—I observe in your issue of September 3 that Mr. Moss refers in very kind—I might almost say flattering—terms to my remark on his process for cascara extract, quoted in your columns the previous week. As this quotation was only a portion of a note by me on the subject in the *Indian Medical Record*, I fear Mr. Moss has been misled by the apparent curtness of my criticism. I was referring to the many futile attempts made during the last few years to produce a tasteless and efficient liquid extract, and I expressed my approval of Mr. Moss's process in principle, although I had failed here to produce a satisfactory result on account of the difficulty referred to. I have not since had an opportunity of making another trial, but when I do I will avail myself of the suggestion Mr. Moss has kindly put forward.

It may interest Mr. Moss to know that some four years ago, when tasteless cascara was in such great demand, I was called upon to prepare a quantity, but was unable to obtain any of the bark nearer than London. Our firm having a large stock of liquid extract on hand, I made some experiments with a view to converting it into a tasteless preparation, with the result that I devised a process exactly like Mr. Moss's in principle—viz., evaporating to small bulk, diluting largely to precipitate the resin, filtering (I used magnesia to assist this part of the process), and again evaporating and adding the necessary spirit. This process gave a miscible, almost tasteless, and therapeutically most efficacious preparation, and when it was desired to cover the very slight residual bitter taste this could easily be accomplished by means of aromatics.

Although I do not presume to pose as an authority on the subject, this experience leads me to approve of Mr. Moss's process; but I also agree with that gentleman in that a great deal—everything, in fact—depends upon the quality of the bark used to start with.

I am, &c.,

Bombay, September 24.

THOMAS STEPHENSON.

Pharmaceutical Education in Dublin.

SIR,—I wish to secure your interest on behalf of our educational projects, and feel sure I shall not appeal in vain.

We have got an excellent School Committee, who have charged themselves with providing recreation and instruction for our alumni. Tuesday evening, November 1, will witness our first effort at reviving our evening scientific meetings, when Professor Tichborne, LL.D., will deliver a lecture on carbonic acid.

It is needless for me to say one word on behalf of Professor Tichborne's learning or ability to impart information on a subject he has made peculiarly his own.

It is the intention of the committee to hold a series of monthly lectures during the winter session in the splen-

did examination hall of the Society in Great Mount Street. For the December meeting MacDowel Cosgrave, M.D., M.Ch., F.R.C.P.I., and for the January meeting Rodolph Burnes, A.B., M.D. Dub. Univers., have consented to deliver lectures on interesting and relative subjects. These lectures will all be free to members of the Pharmaceutical Society, associate druggists, and their assistants. We have ample room, and shall be very pleased to see a large audience.

Yours truly,

October 12. RODOLPH A. C. BURNES, M.D., T.C.D.

Irish Chemists and Druggists.

Mr. W. C. Hinchy, pharmaceutical chemist, Kilmallock, sends us a very long letter in expansion of his arguments addressed to the annual meeting of the Pharmaceutical Society of Ireland. Mr. Hinchy holds that the Council have admitted to registration as chemists and druggists men who had no claim to the title. We cannot open our columns to a discussion on this point. The Council appear to have discharged a difficult and delicate task with general fairness, which is evidenced by the fact that they are complained of on both sides. Mr. Hinchy also wishes to correct the statement that he gave 10*l.* towards the prosecution of an offender. He merely guaranteed that amount.

A Peculiar Lime-water.

SIR,—I recently noticed in your Answers to Queries a note on a pink coloration of milk, which you suggested was due to the presence of salicylic acid. Something similar has recently come under my notice—viz., a bright pink coloration of milk when mixed with lime-water procured from one particular firm of chemists. This vivid pink colour arose equally with samples of milk from several dairies. I jumped to a similar suspicion of an admixture of the milk with salicylic acid, and I found, on experimenting, that the addition of salicylic acid to the lime-water did actually give the same striking reaction.

But I also found that the same colour arose from admixture with boric acid, and with a good sample of olive oil—*i.e.*, in making lin. calsis., B.P.

And, again, liq. ferri perchlor. added to the milk gave no coloration whatever, as it surely would have done if salicylic acid were present; whilst the iron added to the lime-water gave a bright cherry-red.

Lime-water from another source gave rise to none of these remarkable appearances.

I may add that I have called the vendor's attention to these peculiarities, but he offers me no elucidation that commends itself as meeting these facts.

Yours faithfully,

October 3. PUZZLED. (130/37.)

[Has anyone met with similar phenomena? We can detect nothing peculiar about the lime-water further than the faint violet coloration which it gives with a salicylate. It is possible that this may be due to the presence of a minute trace of metallic impurity other than iron.]

The Recent Major Examination.

SIR,—There are two questions regarding the above that I should like to ask the powers that be:—

1. Is it legal to hold the examination in September, when it is advertised to be held in October?

2. If so, why were the students of Bloomsbury Square only, and not the students of other schools, informed of the pending change until the last moment?

The proceeding was certainly not just, and it is hardly the way to popularise the Major examination among young pharmacists.

Yours,

ROHAMI. (138/61.)

DISPENSING NOTES.

Strychnine and Iodide Mixture.

SIR,—Will you kindly inform me, through the columns of THE CHEMIST AND DRUGGIST, the best course to adopt in a case of this kind?

A patient brought me a prescription to dispense written by a doctor quite three hundred miles distant. The patient himself lives thirty miles from the nearest chemist.

Potass. iodid.	..	..	..	3v. 9j.
Liquor. strychninæ.	..	..	..	3ij. m40
Syr. aurantii	..	..	..	3j. m160
Aq. ad.	..	..	..	3xvj.

M. Ft. mist.

3ss. ex aquâ. ter in die sd.

As written, a copious precipitate of acicular crystals will fall after a day or two. Would it be justifiable to substitute 10-minim doses of tinct. nux vomica for the liq. strychnin., and, if this be adopted, is there any likelihood of the strychnine in the nux vomica being thrown down?

Faithfully yours,

Fort Beaufort, Cape Colony, S. M. MACKENZIE.
September 10.

[We have had this made up for ten days, and there is no crystallisation.]

A Double Query.

SIR,—With reference to the mixture under this heading a presentable mixture may be obtained by dissolving the quinine in the spt. ammon. aromat., and pouring the solution into the aq. camph., then adding the tincture. It also keeps perfectly well.

ROHAMI. (138/61.)

Homœopathic.

SIR,—Can you say what the following prescription is composed of?—

Carb. anim. 3x trit.	3ss.
----------------------	----	----	----	------

Two grains to be sniffed up the nostril.

PUZZLED. (137/6.)

[Yes; 1 part of animal charcoal and 999 parts of milk-sugar. That is to say, 1 part of the charcoal is triturated with 9 parts of milk-sugar; then 1 part of that trituration is triturated with other 9 parts of milk-sugar, and again 1 part of this trituration is manipulated with 9 parts of milk-sugar in the same way. Hence 3x, or third decimal.]

How Can This be Done?

A homœopathic practitioner in Hobart was the writer of the following prescription, and "C. H." (132/37), one of our subscribers out there, would like to know how these directions are to be got on a label for a 2-drachm bottle. If any smart writer on this side can do it, we shall be glad to receive the specimen. The prescription is:—

Tinct. helon. dioica	φ	..	..	..	3j.
„ chinin. arsen.	..	..	..	..	3j.

Doses: Three drops in half a wineglassful of water three times a day on alternate days until the desired result is obtained, and then omitted for a week or ten days and resumed again, until all pain in the side ceases, and no palpitation troubles any more.

Oil of Pine Tar.

SIR,—Occasionally, lately, I have been asked for an ointment for eczema, consisting of—

Oil of pine-tar	..	..	..	..	3j.
Vaseline	..	..	..	..	3j.

I fancy the recipe must be taken from a current periodical. Can you please tell me what oil of pine tar is?

PELAGOS. (130/64.)

[We think ol. picis rect. is indicated here, pine-wood being the source of wood-tar. It may, however, be that oil of birch-tar (ol. rusci) is meant, that being a favourite remedy for eczema.]

LEGAL QUERIES.

130/16. Carboy.—You cannot register a word at Stationers Hall. The only valid registration is as a trade-mark. The

fees in ordinary cases are 5s. on application, and a further 20s. if your application is accepted. If not, you lose your 5s.

126/71. *A. J. N.*—We think you can safely use a trade name different to your own. This is done by a number of eminent pharmacists. The President of the Pharmaceutical Society, Mr. Carteighe, for instance, trades as Dinneford & Co., and we presume that when he sells poisons and poisonous proprietary medicines he gives Dinneford & Co., as the name of the seller. You would not be justified, we think, in adopting a special fictitious name for your poisonous proprietary medicine labels. The fees payable for registering a trade-mark amount to 25s. in cases where no opposition is involved.

131/61. *J. W. T.*—The first point raised by "Querulous Questioners" in reference to your poisonous patent-medicine label is worth attention. If, instead of saying it "can only be purchased from a qualified chemist," you will say it "can only be sold by a qualified chemist," your assertion will surely be more accurate. In regard to their second point we agree with you that the label does sufficiently fulfil the requirements of the law.

137/9. *Boom.*—We should not expect that either of the titles you name used alone is registrable. Both seem to be descriptive. We cannot, however, undertake to make trade-mark searches. You can do this at the Trade Marks Office, Southampton Buildings, on payment of 1s. per quarter-hour.

137/7. *G. D. C.*—Chloroform, being a scheduled poison, can only be sold by registered chemists. Whether the sale of a mixture containing a minute proportion of chloroform is legally a sale of chloroform is, to say the least, doubtful. The point has never been argued in or decided by a Court, and nobody can answer the question authoritatively.

123/68. *Lex.*—Respecting the formation of a joint-stock company, we would advise you to get a book on "The Law of Joint-stock Companies," published by Effingham Wilson, Royal Exchange, London, price 1s. 6d. Your sons could be shareholders.

131/50. *Ignoramus.*—County-court costs vary, but we have never heard of one in which a chemist is allowed for his attendance on a higher scale than other tradesmen.

136/3. *Eureka.*—The titles "medical hall" and "drug hall" are not protected. That of "botanic druggist," used by a person not registered under the Pharmacy Act, would be an infringement of that statute.

135/45. *Dental.*—The Dentists Act does not extend to the Isle of Man, but we cannot say whether dentistry or the titles associated therewith are in any way protected there. Nor can we tell you the law affecting dentists in France. But it is certain that if in either part it is possible to assume the title, this would not suffice to allow anyone to break the law subsequently in this country. If an unregistered man associate himself with a registered man, and the two describe themselves as dentists, the former is liable to prosecution and a penalty.

176/3. *J. W. C.*—Your label is very much on the borderline. On page 92 of "Alpe's Handy-book" you will find a recommendation, nearly similar, of toothache tincture, which is considered "not liable," but your label goes a little further in recommending, under "Dose," the use of the mixture *in urgent cases* until relief is obtained. Upon the whole, we think it would be held at Somerset House to exceed the regulations as to recommendation of non-dutiable labels.

181/29. *Bon Accord* asks: "If a wholesale firm send out an adulterated article, and they inform you that they will defend any action when a chemist is summoned, can the chemist come upon the wholesale firm for damages claimed by the Court if the firm object to defend?" [Such an undertaking on the part of the wholesale firm, if in writing, and clearly including the articles sued upon, seems to render them responsible. Unless it expressly referred to the particular article alleged to be adulterated, the guarantee would not amount to a warranty, which you could plead in defence. If you are in time, you had better get their letter promising to defend stamped at Somerset House.]

138/59. *Stramonium.*—There is no limitation by law of the quantity of strychnine you may sell to a customer.

MISCELLANEOUS INQUIRIES.

123/44. *F. J.* wants us to tell him how to make a good mixture from the following prescription for Digestive Syrup:—

Ext. aloes aquos	..	..	..	3ss.
„ glycyrrh. liq.	..	..	..	3ij.
Potas. carb.	..	..	..	3ij.
Pulv. boracis	..	..	..	3ss.
„ capsici	..	..	..	3ij.
Ol. sassafras	..	..	..	℥xlvij.
Ext. cascarae sagradae	..	..	..	3iv.
Glycerin. pur.	..	..	..	3vj.
Theriaci	..	..	..	℥b iss.
Tr. nucis vom.	..	..	..	3iss.
„ belladon.	..	..	..	3iss.
Spt. rect.	..	..	..	3ij.
Ext. gentian.	..	..	..	3vj.
Pulv. cinchon. cort.	..	..	..	3ss.
Ext. tarax.	..	..	..	3iss.
Aquae ad	..	..	..	℥ijss.

[The syrup is not intended to be a clear one. Dissolve the borax and carbonate of potash in 10 oz. of warm water, and with this rub the extracts to a smooth cream, then add the powdered capsicum and cinchona. Mix well, add the treacle and glycerine, and finally the tinctures, making up to the required volume with water.]

114/17. *Kilogramme* asks the formula for Dr. Burney Yeo's Inhalation of iodoform, eucalyptus, &c. Not knowing anything of the kind, we have communicated with Dr. Burney Yeo, who replies: "I am not aware that I have ever published any such formula. Certainly I have no special inhalation that I am in the habit of using."

113/11. *Zingib.* submits a sample of Orange Colouring for Aerated Water which, he says, gives a range of colour from a lemon-yellow to a dark orange. The colouring, we find, is a solution of Chrysoidine (diamidoazobenzene hydrochloride). This dye is precipitated yellow by alkalis, even by London water, and is decolorised by tin and hydrochloric acid. It resembles aniline orange and orange III. in these respects, but the dry dye has a characteristic violet colour with a metallic lustre, and, unlike the former, is not so susceptible to change to red on addition of acids.

117/56. *Boots.*—The knife-powder appears to be a natural product of the nature of rottenstone.

123/71. *J. T. (Hanley).*—See the DIARY book-list.

124/13. *Inquirer.*—The preparation is suitable, but see the index to last volume.

129/9. *W. W.*—We have heard that oily butter-colouring is used in Frying Fish to give the rich yellow colour. Try it.

120/13. *Juba Warren* sends us from Jamaica a sample of a plant which grows abundantly there, is known as *Juba Warren*, and has the odour of lemongrass. This plant is *Pectis punctata*, a composite nearly allied to *Tagetes*. Regarding its medicinal properties or commercial value we can tell nothing, having failed to find anything about it in all likely sources of information. Our correspondent has, perhaps, a good opportunity of introducing a new drug if he knows anything about its use in the West Indies. Whether it is at all likely to compete with lemongrass as an oil-producer is also a point which might be worth inquiry.

124/76. *Sp*.—Cloudy Ammonia.—We have not published a formula for a preparation under this name. There is an old preparation, sometimes called "lightning cleanser," which may go by that name. The following is a modified formula for it:—

Curd soap	..	..	..	..	3iij.
Washing-soda	..	..	..	..	3ij.
Borax	..	..	..	..	3j.
Solution of ammonia	..	..	..	..	Oj.
Methylated spirit	..	..	..	..	3iij.
Methylated ether	..	..	..	..	3ij.
Oil of eucalyptus	..	..	..	..	3iss.
Water to..	..	..	..	..	cong. j.

Shave the soap into shreds and dissolve in 3 pints of warm water, then add the soda and borax. When cold add the oil dissolved in the spirit and ether, shake, and make up to a gallon with water.

The quantity of ether may be doubled if desired. It is very effective in softening dirt on clothes in the same way as paraffin; presumably while it is volatilising.

124/59. *Yorks*.—Water-softener.—We generally recommend equal parts of slaked lime and dried carbonate of soda. Water softened by this or any other softener is not fit for drinking if the softener is added by rule of thumb. See THE CHEMIST AND DRUGGIST, May 9, 1891, page 651.

125/23. *Sedative*.—You should use codeine in place of the acetate of morphine in the following Cough-mixture. From the therapeutic point of view, the opium in the tr. camph. co. is not required, and that also may be omitted.

Acid. sulph. dil.	..	..	..	3 oz.
Morph. acet.	..	..	..	18 grs.
Vin. ipecac.	..	..	..	4½ oz.
Syr. scillæ	..	..	..	15 "
Tr. camph. co.	..	..	..	12 "
Spt. chlorof.	..	..	..	6 "
Glycerin.	..	..	..	30 "
Syrup. ribis	..	..	..	12 "

M.

Dose : A teaspoonful.

127/21. *C. B.*—Yes; filter the Nursery Hair Lotion.

127/16. *Inquirer* (Halifax) informs us that he dispensed equal parts of Cocaine Hyd. and Chloral Hydrate dissolved in water for toothache from a prescription. On applying it to the aching tooth on wool, serious illness followed. The doctor called in and said it could not arise from using the application. A fortnight passed and the person again used the application, with the same results of illness. How can this be accounted for?—Assuming that nothing in the nature of chemical substitution takes place on bringing the two ingredients together, we should say that the effect is the result of idiosyncrasy of the patient. Some persons are peculiarly sensitive to the physiological action of cocaine.

128/19. *Scientia*.—Some Willows do not contain salicin. You can roughly determine whether your infusion does or not by taking a pint of it and adding to it solution of subacetate of lead until a precipitate ceases to fall. Allow the precipitate to settle and decant the clear liquid, through which pass a stream of sulphuretted hydrogen to remove

excess of lead; boil and filter. Evaporate the filtrate to a low bulk, when salicin, if present, will crystallise out. If you get any it may be worth your while treating with a maker of salicin for the daily decoction of 1 ton of the willow. You could sell it as an extract.

136/14. *Small Town*.—We think your criticisms are expressed with unnecessary bitterness.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

124/53. Py-cy-nine powder for the complexion: who makes?

137/52. Formula for Stokes' senega mixture; a naval hospital prescription.

136/18. What is the American preparation called syrup of figs?

125/41. Formula for pulv. alkalinae co.; an Irish preparation.

134/35. The address in Bristol of the maker of "Vesico-Sudorific."

Gazette.

PARTNERSHIPS DISSOLVED.

Darlow & Fairfax, Plaistow, Essex, physicians and surgeons.

Duke, J. C., and Robinson, L., Lewisham, surgeons and physicians.

Edwards & Campbell, Crediton, surgeons and apothecaries.

Hallawell, J., and Symes, C., under the style of J. Hallawell & Co., and Symes & Co., Liverpool, wholesale and retail and export pharmaceutical chemists.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Griffiths, Thomas, Bowyer House, Clapham, paint-manufacturer and managing director of Griffiths' Pyrodine Fire-proofing Company (Limited), of Dashwood House, New Broad Street, E.C.

Jessup, Robert Markham, Swinefleet, near Goole, out of business, late chemist and druggist.

Jones, Owen, Carnarvon, mineral-water manufacturer.

Saunders, Thomas Bealby, late of Liversedge, and Saunders, Ashby Varley, late of Bradford (trading as Saunders & Saunders), Cleckheaton, chemical manufacturers.

ADJUDICATIONS.

Jessup, Robert Markham, Swinefleet, near Goole, out of business, late chemist and druggist.

Jones, Owen, Carnarvon, mineral-water manufacturer.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

WEDNESDAY, OCTOBER 19.—*Royal Microscopical Society*, 20 Hanover Square, at 8 P.M. On "Methods for Staining Medullated Nerve Fibres," by Dr. C. E. Beevor. "*Heterosporium asperatum*—a Parasitic Fungus," by Mr. G. Massee. "Notes on the Use of Monochromatic Yellow Light for Photomicrography," by Dr. H. G. Piffard.

WEDNESDAY, OCTOBER 19.—*Brighton Junior Association*. Annual dinner, at the Café Royal, East Street, Brighton. Secretary, Mr. A. P. Nosworthy.

THURSDAY, OCTOBER 20.—*Chemists' Assistants' Association*, 103 Great Russell Street, W.C., at 8.30 for 9 P.M. Mr. E. P. Parry, B.Sc., on "The Chemistry of Alkaloids."

SATURDAY, OCTOBER 22.—*Edinburgh Pharmacy Athletic Club*, cross-country run in connection with, from the Grey Horse Inn, Dalkeith Road, at 3.30.



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The Pharmaceutical Society of Ireland.

South African Pharmaceutical Association.

The Midland Pharmaceutical Association of New Zealand.

The Central Association of New Zealand.

Otago Pharmaceutical Association.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

Tasmanian Pharmaceutical Society.

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Summary.

UNDER Scientific Notes will be found some recent observations on alkaloidal assay.

WE mention a few novelties this week, and the Trade Notes are exceptionally interesting.

MANY chemists will be able to utilise the notes on leather-dyeing which we print on page 613.

THE winter session has begun in real earnest, and several of our pages are devoted to Association meetings.

WE are indebted to Mr. S. M. Burroughs for a description of Messrs. Nicholls & Passeron's pharmacy, at Nice.

CYPRUS, as a source of sumach, sponges, colocynth, olive oil, and other drug produce, is considered in a short article.

WE give some extracts from Mr. Edward Whympers' fascinating book "Travels amongst the Great Andes of the Equator."

MR SARGENT is still at it, and now he manages, as will be seen from paragraphs under English news, to take "Camwal" under his charge.

A GROCER at Cardiff has been fined under the Food and Drugs Act for selling Keen's mustard which contained 10 per cent. of wheaten flour.

WE have a taste this week of the caligraphic capabilities of chemists, a long dispensing direction having brought a host of specimens. A few of them are reproduced.

WE publish further particulars regarding the prosecution of Lincolnshire shopkeepers for selling tincture of rhubarb deficient in saffron; and we comment upon the subject editorially, thinking it to be a dangerous analytical precedent.

WE print a report from a Brisbane journal of the annual meeting of the Pharmaceutical Society of Queensland, whereat Mr. S. V. Morgan was officially welcomed, and spoke on colonial pharmacy. The Queenslanders are anxious to cultivate more friendly relations with Bloomsbury Square.

EDINBURGH temperance advocates have endeavoured to prevent Messrs. J. F. Macfarlan & Co. from getting the grocers' spirit-licence, which is necessary for wholesale drug business there, but the respect in which Mr. J. R. Young is held by the officials there, as well as the merits of the case, sufficed to defeat the opponents.

"THE CHEMISTS' AND DRUGGISTS' DIARY," 1893.

THIS work is now being printed, the publisher having completed his arrangements. The first copies of the work will be despatched to our Australian subscribers, and thereafter will follow, as fast as they can be delivered by the binders, copies to other colonial and foreign subscribers, and finally to all at home. It should be noted that those whose subscriptions expire at the end of September, October, or November are not entitled to the 1893 DIARY (they having been presented with the 1892 one), and they will oblige by renewing their subscriptions as promptly as possible. This will facilitate our office arrangements, and ensure early despatch of the DIARIES, as all whose names are on our books in December will be presented with a copy of the DIARY, so that that is a good month to commence subscribing.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

MONDAY, OCTOBER 24.—The 14th Annual "Brewers' Exhibition and Market." Open all the week. Includes aerated-water machinery and requisites.

WEDNESDAY, OCTOBER 26.—Brighton Junior Association of Pharmacy, at 8.30. "Sharp Practice."

THURSDAY, OCTOBER 27.—Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 8.30 P.M. Discussion: "The Conditions of Labour in Pharmacy," opened by Peter MacEwan, F.C.S.

THURSDAY, OCTOBER 27.—Dundee Chemists' Assistants Association, at 9.15 P.M. Mr. G. D. Macdougald, F.I.C.; on "Is Water Analysis a Failure?"

THURSDAY, OCTOBER 27.—Liverpool Chemists' Association.—Election of President. "The Modern Interpretation of the Pharmacy and Patent Medicine Acts," by Dr. Symes.

English News.

Saffron in Tincture of Rhubarb.

At the last meeting of the Holland (Lincolnshire) County Council, Alderman Barrell in the chair, a discussion occurred on the report of the analyst, Mr. C. H. Southwell. Mr. Southwell had examined several samples of tincture of rhubarb, and some of these had been found to be deficient in saffron to the extent of 25 to 50 per cent. Prosecutions had resulted, and the analyst thought more samples should be taken. The Chairman, commenting on this report, said it was extremely undesirable that the least deviation from the established standard should be allowed; but it was only right to point out that in the cases of persons who had been recently convicted for selling adulterated tincture of rhubarb, the ingredient omitted was simply colouring-matter, which did not affect the medicinal properties of the mixture.

Alderman Cooke asked the Chairman to be good enough to give his authority for the statement.

The Chairman said he would readily do so. Squire's "Companion to the British Pharmacopœia" said: "Saffron. Medicinal Properties.—A slightly exhilarating stimulant. Useful for giving colour and flavour to official preparations."

Alderman Cooke said that scarcely bore out the statement that saffron had no medicinal property.

The Chairman said it was very slight.

Alderman Cooke expressed his surprise that, if such were the case, the absence of saffron should constitute adulteration under the Food and Drugs Act. As there were chemists in the Council, he should like to hear their view. Did they confirm the Chairman's opinion?

Alderman Shadford was understood to say that the properties of saffron were unimportant and inert—it was merely a colouring-fluid.

Alderman Cooke said he should like to know why the samples which had recently been subjected to analysis were regarded as adulterated, and the sellers subjected to fines, if the presence of saffron were immaterial. Was it a question of the cost of saffron? Having so far added to the information of the Council, could Alderman Shadford tell them the relative cost of the saffron and that of the ingredient substituted? Then they would be able to judge. (Laughter.)

Alderman Shadford (after the question had been repeated) said: The saffron is the most expensive. The rhubarb in tincture of rhubarb is all important. If the rhubarb is there, nobody is damaged. The saffron is only colouring-matter, and its absence or presence does not do any harm.

Alderman Cooke: The adulteration of gin with water seems to be very much on the same lines. (Laughter.)

The Chairman: I wish it to be quite understood that I do not wish to excuse the adulteration in the cases referred to. If we have a legal standard, the standard must be adhered to. Drugs and food must be sold of the proper quality.

The *Boston Guardian*, in commenting on this discussion, says it suggests

one or two unpleasant reflections. There are evidently some members of the Council who wish the County Analyst to conduct his analyses to suit their particular trades. "If he's going to annoy us tradesmen," said one member after the meeting, "we'll soon have him out." It is very annoying when, instead of saffron at 35s. per lb., you have used turmeric at 3d. per lb. to have the fact exposed; but if the more expensive drug is the prescribed ingredient for a particular medicine, it should be used, or the purchaser is defrauded. We don't see why publicans should be fined heavy penalties for putting a little too much water to their gin and brandy if chemists are to be allowed to sell as medicines improper and inferior drugs; and the extent to which this is apparently done calls for more complete analytical supervision. The point the chairman considered it his duty to remark upon is not a matter for discussion by County Councils, or even by medical gentlemen. The British Medical Council, under the authority of Act of Parliament, orders that certain ingredients are to be used in the preparation of medicine, and whether of value or not in the minds of the sellers of the compound, the Food and Drugs Act answers all doubts. It is framed for the protection of the public and the benefit of honest traders, and we shall be much mistaken if the County Council allows it to be ignored because some members find a departure from it convenient, not to say profitable.

Mr. Sargent Still Writing.

At last week's meeting of the Harrogate Town Council the following letter was read from Mr. G. W. Sargent, 75 Church Street, Kensington, London, the Clerk also stating that he had received several others:—

September 23, 1892.

CHEMISTS' AERATED-WATER ASSOCIATION.

45 Gifford Street, W., and Harrogate.

Dear Sir,—Constant complaint is reaching me you have taken no proceedings with regard to this "fictitious company." It will be necessary in your communicating with the Vestry of Islington, W., London, at once—and enquiry would be further promoted by mentioning my name in connection with the Pharmacy Acts. List of shareholders contains the names of Mr. R. Hampson, Islington, treasurer of the Society, and Mr. Greenish, members of the Council both, and the gravity of the position has been made clear to yourselves.

Yours truly,
G. W. SARGENT.

The Town Council, Harrogate.

Councillor Ward moved, and Councillor Oxley seconded, that it be laid upon the table.

The Clerk: The chemists referred to were Mr. Wilson and Mr. Davis.

Councillor Wilson said that as his name was mentioned he ought to give some explanation to the Council. This man had taken upon himself to write to various chemists all over the country, who, he thought, were contravening the Pharmacy Acts. Mr. Bottle, an ex-mayor and magistrate, of Dover, took the matter up, and this Mr. Sargent was indicted in an action for slander at the Maidstone Assizes, and the Judge requested him to come up for judgment when called upon, his counsel having offered most humble apologies.

The motion was then submitted and carried.

At a meeting of the Bangor City Council last week a letter was read from Mr. Sargent calling attention to certain violations of the Pharmacy Act, 1833. As, however, the letter could not be understood, though the writer stated it had been read at several Council meetings in England, it was decided to leave it on the table.

The Hours of St. Helen's Chemical workers.

Mr. Tom Mann made a speech at Wigan, in which he referred to the long hours of St. Helen's chemical-workers. The Mayor of St. Helen's (Councillor Nuttall), referring to an assertion that there were a great many men who worked in the St. Helen's chemical-works from 7 A.M. on Sunday morning until 6 A.M. on Monday morning without any regulation hours for meals, has made inquiries and finds the statement to be true. There are, he says, "between fifty and sixty men, divided over the whole of the works, that commence work at 7 A.M. on Sunday and continue till 6 A.M. on Monday. The furnaces have to work continuously—i.e. eighty-four hours per week—and the long turn is required to enable the workmen to change turns, so that they work one week in the day and the next in the night. Therefore the man that has worked the long turn this week leaves work at 7 A.M. next Sunday, and does not come on duty till 6 A.M. on Monday following, so they have every other Sunday and Sunday night off work." The Mayor seems to think he has somehow proved that this abominable slavery is necessary. We confess we do not follow his reasoning. He proceeds (he is replying to an inquirer): "Now, when you take into consideration that only fifty to sixty men—out of a total of over 3,000—work this long turn, you will see it is a very small proportion. As to the meal-hours, it is quite impossible that workmen in charge of furnaces can have a fixed time for meals; they have to take them when the furnace will allow. But if you will look over the following statement you will see that they have ample time not only to have their meals but for a comfortable smoke, &c., after it, and the work is not hard. Statement: Average hours of attendance of the two shifts of men, 84 per week. Hours spent in actual work (say) 30 per week. The latter is arrived at in the following way, viz.:—Dropping one burner or kiln, two minutes; barring and charging one burner, four minutes; total, six minutes. Thirty burners are charged per 12 hours, or at the rate of $2\frac{1}{2}$ per hour. $6 \times 2\frac{1}{2}$ equal to 15 minutes per hour. Time spent in petting, six minutes per hour. Total, 21 minutes \times 12, equal to 42 hours per shift, or 294 per week."

A Case for the Pharmaceutical Society.

Dr. George Danford Thomas, the Coroner for Central London, held an inquest on Monday concerning the death of Rose Gertrude Gurney, aged 1 year and 11 months, daughter of a solicitor's clerk, living at 4 Hand Court, Holborn. The evidence showed that the child died from pleuro-pneumonia, and a medical man said that harm had been done by the mother in giving it a proprietary medicine known as "balsam of horehound," which contained opium. The Coroner said that such proprietary medicines ought certainly not to be taken except under medical advice. In some diseases, especially kidney disease, a very ordinary dose had been known to cause death. The jury, in returning a verdict of death from natural causes, suggested that the attention of the Pharmaceutical Society should be called to the fact that the bottle containing the medicine had not been labelled in accordance with the Poisons Act to indicate that it was a narcotic.

Why not Seven?

The following chemists and druggists of Margate have decided to close their establishments each day at 8 P.M. during the winter, commencing November 1:—W. S. Harvey, H. Ray, G. Stimpson, J. Bailly & Co., R. Pettman, P. Holmes, S. K. Cadby, D. T. Evans, Hubbard & Son, and Wootton & Son.

The Sale of Poisons and the Neill Trial.

An important witness in the Neill or Cream trial, before Mr. Justice Hawkins, on Tuesday, was Mr. John George Kirby, assistant to Mr. Priest, chemist, 22 Parliament Street. Mr. Kirby said he knew the prisoner, who came to his shop in the beginning of October, 1891. It was before the 12th of the month. Prisoner told him that he was a medical student at St. Thomas's, and gave his name as Thomas Neill. He said he was attending a course of lectures at the hospital, and asked for some tincture of nux vomica, a scheduled poison. He wrote on a piece of paper the order produced. Witness supplied him with the poison. He also asked for some gelatine capsules, and wished them to be obtained for him. He afterwards gave an order on a wholesale chemist for the capsules. They were 12-grain capsules, and he obtained a box of 100; but the prisoner was not satisfied with them, saying that they were too large. They were changed for a box of smaller-sized capsules. Prisoner did not say what he wanted them for. The prisoner came to the shop before the following January, and was supplied from time to time with nux vomica, in quantities ranging from 1 oz. to 4 oz.

The Judge: Did you keep the orders?—It was not necessary.

The Act of Parliament is very stringent?—This came within the schedule of medicines, and he gave his name and address.

Cross-examined by Mr. Geoghegan: Before October 20 I had never sold Neill nux vomica. That supplied was according to the British Pharmacopœia, and the strength of it was $\frac{1}{2}$ grain of strychnine to 1 oz. of nux vomica. I asked Neill if he was a medical man, and he said he was; but I could not find his name in the Register. He had bought opium about once a fortnight. We are bound to enter the sale of laudanum, and an entry of that kind appears in the books. That was in a prescription; but ordinary sales across the counter were not entered.

The Judge: Suppose an ordinary stranger came to you and said he was a medical man, would you refuse to supply him?—No; not if what he required was in the first schedule, and he gave his name and address.

Why did you not register the sale of what had been supplied when he said he was a medical man and you found he was not? Have you any reason to give?—No.

To your knowledge, is your practice followed by other chemists?—I cannot say.

The Supply of Drugs to Sheffield Workhouse.

At the meeting of the Sheffield Board of Guardians on Wednesday afternoon it appeared from the minutes of one of the committees that there had been some correspondence with Mr. J. M. Furness, chemist, in respect of his account for 147 12s. 9d., payment of which had been deferred because

of some alleged overcharges. Mr. Furness admitted that there was a manifest error in the price charged for some collodion, but said that collodion could not possibly be sold at anything like the price at which the committee were advised, and that also applied to other things included in his account. If the Board wished to buy cheaper physic of the quality evidently indicated, he emphatically declined to supply it. He would use his best efforts to protect the paupers from taking such rubbish, and the medical men from working with such weapons. The matter was referred back to the committee.

Inciting to Steal.

At the Central Criminal Court, on Wednesday, before the Common Sergeant, George Gillies, traveller, aged 35, pleaded guilty to three indictments, which charged him with stealing twenty-four lancets, of the value of 2/ 8s, the goods of Thomas Farries and others, and also with unlawfully inciting John Nicholas Gregora to steal the goods of Arthur de Blanc Newbery and others. Mr. Travers Humphreys said that he had been instructed by the London Wholesale Drug and Chemical Trade Protection Society to prosecute the prisoner, who had pleaded guilty to three charges, the first of which was that of inciting a man named Gregora, an employé of Messrs. Newbery & Co., wholesale chemists, of the City, to steal the goods of his employers. He was known to Gregora from visiting the premises often, and on one occasion, in September last, he asked the man how much his wages were weekly. Gregora said that his wages were 30s. Gellies then remarked confidently, "Well, I could get you 1/ a day," and suggested that he (Gregora) should bring goods away from the premises on every opportunity. He added that, if this could be managed successfully, he "would make it worth his while for the trouble." After the interview the man very properly promptly communicated the whole of what had transpired to his employers. The City police authorities were communicated with, and the matter was placed in the hands of Detective-Inspector Davidson. In the evening, acting on instructions, Gregora took certain articles with him to the Angel, Islington, and handed them to the prisoner, who went away with them. Later on he pledged the property, and handed a sovereign to Gregora, and then he asked him to get some more things, especially some cases of Beecham's pills. As he left he observed, "Do it big; it is no use doing it little." The conversation had been overheard by the detective, and he immediately arrested the prisoner. On his lodgings being searched, over fifty pawn-tickets were found, which related to numerous other articles used in the chemist's trade. The matter was then taken up by the London Wholesale Drug and Chemical Trade Protection Society. As the result of inquiries which they caused to be instituted, they ascertained that towards the end of July last the prisoner had gone to the firm of Messrs. Hesse & Co., in the City, and had requested them to sell for him to Messrs. Butler & Crisp, wholesale chemists, ten gross of Condy's fluid, on the excuse that he had had previous dealings with that firm, but had had a dispute with them, and so was unable to carry out further transactions in his own name. Messrs. Hesse & Co. obtained a quotation and sold the fluid to Butler & Crisp, and paid him 21/ on account. The matter subsequently came to the knowledge of Messrs. Condy & Mitchell, who are the proprietors of the business of the manufacture of Condy's fluid, and they at once went through their stock and found that 185/ worth of the fluid had been stolen from the premises since June last, of which the ten gross in question formed a part. In a third case the prisoner was charged with stealing and receiving twenty-four lancets, the property of Messrs. Burgoyne & Co., wholesale chemists. The prisoner pledged the property, which had been surreptitiously obtained from the warehouse of the prosecutor, on August 3, with a pawnbroker in the Farringdon Road, and the ticket which related to that transaction was found in his possession. The articles had been specially made for Messrs. Burgoyne and all bore special marks. When the matter was drawn to their attention they went through their stock, and discovered that the lancets were missing. There could be no doubt, said the learned counsel, that the prisoner had successfully enticed some employé in that firm to steal various other goods. A warrant was out in the year 1883, but the persons who identified the goods on that occasion did not care to

prosecute. The Common Sergeant told the prisoner that it was necessary to make an example of a man of his evil designing nature, for the law very properly recognised that a man who incited another to steal was worse than either a thief or a receiver. He ordered Gillies to be kept in penal servitude for five years.

Disinfectant Contracts.

The following tenders have been accepted by the Gosport and Alverstoke Local Board:—Crude sanitas and sanitas powder, Sanitas Company; carbolic acid and carbolic powder, Messrs. McDougall Brothers; and chloride of lime, Mr. Timothy White, of Portsmouth and Gosport.

Charge of Embezzlement against a Chemist's Manager.

At the Hampshire Michaelmas Quarter Sessions at Winchester, on Tuesday, Frederick Brooks Webb (40), manager of a branch business at Bournemouth, chemist, surrendered to his bail on a charge of having embezzled a sum of 41*l.* 18*s.*, the moneys of his employers, the Southern Drug Company (Limited), on and between August 17th and 20th. Mr. Tickell, who prosecuted, said the prosecutors carried on a very extensive business in the county. Their registered office was at Southampton; they had about nine branches. Prisoner was manager of the branch at Old Christchurch Road, Bournemouth, had a house and 120*l.* a year, besides certain commission, had been in the employ of the company some seven years, and had received various rewards for the business he brought. Mr. Tickell gave details of the accounts kept by the prisoner. By the counterfoil of the bank paying-in slip-book and cash-book, it appeared that on August 18 he paid into the bank 31*l.* 17*s.* He afterwards admitted that he had the money, but had not paid it in. As to the second item, of 10*l.* 1*s.*, according to the cash-book, on August 28 an amount of 20*l.* 18*s.* 9*d.* was paid in, but this included a cheque of his own, of no value at all. Mr. Tickell characterised the conduct of the prisoner as deliberate embezzlement, and said he had been engaged in falsifying his employer's accounts ever since July 20.

Thomas Batty, general manager of the company, said on August 20 he went to Bournemouth, and saw the manager of the Wilts and Dorset Bank. In consequence of what he heard there, he saw the prisoner, and asked him where the 31*l.* 17*s.* was that was represented as being paid in on the 10th. He replied that it was not paid in; he had it. Witness asked for the cash-book, and the amount of money in hand. He handed over 10*l.* 5*s.* 3*d.* Witness had never received any portion of the 41*l.* 18*s.*

Cross-examined: The pass-books would be sent to Mr. Day, the managing director, at Southampton; the weekly sheets would also go to Southampton. The entries in the cash-book on August 18 and 20 were in prisoner's handwriting. Prisoner was perfectly open, and there was no hesitation at all as to what had been done. Witness's employers took out a summons against prisoner, and he surrendered. Before the issue of the warrant, the money was offered, but the prosecution refused to accept it.

Re-examined: No money was offered to me.

By Mr. Matthews: Prisoner said, on the Saturday, that he would pay the money, and raise it before the bank closed.

William Day said the pass-book was usually sent to him at intervals of about ten days or a fortnight. He received a telegram from a person in Bournemouth, offering money, but the matter was in the hands of the police.

Cross-examined: He saw Mrs. Webb on the Monday. Mrs. Webb said they would sell their furniture to get the money, but witness said he would not withdraw from the prosecution for 1,000*l.* He thought it his duty to prosecute. Prisoner was under notice to leave on September 9, but not for anything connected with discrepancies in accounts.

John Tanner, ledger clerk at the bank, and another witness were called, and the Rev. C. H. Sharpe stated that he could speak as to the prisoner having borne an irreproachable character for five years.

Mr. Matthews, in defence, contended that his client was not guilty of embezzlement, but only of irregularity of accounts. He urged various arguments in support of his defence, and commented strongly on the attitude taken by Mr. Day when appealed to by Mrs. Webb.

The jury found the prisoner not guilty—a verdict which was received with some marks of approbation in court.

Irish News.

"Eminent American Physicians."

Under this title a couple of individuals have during the present month established themselves in furnished apartments at 48 Ratland Square, Dublin, and have freely announced that they would "give services free for three months to all who visited them before November 1, but that medicines would be charged for. These doctors were ready to treat all chronic diseases, especially male and female weakness, catarrh, catarrhal deafness, &c., but would accept no incurable cases. They would examine each case thoroughly free of charge; and, if incurable, would frankly, kindly say so." A Dublin doctor, suspicious of their *bona-fides*, visited these eminent physicians, and finding them to be very ignorant of medicine and therapeutics, he communicated with the police authorities, with the result that Inspector Robbins, of Liverpool, has visited Dublin, and found that the doctors, by name Hale and Millar, were men who had been practising in Liverpool, and whose addresses were wanted. The Dublin papers having exposed the system, Mr. Hale left Dublin suddenly for Belfast on Saturday last, and Mr. Millar departed late on Monday night. Hale has since been arrested. He is said to be from Philadelphia, but is not, of course, the well-known Dr. Hale of that city. More will probably be heard of the matter. Two females in nurse's costume also formed part of the staff.

Selling under Cost-price.

A large drapery firm in Dublin is at present selling 6*d.* tablets of Pears' soap for 3*d.* each, and thereby lose on each sale, as Pears's best terms are 4*s.* per dozen, less 20 per cent.

Attempted Poisoning with Aniline Dye.

A painter named Duncan, living at Queen's Square, Dublin, has been sent for trial, charged with attempting to commit suicide by taking aniline dye internally. Duncan has been a month in hospital recovering from the effects of his experiment.

Scotch News.

Teachers at Aberdeen.

Mr. H. T. Jones, F.C.S., assistant professor of chemistry in the University of Aberdeen, has been appointed teacher of chemistry to the Aberdeen and North of Scotland Society of Chemists and Druggists, and Mr. Wm. Pennie has been appointed teacher of botany, materia medica and pharmacy.

Fife Jottings.

Mr. J. Tocher, of Dunfermline, chemist, has just returned from a holiday-trip to the Riviera and Northern Italy. He was accompanied by Dr. John Gordon, Aberdeen, a well-known pharmacist.

Mr. H. W. F. Allen, of Kirkcaldy, has completed an important alteration of his premises, which will give him considerably more room.

Opposition to a Chemist's Spirit-licence.

At the half-yearly Licensing Court for Edinburgh, held on Tuesday, an application was made by Mr. James Robertson Young (for Messrs. J. F. Macfarlan & Co., chemists) for a grocer's licence in respect of their premises at 20 North Bridge. The Edinburgh and Leith Licensed Grocers' Association objected to the licence being granted for a variety of reasons, amongst which were these:—That the applicant was not a dealer in groceries, but a chemist carrying on a large business in drugs; that if this licence were granted, all chemists would be entitled to them, and an overwhelming increase in the number of licensed premises would be the consequence; and that a grocer's licence was unnecessary for the conduct of a chemist's business.

Mr. J. R. Young, the applicant, held that the License Grocers' Association were not in a position to object here, because the Act required that an objector must be any person

or his agent owning or occupying property in the neighbourhood of the premises that were asked to be licensed.

Mr. A. J. Young, the advocate who represented the objectors, said the Association was composed of, among others, parties who did occupy property in the neighbourhood. He also appeared specifically for certain parties who were undoubtedly owners or occupiers in the neighbourhood. He said he had an even stronger objection than that which had been stated—namely, that the applicants already held a rectifier's licence for premises at Abbey Hill, and section 101, sub-section 102, of the Excise Acts provided—"A retailer must not be concerned or interested in the business of a distiller, or of a rectifier keeping a still carried on upon any premises within two miles of the premises on which he is licensed to carry on the business of a retailer." If the applicant were given the licence for which he now applied, he would simply be bringing himself within the clutch of this provision of the statute—which provision, he might add, was followed by a penalty.

The Lord Provost asked if Messrs Duncan, Flockhart & Co., for instance, held such a licence as was now applied for?—(Mr. Young, the applicant: They do)—because if people already held such licences, surely it could not be against the law.

Mr. Henderson, chief constable, pointed out that the department for which this licence was desired was away down on a sunk floor, to which the public were not admitted at all. It was more to suit the convenience of business.

Mr. Young, the applicant, said that such a licence as was now applied for was at present held by Messrs. Raimes, Clark & Co., Leith, and by Messrs. Duncan, Flockhart & Co., and Messrs. Pinkerton, Gibson & Co. The special object of his firm in applying for this licence was that they might supply their customers—who were principally chemists, dispensaries, infirmaries, and medical men throughout the country—with small quantities of spirits of wine. They did not want to have anything to do with groceries, or beer, spirits, or wines; they simply wished to accommodate customers who compounded their own medicines. Their business at present suffered from the want of such a licence, and he did not think it reasonable that they should be in a worse position than other firms.

Bailie Macpherson: Would any drink be sold to the public as such, apart from the business carried on as chemists?

Mr. Young, the applicant: Not at all.

Mr. Young, advocate: But then you let in the thin end of the wedge, and you see the difficulty of supervision.

The application was unanimously granted.

Mr. Young, advocate, intimated an appeal.

Glasgow Chemists' Ambulance Class.

The results of the recent examination of this class, taught by Dr. David Lees, have just been declared by Dr. Macintyre, the examiner. The following gentlemen have passed and received certificates:—Messrs. Alex. Laing, James Bruce, Arthur McKellar, Benjamin Cartwright, George Robertson, Balfour Reekie, R. Shennan, Arthur Duncan, William Beith, Alfred Livesey, Thomas Lawrence, T. M. Smith, R. Hume, Hendrie, and Ballantyne.

French Pharmaceutical News.

(From our Paris Correspondent.)

DEATH OF A HOMŒOPATHIC PHARMACIST.—M. Charles Catellan, who in 1838, with his brother Antoine, established the first homœopathic pharmacy in Paris, has just died at Chaume at the age of 72.

A BIOLOGICAL PRIZE.—A sum of 3,068*f.* subscribed for a memorial to Claude Bernard is at present in the hands of Drs. Berthelot and Charcot, and is to be handed by them to the Society of Biology. The money will be devoted to the foundation of a prize for experimental biology which will bear the name of the late distinguished French savant.

THE CURE OF VIPER BITES.—The Academy of Medicine has awarded the "Orfila Prize" to Professor Kaufmann of the Alfort Veterinary School, for his treatise on viper bites. He

recommends a 1-per-cent. solution of chromic acid to be placed exactly on the bitten spot. The weakness of the solution prevents its cauterising the tissues. A veterinary surgeon in the Franche Comté states that he applied this remedy to a setting dog with entire and speedy success.

PHOSPHORESCENT SULPHIDE OF ZINC.—A paper by Professor Charles Henry, of the Sorbonne, on phosphorescent sulphide of zinc, was read at the last meeting of the Academy of Sciences. He remarked that this substance being chemically unalterable can be used as a photometric standard and be applied to various scientific and industrial uses where other phosphorescent bodies cannot be employed. He had made some interesting and delicate experiments of its light measuring powers which, being mathematically exact, are likely to open up a new sphere of action in the direction of photometry.

PASTEUR (LIMITED).—Under the title of the Société Anonyme du Vaccin Charbonneux Pasteur, the public is invited to subscribe to a joint stock company, the capital being 2,000,000*f.* (say 80,000*l.*) with 200 founders shares. The primary object the promoters of the Society have in view is, as the name indicates, to extend the use of Pasteur's Vaccine Charbonneux. Laboratories are to be opened in various countries abroad, Austria and several American States excepted. The prospectus states that the company will reserve to itself the right of purchasing concessions of a similar nature which can in any way be considered as interesting from a hygienic point of view.

A CHOLERA FRAUD.—Madame Portrail may be included among the victims of the cholera in Paris. She received recently a call from an individual who stated he came from the Mayor of the 3rd Arrondissement and presented her with seven pamphlets describing the precautionary measures to be taken. For these he asked and received a franc, having explained to the worthy lady that if she fell a victim to the dreaded malady she had only to present the pamphlets at the Mairie to receive gratuitous medical care. After his departure, her inquiries proved that her plausible visitor was a mere sharper and, falling into the hands of the police, the disseminator of sanitary science is now serving his seventh term in gaol.

IS A PHARMACIST COVERED BY A BOGUS PRESCRIPTION?—This question is introduced in the current number of the *Union Pharmaceutique* and is replied to by M. G. Bogelot in the following way:—"The question is a delicate one. It is evident that the pharmacist has not the means of knowing all the medical men in practice. Formerly, doctors were in the habit of putting their private seal on their prescriptions, but as this is no longer done the only thing to be relied on is the pharmacist's tact. If the dispenser has any doubt as to the signature on a recipe, and especially if it appears unusual or dangerous, the person asking for the medicine should be interrogated. Should the replies not be satisfactory his duty is to refuse absolutely to supply it. Special care is necessary when preparations containing ether, morphia, or cocaine are asked for."

Foreign and Colonial News.

DISPENSARY OFFICERS WANTED IN MADRAS.—The continual absorption by the military department of all the available medical officers in the Madras Presidency has left the civil hospitals and dispensaries so short-handed that the Surgeon-General has drawn the attention of the Government to the subject in his report, with the result that he has been called upon to formulate a scheme for the training of local men in the districts.

JAPS. OBJECT TO A CHOLERA MIXTURE.—Messrs. A. C. Sim & Co., chemists, Kobe, Japan, have been doing a good thing of late in a cholera mixture, and this seems to have met with the disapproval of the natives, for at a meeting of the Kobe branch of the Dai Nippon Health Association the members resolved, amongst other things, to memorialise the Home Minister that steps should be taken to prohibit the sale of the mixture to all persons, except physicians and druggists, and to draw the attention of the public to the

fact that the mixture should be used with caution. According to the *Hingo News* the mixture is harmless and effective, and the *News* says this is "another instance of the jealousy with which Japanese view the success of anything foreign among their countrymen."

THE REGULATION OF POISON-VENDING IN INDIA.—The other day an inquest was held in Calcutta on a Punjaabee who had died from arsenic-poisoning. The jury, adopting a formula which has lately become familiar in Indian courts, declared in their verdict that it was desirable that the sale of poisons should be regulated by law. The *Calcutta Statesman*, in reporting this fact, takes occasion to give its opinion that such a recommendation would be hopelessly impracticable. "It would be easy enough to pass a law for the purpose of restraining the sale of poisons," says our contemporary, "and no doubt that law would be hailed with delight by the police, as holding out to them the promise of a rich harvest. But as the sale of poisons is necessary for a multitude of purposes, medicinal and other, it is difficult to see how the law could be worked without giving rise to serious hardship in the absence of licensed apothecaries or other qualified vendors. In most countries it would be a sufficient answer to this objection that one of the effects of the law would be to create such a class of vendors. But this would not be the case in India, and, moreover, the Indian law knows nothing of certificates of death. The most conclusive argument, however, against a law to regulate the sale of poisons in this country is that it would be practically useless. In England, to prevent a man's being able to buy poison is, in nine cases out of ten, to prevent his being able to obtain it at all. In India, on the other hand, in nine hundred and ninety-nine cases out of a thousand it would make very little difference in his ability to obtain it. There are very few people in India who would have to go more than a few hundred yards from their own doors to be able to obtain, for the gathering of it, poison enough to kill half a village. Deadly poisons are all round and about, and their properties are known to everyone; and it would probably make very little difference in the number of murders or suicides if the sale of poisons were even absolutely prohibited. It is true that for some inscrutable reason natives of India show a certain preference for arsenic for the purposes of murder, and arsenic cannot, of course, be picked up by the wayside, like nux vomica and "dhatooa," and many other vegetable poisons. But it is pretty certain that if it ceased to be purchasable persons bent on murder would have recourse to one of the many substances that could be obtained, in spite of the law, at the cost of a very little trouble."

THE QUEENSLAND PHARMACEUTICAL SOCIETY.

WE take the following report of the thirteenth annual meeting of the above Society from the *Brisbane Telegraph* of August 27:—

The thirteenth annual meeting of members of the Pharmaceutical Society of Queensland took place last night at the Society's rooms, Edward Street. The President (Mr. D. J. Clarke) was in the chair. There was a large representative attendance of pharmaceutical chemists of Brisbane and district. Mr. John Turnbull (Thursday Island) and Mr. Moses Ward (Brisbane) were unanimously elected members of the Society. Messrs. J. H. Fitzgibbon, G. Watkins, T. Watson Thomason, and H. W. Thomason were re-elected as members of the Council, and the two seats rendered vacant—one of which was caused by the death of Mr. H. E. Miller—were filled by the election of Messrs. Moses Ward and E. Charles Blake, late hon. local secretary Rockhampton district. The election of officers for the session 1892-3 resulted as follows: President, Mr. J. H. Fitzgibbon; Vice-President, Mr. W. Allen-Waters; hon. treasurer, Mr. A. Brand Chater; hon. auditors, Messrs. W. J. Costin and M. H. Cormack. Other business in connection with the annual meeting was adjourned until Friday September 2.

Mr. A. W. Field, as a past President of the Society and an English chemist and druggist, then introduced Mr. Septimus Vaughan Morgan, one of the proprietors of THE CHEMIST AND DRUGGIST, and in doing so expressed the satisfaction it gave all assembled to welcome one who, together with his confrères, had, amongst many other things, done so much to advance pharmaceutical research, through the medium of

that ably-conducted journal of the profession, THE CHEMIST AND DRUGGIST. (Applause.) He considered that journal to be the main prop of every chemist, and had been from the commencement, in the fifties, a fair advocate, credit being given to those who deserved it, and at the same time the erring ones were never spared. (Hear, hear.) The daughter journal—*The Chemist and Druggist of Australasia*—had since 1885 done excellent work, and he trusted that it would receive the support which it certainly deserved. The editor of the Australasian edition was undoubtedly the right man in the right place. Mr. Field concluded his remarks by wishing the proprietors and staff of THE CHEMIST AND DRUGGIST every success. (Applause.)

Mr. Vaughan Morgan, who was received with loud applause, expressed the pleasure it gave him to be present at so large a gathering of the profession, and although it was twenty-three years ago since he visited Brisbane, yet there were some now present whose names he recollected. Things had very much altered in the interval of so many years, and he anticipated a good future for pharmacy advancement in Queensland. Mr. Morgan referred at some length to the manners and customs of the Indian, Chinese, and American pharmacists, and gave some very instructive and at times amusing incidents experienced during his many years of travel. He also referred to the journal of which he was part proprietor, and admitted the large influence it had throughout the world wherever the chemist existed. Whether it was in the Australasian bush, American back blocks, Hindoo bazzars, Chinese, South African, or European pharmacies, there would be found THE CHEMIST AND DRUGGIST. The journal had also been translated into the Russian and other languages. Referring to local matters affecting pharmaceutical chemists he thought that every effort should be made to reduce their hours of labour. (Applause.) He could not understand why the chemists should be subjected to the absurdly long hours they inflicted upon themselves. They were probably more to blame than the public in regard to this question. (Hear, hear.) He trusted, however, that the chemists would endeavour to educate the public to the habit of doing their business at a reasonable hour. (Applause.) Mr. Morgan also thought that there should be a uniformity of prices, so that a better understanding might exist between the public and the chemist. (Hear, hear.) A gentleman whom he had met in Brisbane, and who was well known to them all, had in an interview referred to the necessity for having a new constitution of the Society, and having the executive so constituted that every part of the colony had direct representation. (Applause.) For his own part he might say that he considered the scheme an admirable one, and one which was ultimately calculated to be adopted by the other colonies, the result being intercolonial reciprocity. (Applause, and a voice, "Victoria is the trouble.") Mr. Morgan made special reference to the existence of too many pharmacies in a city like Brisbane—(hear, hear)—and quoted the practice adopted in Germany and other countries where the Government had full control as to the number of chemists' shops which should exist. Mr. Morgan then resumed his seat amid applause.

MESSRS. MOSES WARD, Wm. Steele, and W. J. Costin gave some interesting reminiscences of the early days in Brisbane, many of which caused much amusement.

Mr. Geo. Watkins hoped Mr. Morgan would use his influence to procure a better understanding between Great Britain and the colonies regarding the certificates of the latter being accepted by the Pharmaceutical Society of Great Britain. (Applause.) The time would certainly come when the colonies would demand that unless Great Britain recognised colonial certificates the colonial Boards would refuse to accept those of Great Britain and Ireland. (Applause.)

Mr. Clarke suggested that as a test of the Queensland examinations Mr. Morgan might present himself before the Board of Pharmacy and be "put through the mill." (Laughter, and Mr. Morgan: "I'm afraid I should be plucked.")

Messrs. W. Taylor and C. H. F. Yeo having added some interesting information, the proceedings terminated.

A TRUE BELIEVER.—Stranger: "And so you believe in chloride of gold as a cure for drunkenness?" Red-nosed Enthusiast: "Believe in it! How can I help it? I've been cured six times."

The Winter Session.

BRIGHTON JUNIOR ASSOCIATION OF PHARMACY.

ON Wednesday the members of this Association held a social evening at their rooms in Sillwood Terrace, Brighton. The President (Mr. A. E. Colman) occupied the chair, and there was a good attendance. The Association has the following programme in view:—October 26, sharp practice (five-minutes' speeches); November 2, social and musical evening; November 9, paper, Mr. B. Lomax, C.E., F.L.S.; November 16, social and musical evening; November 23, debate, Eight Hours' Question; November 30, social and musical evening; December 7, paper, "Seven Modern Wonders," Mr. C. G. Yates (Vice-President).

DUNDEE CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

THE fourth session was successfully inaugurated on October 13, when Mr. Charles Kerr, the honorary president, delivered the opening address to a large audience. Bailie Ferrier presided. Mr. Kerr said that he chose on this occasion rather than to lecture his hearers with precepts, to set before them an example, for he thought examples took a far more powerful hold on the young mind than any amount of precepts. When in Edinburgh as a student he had sat under Professor George Wilson, one of the purest and godliest chemists that ever lived, and he proposed to give a sketch of his career. George Wilson began life as an apprentice druggist in the laboratory of the Edinburgh Royal Infirmary, where he served for four years. During that period he attended classes for the medical qualification, but he had to powder aloes, make pills, tinctures, infusions and the like, and take his share of the drudgery of the laboratory, besides associate with uncongenial companions till nine o'clock in the evening before he was free to study for his classes. The various classes attended by Wilson during these years were enumerated as showing what can be done even with long hours of daily labour. His professional examinations having been passed with distinction, he decided to follow chemistry as a profession, and obtained an assistantship in the laboratory of Dr. Christison. He afterwards filled an assistantship to Professor Graham, then Master of the Mint in London, but, returning to Edinburgh, he prosecuted his favourite science, although he had meanwhile taken the degree of M.D. At this time his health began to fail. A disease in his foot got to such a stage that nothing could save the limb but amputation. He prepared himself bravely for the operation—it was before the days of chloroform—and in a letter to Dr. Simpson some time after—written to assist him in his advocacy of the introduction of anæsthetics—he described the horror of great darkness and the sense of desertion by God and man, bordering close upon despair, which swept through his mind and overwhelmed his heart, and which he could never forget, however gladly he would do so. During his period of enforced rest he was busy with his pen, and Mr. Kerr read extracts from his prose and poetical works, particularly his "Five Gateways of Knowledge," a book which created quite a sensation at the time of its publication. When he resumed his professional duties he gave occasional lectures to various bodies in which he was interested, including the Pharmaceutical Society. Mr. Kerr gave some extracts from some of these lectures, which he had himself attended. He became Professor of Technology in the University and Director of the Industrial Museum of Scotland. Mr. Kerr attended his class in Technology in the winter of 1859, but the course proved a very short one. The session had gone on for a few weeks and they were getting behind, the Professor said, and to make up time he would give them two lectures on Fridays, the usual one in the morning and the other in the afternoon. He had only got through the first half of his lecture when he begged to be excused from finishing it. "Gentlemen," he said, "we will resume this subject on Monday." The following Tuesday he died.

Mr. KERR was awarded an enthusiastic vote of thanks for his lecture.

The SECRETARY (Mr. W. Mair) stated that Mr. A. B.

Anderson, Dundee, and Mr. Peter MacEwan, F.C.S., London, had presented prizes for competition. Mr. Jack's prize for a collection of marine algae was presented by the Chairman to Mr. Andrew Paterson.

On October 27, at the Association's room, Mr. G. D. Macdougald, F.I.C., City Analyst for Dundee, will read a paper, which will take the form of a reply to the question recently raised by THE CHEMIST AND DRUGGIST, "Is Water-analysis a Failure?" The other papers to be delivered during the session include: President's address, James A. Kinnear; "Botany in Relation to Pharmacy"—an evolution, Wm. G. Smith, B.Sc.; "The Botany of the Minor Schedule," Wm. Mair; "The Incomplete Pharmacist"—a sketch, Walter MacEwan; "The Human Face," D. M. Small, L.D.S.; "The Manufacture of Vinegar," A. J. K. Paterson; "Photography," Wm. Mair; "The Spas of Germany and Austria," Dr. Kynoch.

GLASGOW PHARMACEUTICAL ASSOCIATION.

ON the evening of October 13 a general meeting of Glasgow chemists and druggists was held in the Band of Hope Rooms, 94 West Regent Street, to resuscitate the defunct Chemists' and Druggists' Association. The attendance both of masters and assistants was encouraging.

ELECTION OF PRESIDENT.

MR. JAMES ROBB, the President of the late Assistants' Association, took the chair, and after explaining the provisional arrangements made by the committee, he formally moved the approval of their recommendation that Mr. W. L. Currie, Downhill, be elected President of the Society. Mr. Currie had already worked hard for the inauguration of the Association. Mr. JAMES MOIR, Crosshill, seconded, and the appointment was unanimously confirmed.

NAME OF THE SOCIETY.

At the suggestion of the PRESIDENT, it was, after some discussion, agreed to call the new Society "The Glasgow Pharmaceutical Association." In course of conversation on the subject, one gentleman remarked that the name "Chemists' and Druggists' Association" was now very old-fashioned, while the general feeling was that under "Pharmaceutical" the Society would flourish better than under the old name.

ELECTION OF OFFICE-BEARERS.

Office-bearers were next elected as follows:—Hon. President, Mr. Daniel Frazer. Hon. Vice-Presidents, Mr. John McMillan and Mr. Alexander Kinninmont. President, Mr. W. L. Currie; Vice-Presidents, Mr. Thomas Robinson and Mr. John Crail; General Secretary, Mr. Alexander Laing; Divisional Secretaries, Messrs. James Bruce (South-Side), Robert Gordon (Partick), M. Carmichael (North-East), and James Russell (North-West); Treasurer, Mr. James Finlay, Dundas Street; Librarian, Mr. Arthur McKellar; Council, Messrs. Hugh Lambie, James Moir, James Robb, Benjamin Cartwright, H. W. Miller, Halley, and Weir.

THE EVILS OF STORES AND LIMITED COMPANIES.

THE PRESIDENT then addressed the meeting. He was convinced, he said, that with such a formidable army of workers something good should come out of the Association. It was high time they had a good Chemists' Association in Glasgow; it was a disgrace to the second city of the Empire that they had nothing of the kind in existence. Credit was due to the assistants for carrying on the old association for three or four winters. There were a good many employers in the city, but he was sorry to say they were not more numerous. Their places were usurped by shopkeeping medical men. He was inclined to think that the members of the Pharmaceutical Society, if they were well supported by an association such as theirs, ought to be able to do some good in elevating the position of pharmacy generally in Glasgow and the West of Scotland. There was an absolute necessity for something being done for the protection of the legitimate members of the trade in Glasgow. They had already one limited company started for dispensing medicine, and he was told that five or six others were coming in the distance. With such formidable opposition, some representation ought to be made to the premier society of Grea-

Britain, that they ought to put their best foot forward and do something for the trade. The Pharmaceutical Society ought to be supported by every chemist and druggist in business, as it was by that means, and that means alone, that anything could be done. He suggested in conclusion that the new association should be utilised for the discussion of general trade matters. (Applause.)

Mr. LAING thought they might have to educate the Pharmaceutical Society before they could get it to do anything for them. (Laughter.) In his opinion, they would have to depend on their own efforts in taking measures to protect themselves from what he considered unfair competition. What they most needed to do was to educate the public into dealing with legitimate chemists and druggists. Of course, if chemists meant to be traders pure and simple, and sold everything that was asked for, then he did not suppose they would be able to do themselves much good. It was disgraceful, he thought, that druggists should sell so many patent medicines which they knew to be worthless. They should have the common honesty to tell people who asked for them that they were only throwing away their money. They should endeavour, also, to put a stop to the keeping of shops by unqualified men. (Hear, hear.)

Mr. MOIR suggested that the Society should combine trade interests and educational interests. (Hear, hear.) There was no doubt that the stores and limited liability companies were a curse to the country, so far as their trade went. When the Limited Liability Act was passed, it was never intended for small concerns, but was intended to apply to huge concerns, which private enterprise could not successfully cope with. But nowadays no private man could stand against the limited liability companies, because they could run him out of the trade. According to the state of the law, the companies could succeed where private traders failed. Whenever the companies got into difficulties there was no odium attached to them—it was a "voluntary" winding-up—but when a private man came down he had to face his creditors, and very likely they bothered the life out of him. Before they could do anything to cope with that state of matters, it would be necessary for them to get the whole of the members of Parliament throughout the country interested on behalf of the druggists. Another thing Mr. Moir took notice of was the question of preparing an official price-list, as a counterblast to the lists issued by the stores, and distributed over the city. The stores people got hold of a list published many years ago by the Glasgow chemists, and unfairly compared their own prices with those quoted in that old list, and which were not applicable now at all. Although the druggists were to issue a new price-list, they did not necessarily require to act up to it at all. (Laughter.) But if it were officially published, it would prevent the stores from crowding over them. They could say to their customers, "This is a little more than the quoted price, but you are getting the best value." (Laughter.) In conclusion, he remarked that he understood that Francis Spite, a local grocer, was going to establish drug-stores in Crosshill, Dennistoun, and Hillhead.

Mr. FINLAY asked them, "for goodness' sake," not to bring out any price-list. It would wreck their Society. The last one stuck in their teeth yet.

The PRESIDENT said the Council would arrange the action that he proposed. He had no doubt that if they went about it in the right way the Glasgow Pharmaceutical Association would soon make itself felt over Scotland. It was not so very long since the Glasgow Chemists' and Druggists' Association put their foot down on one Bill that was being pushed through Parliament, and if necessary they might do the same again. He failed to see why the limited liability companies could not be put a stop to. He had sounded several members of Parliament on the subject already, and he was sorry to say that there were some members of Parliament who thought limited liability companies were a grand thing. To him it appeared strange that a limited company could put above their doors the legend "Chemist and Druggist," when the Pharmacy Act of 1868 enacted that none but legally qualified men could assume that title. That was a point that was not properly settled in the Army and Navy prosecution in London. In connection with that case the counsel for the Pharmaceutical Society, in his opinion, put his foot in it when he said that a number of qualified men could not form an association and conduct that kind of business.

That, he believed, was the most damaging statement in the whole case. Mr. Currie, however, was convinced that if this question were brought up again in the right way a different judgment would be given upon it. (Applause.)

THE LIVERPOOL CHEMISTS' ASSOCIATION.

THE coming session opens with considerable promise, as the Council have secured a number of interesting papers for the winter, and anticipate a very successful season. The first meeting will be held on Thursday, October 27, when Dr. Symes will read a paper on "The Modern Interpretation of the Pharmacy and Patent-medicine Acts." A question-box is to be introduced.

THE LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

THE annual general meeting was held on October 13 in the Botanical Laboratories, University College, Liverpool, for the election of officers, &c. Mr. Theo. H. Wardleworth was elected President; Messrs. C. F. Symes and J. R. Johnson Vice-Presidents; Mr. A. C. Mitchell Treasurer; and Mr. Geo. Brinson Secretary. The programme for the winter session comprises the following papers:—"Notes on Perchloride of Mercury in Spirituous Solutions," Mr. J. R. Johnson; "The Emulsification of Resins," Mr. Harold Wyatt, jun.; "The Aromatic Compounds and Ring-formulae," Mr. E. Davies, F.I.C., F.C.S.; "The Nitrogen Compounds," Mr. James T. Conroy, B.Sc.; "Pharmaceutical Apprenticeship," Mr. A. C. Mitchell; "Some Curious Plants," Miss E. M. Wood; also papers by Mr. McFall, F.C.S., Dr. Larkin, and Dr. Logan.

MANCHESTER PHARMACEUTICAL ASSOCIATION.

THIS Association has begun the session in a fairly hopeful style. The opening meeting, entitled the "annual general," was held on October 12, at the old meeting-place in the Victoria Hotel. About thirty of the members put in an appearance. Five new members were proposed and duly elected, and it is understood that another small batch will be dealt with at the next meeting. Mr. George S. Woolley, the President, occupied the chair at the opening meeting.

ANNUAL REPORTS.

The HON. SECRETARY (Mr. A. Blackburn) submitted his report on the work of the past year. The Association, the report said, had made satisfactory progress, there being now seventy-three subscribing members on the books, an increase of seventeen upon last year. Several collections of herbaria, presented by Mr. Wm. Stones to the association, had been offered for competition amongst the assistants and apprentices of members. The competition took the form of an examination in subjects connected with pharmacy, and was divided to suit junior and senior candidates. There were six entries, and prizes were awarded to C. S. Paine (senior division), F. H. F. Brauer and W. Fairhurst (junior division). Reference was also made to the pharmaceutical department of the Victoria University, which, it was said, had been established mainly through the exertions of the Council, but which had received very poor support from pharmacists in the North. The report closed with a reference to the death during the past year of Mr. F. Barnaby, one of the most respected members of the Association.

The report of the Hon. Treasurer (Mr. W. Stones) showed a small balance on the right side of the account.

Both reports were adopted.

THE PRESIDENT'S ADDRESS: THE APATHY OF MANCHESTER YOUNG MEN.

THE PRESIDENT was well received on rising to deliver his opening address. He began, as was fitting, with an allusion to the past and the future from a local point of view. The meetings during the past session, he remarked, had been fairly well attended, but not by any means as well as they might have been. Several interesting and useful papers were read, some of which gave rise to considerable discussion, particularly that on the labelling of poisons by Mr. W. Lane. It would greatly encourage and assist them if more

of their members would attend their monthly meetings. Nowadays nothing could be accomplished without united action, and if the pharmacists of this country could only be induced to act together, there would be some hope of considerable amelioration in their condition. In looking forward to the coming session, it was most disheartening to find the utter want of appreciation by the young men of the classes which had been provided for them with so much thought by the authorities of the Owens College. This was simply disastrous, as he knew that unless a few young men entered themselves during the session, the various courses of lectures provided would be entirely discontinued. Should this be so, pharmacy would very shortly be the only branch of learning omitted from the College calendar—a result which would be anything but creditable to Manchester pharmacists. At present, when the great demand from all sides was for education, to enable their young men to make themselves at least equal to the foreigner, it was astounding that out of the dense population of that district it was not possible to find half-a-dozen students of pharmacy who desired to associate themselves with the Victoria University. Taking the country generally, he believed there was an increasing desire amongst young men to pass the Major examination, which made it the more incomprehensible why that district should be an exception. He knew there were other schools of pharmacy in Manchester. Still, he could not see why the pharmacy course at a seat of learning like the Owens College should not be taken advantage of. The Council had done their utmost to co-operate with the College authorities in the promotion of these classes, and Mr. Kirkby had devoted much time and thought to the matter. No fewer than 1,800 circulars had been sent out, and the result was only one entry! He had no doubt they would hear of that one young man again. The late Sir Morell Mackenzie, in an article he once wrote, said he was disposed to think that the influence of culture on professional success was not so universally recognised by professional men as it ought to be. It seemed to him (the President) that they ought to impress the importance of culture on their young men by every means in their power, and endeavour to induce them to extend the period of their education, instead of trying to pass the examinations in the shortest possible space of time. Six lectures on pharmacy law were to be given by Mr. Kirkby during the coming winter at the Owens College, and he trusted they would be attended by members of the Association, to whom they were open. Each of the lectures would be delivered on the last Wednesday of the month, at 8.15 P.M. The first would be given on the 26th of this month. No competitors had presented themselves for the Manchester pharmaceutical scholarship. He trusted that, when the scholarship had become more widely known, they would have numerous entries. Apart from educational matters, a question which would have to receive the consideration of the incoming Council was that of the local secretaryship of the Pharmaceutical Association. There should be a local secretary for Salford, and Manchester was now so large that one man could not possibly do the work; it was, therefore, suggested that he should have two or three assistants in the suburbs, and he trusted they would be able to find gentlemen who would undertake the work.

A NEW READING OF THE PHARMACY ACT.

With some trepidation, as he himself admitted, the President soared from local to imperial topics. He said that because the matter was to some extent *sub judice*, and because, as the President of the Pharmaceutical Conference remarked, "a brilliant flash of silence" was, perhaps, the wisest policy to adopt; but he could not but allude briefly to the new reading of the Pharmacy Law by a police magistrate. That reading simply declared that an article containing a statutory poison must be labelled as directed in section 17. This seemed so thoroughly in accordance with ordinary common sense, that one could not avoid wondering how it was that twenty-four years had elapsed before such a decision could be arrived at. That one man in selling a small quantity of a scheduled poison must obey the law, while another selling a preparation containing the same poison, might, by the simple process of placing a Government stamp on his packages, place himself above the law, would give us a condition of things which, in his opinion, no higher authority would permit, and he did not think the magisterial

decision would be upset. It had been argued that the use of the poison label in connection with preparations containing only a small quantity of a scheduled poison would tend to make the word "Poison" so familiar that the public might be led to disregard it. This was not in accordance with the experience of everyday life. We constantly saw precautionary notices of various kinds, the object of which was to avoid accidents, and we saw they were useful and were not disregarded. The law was explicit, and that was enough for them. They were the appointed executors of the law, and it was their duty to see its provisions thoroughly carried out. A small quantity of paregoric might be considered harmless in itself: but if they said that it need not be on a poison label, they admitted that it might be sold by any unqualified person. It was, therefore, incumbent on pharmacists to observe strictly the requirements of the law as regards the sale of poisons. He did not wish to cast reflection on any one. On the contrary, his experience was that the pharmacists of this country carried on their work in a most conscientious manner, and their position was not recognised as it should be. He meant to emphasise the fact that in the light of the new reading of the Act, they must extend their precautions to the sale of stamped medicines, and see that the public were fully informed of the nature of the preparations they were purchasing.

AN INJUSTICE TO BE REMEDIED.

Passing to another subject, the President said there was an injustice at present existing, which he thought the chemists of this country might combine together to remedy, and this could only be accomplished by combined action and continued agitation. It had been laid down as the law of the land that seven unqualified men could register themselves as a limited company, and then style themselves chemists and druggists, or, for anything he knew to the contrary, pharmaceutical chemists, and retail poisons. As they all knew, one or two men could not do this, so that, by the simple process of paying a certain percentage of their subscribed capital to the Government, seven men could place themselves above the law as laid down in the Pharmacy Act of 1868. If this could be accomplished, why could not seven men form themselves into a company, call themselves solicitors, and proceed to conduct legal business on a greatly reduced tariff? Perhaps the authorities would draw the line there. Here was an example of one of the companies he had alluded to, founded for the express purpose of evading the Pharmacy Act. A tradesman, A, transformed his business into a registered company, with a capital of 5,000*l.*, divided into 5,000 shares of 1*l.* each. A took 4,994 shares, and B, C, D, E, F, and G one share each. A was the managing director. No shares could be transferred without his consent. All new shares must be first offered to him, all meetings had to be convened by him, and no member had power to compel him to convene a meeting. He had to be chairman of the company. A quorum was not to be necessary for the transaction of business; but no business could be transacted in his absence. Every member had one vote for each share. The managing director had full power to conduct the affairs of the company, to decide what books of account should be kept by the company, he was not bound to submit any statement of accounts, and the books of the company were not at any time open to the inspection of members, except by his permission, given in writing. A company, with the conditions he had named, had actually been registered under the law of this country. He imagined that if a traveller, returning from a semi-civilised land, should report such a state of affairs, he would be greeted with a smile of incredulity. If ever an abuse called for a remedy that did; but it could only be remedied by united action. The President closed his address in a less dolorous tone than that with which he opened it. There was, he thought, a prospect of more members and more interest in the proceedings of the Association.

A vote of thanks to Mr. Woolley for his address was proposed by Mr. F. BADEN BENDER, seconded by Mr. W. WILKINSON, supported by Mr. H. KEMP, and passed.

The following gentlemen have been elected to serve on the Council of the Association during the present session—viz., Messrs. W. Arrandale, F. B. Benger, A. Blackburn, W. Bowden, J. Hart, H. Kemp, W. Kirkby, W. Lane, W. Stones, G. H. Westmacott, W. Wilkinson, G. S. Woolley.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.

THE opening of the Session of the above Society took place on the evening of October 13, when Mr. Robert Watts, the President, occupied the chair. There was a large attendance, including Mr. W. Favell, surgeon, Rev. T. S. King, F.R.G.S., Mr. A. H. Allen, borough analyst, and several members of the Society.

The PRESIDENT briefly referred to the success which had attended the Society in the past, and distributed the prizes to the successful students.

Alderman W. GOWEN CROSS, J.P. (Shrewsbury), was received with applause on rising to deliver the inaugural address. He said it was a sad experience to those who took an interest in pharmaceutical education to find that in the provinces schools of that kind had had a very precarious existence, or had ceased to exist altogether. The chief cause of failure was to be traced directly to the lack of interest which their young men and some of the masters had taken in the matter. Some accepted the position with an air of complaisance because they expected a bill to enforce a pharmaceutical curriculum would become law. Whether that was so or not, he could congratulate the Sheffield school on its success. He urged the young men in the town to avail themselves of the advantages the school offered, saying it was impossible in these days of hurry and worry for a young man to learn the scientific portion of a pharmacist's business satisfactorily in his master's establishment. He must seek the assistance such a school afforded. If the school were not self-supporting he appealed to the managers to raise the fees, as the students did not belong to a class of the community which required free or even assisted education. The young men were advised to give due proportion to each phase of their work. Let them be as scientific as they pleased; but let them not neglect to become skilful in the technical operations which the pharmacist had to perform. Turning to the subjects which would be more particularly dealt with in that school, he said they had in the first place to master the elements of two delightful sciences. He was not speaking of pharmaceutical chemistry, as he did not believe in the limited application of science. There were persons who spoke of it as though it were a distinctly recognised branch of a great science. Such, he unhesitatingly affirmed, was not a fact; and he hoped no one present thought anything of the kind. To be a pharmaceutical chemist it was necessary to be an all-round chemist; and he asked them to regard their art as one upon which the highest knowledge was required. Having shown how fallacious was the notion that "botany is a dry study," inasmuch as the pursuit of it led a man away from toil, out of the busy throng, along the sweet country fields and lanes away from care, out of himself into such a region of delight as was simply indescribable, he said it was only the wrong-headed man who endeavoured to absorb his botanical knowledge from books and dried specimens. Books and dried specimens were necessary adjuncts, but true proportion must be observed between theoretical and practical knowledge. He advised the students to set a high value on their time and not to succumb to difficulties; as, rightly viewed, they were great opportunities. Thoroughness was a trait of character which could not too strongly be insisted upon. In conclusion he warned the students that during their earthly sojourn they would never reach finality. Let them work cheerfully on in full assurance that there was always something to do, always something to learn, always something to repair or perfect, and let them enter bravely into the work, remembering those who had preceded them and of whose enlightened generosity they were reaping the advantage. (Applause.)

Mr. W. WARD proposed a vote of thanks to Alderman Cross for his address, and the motion was seconded by the Rev. T. S. King and supported by Mr. Favell, who bore testimony to the great help pharmacists had been to the medical profession. The motion was carried and briefly acknowledged.

The members and friends afterwards dined together.

Mr. R. Watts presided, and the company numbered about one hundred, including Professor Hicks (Firth College), Mr. R. J. Pye-Smith, F.R.C.S., Dr. Longbottom, and most of the leading chemists in the town and district.

After the usual loyal toasts, Mr. R. J. PYE-SMITH proposed "Success to the Local Society." He alluded to the honourable character of the chemist's trade, which he said was capable of development to an extent beyond anything yet attained. It was not unlikely that the time would come—and it would be a benefit if it did—when certain articles of trade—such as soaps and brushes—now found in the shops of some pharmacists were relegated to the shops of the barber; so-called patent medicines to quacks, and dentistry to those who made it a special branch. Pharmacists had a right to look to the medical profession for the compounding and the dispensing of their medicines. (Applause.) Pharmacy was a most important art and a valuable safeguard to the community against poisoning, whether intentional, as was to a large extent guarded against by the Sales of Poisons Act, or unintentional. The medical profession looked upon pharmacists as their "handmaid," and he trusted the union between them would strengthen and increase. (Applause.)

The PRESIDENT responded.

Mr. C. O. MORRISON submitted the toast "The Pharmaceutical Society of Great Britain." He spoke of the friendly interest the Society had always shown towards the Sheffield organisation, and in referring to the work the Society might take up he contended that an examination which was appointed by the State should be conducted by the State. More than half the candidates were "ploughed" in their examinations by the Society, and when they did get through they entertained an unfriendly feeling towards it. This would be changed if there was a State examination, as in Germany. He urged at some length that the Society should pay more attention to certain business details and more friends would rally round it.

Mr. CROSS and Mr. NEWSHOLME replied.

Other toasts, interspersed with an excellent musical programme, were given.

CHEMISTS' ASSISTANTS' ASSOCIATION.

THE first social evening of the above Association was held on Thursday, October 13, at 103 Great Russell Street, W.C. The chair was taken by Mr. W. Martindale, who referred in his preliminary address to the useful work of the Association. Employers had, he said, much cause to be grateful to the members for the excellent hints they often received from them. The *Proceedings*, which he read with great interest, were of great value not only to pharmacists and medical men, but also to the revisers of the Pharmacopoeia. An excellent programme had been arranged by Mr. S. A. Walton. Messrs. J. C. and P. Umney were well to the front, and the comic songs by Mr. Scrivener were heartily received. There were besides a performance on the mandoline and one on the fairy bells by Mr. Parker. After the usual votes of thanks to the chairman and artists, the company dispersed shortly before midnight.

MATERIA MEDICA CLASSES AT PLYMOUTH.

THE committee of the Plymouth Technical Schools, founded as a Jubilee memorial, has decided to establish a class in materia medica, if a sufficient number of students offer themselves to justify such a step. This is in response to a request sent them through Mr. Freeman W. Hunt, 106 Old Town Street, as secretary to a meeting of local chemists. Applications from pharmaceutical and medical students should be made to Mr. Hunt at an early date. The proposed class will be held on Tuesdays from 3.20 to 9.20 P.M.

MACE AND NUTMEGS IN BANDA.—The spice-growers on the island of Banda (Dutch Indies) had a very prosperous year in 1891 owing to the rise in the market value of nutmegs and mace. There are thirty-four nutmeg-plantations in the island, and the recent sale of two of these showed that this kind of property has increased very largely. The total output of nutmegs and mace in the islands of the Banda group in 1891 was about 14,580 piculs. The cultivation of nutmegs is extending to many of the neighbouring islands, but the trees there are not yet in bearing.

Legal Reports.

AN IMPORTANT MUSTARD-CASE.

MR. T. W. LEWIS, the Cardiff stipendiary, delivered an important judgment on Wednesday, in a case in which a youth named Arthur Griffiths, son of Mr. Richard Griffiths, grocer, of Cardiff, had been summoned by an inspector under the Sale of Food and Drugs Act for selling to him 6 oz. of mustard not of the nature, substance, and quality demanded by him.

The defendant is a son of Richard Griffiths, a grocer at Cardiff. On August 19 last Inspector Hill went to the shop of Richard Griffiths, and said to the defendant, Arthur Griffiths, "Give me 6 oz. of mustard." The defendant thereupon served him from a tin marked "Keen's mustard," and accepted $4\frac{1}{2}d.$ in payment. Immediately after the purchase, while Hill was informing the defendant that the mustard was for analysis by the public analyst, the defendant's mother came into the shop, and inquired of him what he had sold. He replied "Colman's condiment."

Mr. Hughes, the borough analyst, gave evidence, and stated that he had analysed the article and found it to contain 90 per cent. of mustard and 10 per cent. of wheat flour. Also that it was of inferior quality to pure mustard, although the trade price for 6 oz. of pure mustard was $4\frac{1}{2}d.$, the amount paid for the 6 oz. in question. These facts were uncontradicted, and Mr. Vachell, the defendant's advocate, declined an offer made by the Court to grant him an adjournment for the purpose of enabling him to adduce evidence.

The first question for determination, said the Stipendiary, is whether a compound of 90 per cent. of mustard and 10 per cent. of wheat flour is of the same nature, substance, and quality as mustard. The later statute (42 and 43 Vict. c. 30, s. 2) construes the words "nature, substance, and quality" in the statute (38 and 39 Vict., cap. 63, s. 6) to mean any article of food or any drug which is defective in its nature, or in substance, or in quality. Mustard consists of the seeds of the *Sinapis nigra* and the *Sinapis alba*, reduced to flour and mixed. It differs in colour, weight, specific gravity, chemical composition, and properties from wheat flour—a substance too well known to need description. Hence it appears essentially of a different nature from flour. And inasmuch as 10 per cent. of the article supplied by the defendant to the complainant was not mustard flour but wheat flour, the article was *qua* mustard defective to the extent of 10 per cent. I am of opinion, therefore, that the article supplied was not of the same nature, substance, and quality as that demanded, and this view appears to me to be supported by the *obiter dicta* of Mr. Justice Lush and Mr. Justice Mellor in *Sandys v. Markham*, 41 J.P. 52.

The second question to be determined is, Was the complainant prejudiced? In *Sandys v. Small* (42 J.P. 550) the late Lord Chief Justice Cockburn said:—"The true construction of the statute is that when the seller professed to sell a particular article, and he sold it altered by the admixture of something else, it must be taken that he did it to the prejudice of the buyer, unless the fact was duly brought to the notice of the buyer." Hence, if in the case upon which I am now adjudicating, the defendant had by verbal notice or by label upon the article sold conveyed the knowledge to the complainant before the purchase that the article was a mustard condiment, or mustard containing an admixture of wheat flour, and the complainant then purchased on that understanding, the complainant could not be said to be prejudiced. The evidence, however, negatives any suggestion of notice, expressed or implied, by the defendant to the complainant, and the case thus differs in this material element from the cases referred to in the course of the argument as having been decided by the learned stipendiary magistrates at Pontypridd and Merthyr.

But, on the other hand, Mr. Vachell contends that what is known in the trade as "mustard" is mustard mixed with wheat flour, and that the complainant in asking for mustard was, on account of the trade signification of mustard, asking for what was in effect mustard mixed with wheat flour, and that therefore he was supplied with the article he demanded. In support of this contention, Mr. Vachell cites Dr. Redwood's "Pharmacopœia," and the latest edition of the "Encyclopædia

Britannica." The former work, I observe, was published so long ago as the year 1847, anterior to the Food and Drugs Acts. In the British Pharmacopœia of 1885 I cannot find authority for Dr. Redwood's statement as to the composition of the mustard of commerce. With regard to the quotation from the "Encyclopædia Britannica," it appears to me not to fortify, but to destroy Mr. Vachell's contention. The quotation is as follows:—"As it is now prepared, mustard consists essentially of a mixture of black and white farina in certain proportions. Several grades of pure mustard are made, containing nothing but the farina of mustard-seed, the lower qualities having larger amounts of the white cheaper mustard; and corresponding grades of a mixed preparation of equal price, but containing certain proportions of wheaten or starch flour, are also prepared and sold as mustard condiment. The mixture is free from the unmitigated bitterness and sharpness of flavour of pure mustard, and it keeps much better." The "Encyclopædia Britannica" therefore lays down in perfectly clear terms that "mustard" consists essentially of the farina or flour of mustard-seeds reduced to powder and nothing else; also that there are several qualities of pure mustard; and thirdly, that there is a preparation which is not mustard, and is not called mustard, but is a mixture of farina or flour of mustard, and farina or flour of wheat, and this mixture is called "mustard condiment."

I accordingly am satisfied that "mustard" has not the trade signification contended for by Mr. Vachell, and that the complainant was without notice of any kind supplied by the defendant with an article different from that which he demanded, and accordingly (under the principles laid down in *Hoyle v. Hitchman*, 43 J.P.; *Sandys v. Markham*, 41 J.P.; *Sandys v. Small*, 42 J.P.; and *Knight v. Pervers*, 49 J.P., 614), the defendant was thereby prejudiced.

With reference to the question of prejudice, it is further to be observed that mustard is used not only as a condiment, but also as (1) internally in large doses, a powerful stimulant, causing speedy vomiting (useful in cases of narcotic poisoning); (2) externally, as a powerful irritant (or vesicant), useful to relieve inflammation, as, for example, upon the chest in bronchitis, in baths for the feet to draw blood to the surface, and also for the alleviation of neuralgic pains and spasms (*Garrod's Materia Medica*, 3rd edition, page 184).

If, therefore, a purchaser desires mustard for either of the latter purposes and asks for mustard, but is supplied with mustard mixed with wheat flour, he is prejudiced, in that he has a less powerful and efficacious remedial agent than he requires. The defendant, therefore, appears to me, both by reasoning and on authority, to be within the mischief of the section, unless he shows that he is protected by either of the four provisoes. The burden of proving an exemption is upon the defendant, and he has given me no such proof, or even adduced evidence of the application of either of the provisoes. It appears, therefore, manifest that the offence charged is established against the defendant, and I impose a penalty of 40s. and costs, or, in default of distress, one month's imprisonment.

A GLASGOW PILL-MANUFACTURER'S CLAIM FOR COMPENSATION.

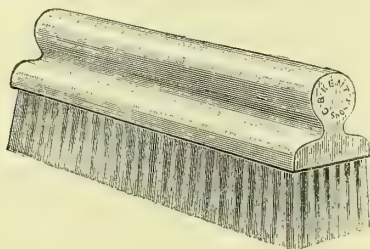
SHERIFF SPENS, Glasgow, has given his decision in the claim for 340% made by Dr. Andrew Malloch Robertson, chemist and druggist, 27 Main Street, Anderston, Glasgow, against the Caledonian Railway Company in respect of loss and damage to pursuer's business by the underground railway operations carried on by the defenders in close proximity to his shop. A report of the case appeared in our issue of October 8. The pursuer's claim of 50% on the allegation that smoke, dirt, and dust caused by the railway company's operations destroyed drugs and other articles either in course of manufacture or for sale, was held to be perfectly relevant, but the evidence showed that most, if not all, of the stuff which was taken out by the railway company was sludge, which could not give rise to much floating dust. There were also other operations, connected with gas and water pipes, done by the Corporation workmen, and it does not appear on the proof that these operations were necessarily due to the railway company's operations. They might have been, but to what extent it does not really appear. He (the Sheriff) had come to the conclusion that damage was caused to the pursuer's stock-in-trade, but in the circumstances

above set forth it was impossible to award anything more than a merely arbitrary sum, and this he fixed at 5%. The next item of claim was 100%, estimated by the pursuer as the extent of his loss of profit through being unable, on account of the smoke, dust, and dirt, to carry on his pill-manufacture. This claim was nothing other than a claim for loss of trade. Loss of trade, it was now authoritatively ruled, was not a relevant claim of damage in consequence of railway companies' operations. That claim must therefore fall. A claim of 15% was preferred for the rent of new premises, which pursuer says he took for the manufacture of sugar-coated pills. That claim was consequential loss, and otherwise not eligible under the provisions of the Act. As to the claim of 100% on the ground that the premises were hidden and blocked by defenders' machinery and plant, the evidence shows that the foot-pavement was always open, and the claim being one for loss of trade, was, on the authority of the case already referred to, untenable. The next claim was for 30% for painting and papering in respect of dirt and dust. As the damage was partly due to the defenders' operations, 5% was allowed. As to the expenses, pursuer claimed 340% and gets 10%. The Sheriff said he was not prepared to give expenses to either side.

Notes of Novelties.

"GRIP" NAIL-BRUSH.

THE new shape of nail-brush shown in the engraving has been registered by Messrs. G. B. Kent & Co. They make it



in three sizes, at moderate prices. As its name implies, it can be grasped firmly and conveniently in the hand. The makers tell us it is selling freely.

A SUBSTITUTE FOR SACHETS.

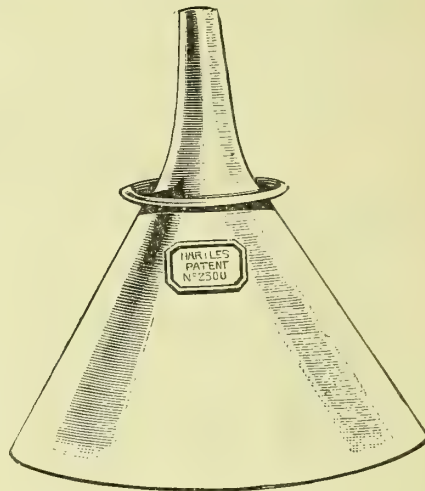
FROM Paris elegant small squares of porous earthenware are now brought into commerce as a substitute for sachets. The squares, of which only the upper surface is polished, are soaked in a fragrant essential oil or concentrated perfume, and when placed on a hot surface emit a pleasant odour. They may also be used for placing among linen or other materials. They go in commerce by the name of "Oriza Solidifié."

HOCKIN, WILSON & CO.'S NEW SUNDRIES.

WE have been shown a number of very attractive novelties in the druggists' sundries line lately introduced by Messrs. Hockin, Wilson & Co., of London and Manchester. Among these may be named a convenient counter-case, silver-lettered, on showy wood, with glass top containing in divisions all the various fittings for feeding-bottles. Many chemists will appreciate the tidiness of an arrangement like this. Another counter-case got up in similar style contains four divisions supplied with tooth-brushes of different grades. The firm are also putting up prepared Fuller's earth in good-looking leatherette cases, and lastly they have got up a crescent-shaped arrangement of long Turkish bottles containing attar of roses in blue, amber, and white glass affixed to a card, the appearance and odour of which is very fetching.

NON-TIPPING FUNNEL.

SOME time ago there was a discussion in THE CHEMIST AND DRUGGIST regarding funnels, and various objections were urged against the shapes now in use. One result of the discussion has been that Miss Gertrude A. Hartle, of Stoke-upon-Trent, a chemist's daughter, has invented what she calls the "non-tipping" funnel. The exterior shape of this is shown in the figure. The apex of the cone is here widened out into



a grooved collar, which rests upon the neck of the flat-bottomed bottle, the effect being that the centre of gravity is thrown so high up that nothing but an extraordinary accidental force can tip the funnel. The outside of the stem has three deep air-channels or flutes, which are continued through the collar. The interior of the funnel is provided with a few dozen corrugations, and at the bottom are seven wedges, which support the paper well at the point of greatest pressure—a very good idea. The funnels are made in acid-proof porcelain, and are supplied by wholesale and sundries houses.

Personalities.

MR. J. S. WARD, Principal of the Liverpool School of Pharmacy and President of the Liverpool Chemists' Association, we regret to learn, is dangerously ill.

MR. FREDERICK WILLIAM BIRD, chemist, Spon Street, Coventry, has been appointed dispenser to the Coventry and Warwickshire Hospital.

MR. A. H. BURTON, who appeared in the Minor pass-list last week as of Llandilo, writes to say this should be Llanduduo. We have always some corrections of this kind. The Registrar gives the address of the apprentice, unless he is expressly asked to correct this. A note on the instructions to candidates would prevent these errors, and ensure more accuracy in the official register.

THE REV. BROOKE LAMBERT, Vicar of Greenwich, has been travelling through Bulgaria, and, in a letter to the *Times*, gives a lively account of his visit. He describes the plain of Kezanlik, as "rich in corn, and diapered with rose fields, for this is the seat of the otto-of-rose manufacture so famous in the bazaars of the East." At Kezanlik he was the guest of Mr. Shipkoff, "one of the principal exporters of the essence." There, surrounded with all English comforts, he learnt much of this important item of Bulgarian trade. By the way, the first National Bulgarian Exhibition was held at Philippopolis this summer, and a long report of it appeared in the *Times*, but, strange to say, it did not contain any reference whatever to the otto-of-rose industry.

Medical Cleanings.

CHILDREN AND ATROPINE.

THE tolerance which children show towards belladonna is a well-known fact; but it has not been often observed that the pupils of infants' eyes are exceedingly difficult to dilate with atropine. Dr. George Carpenter gives in the *Lancet* several examples in proof of this. Sometimes dilation was delayed for many hours after the application of atropine or homatropine drops; but the peculiar point is that other constitutional effects, such as flushing, were manifest.

OINTMENT FOR HÆMORRHOIDS.

DR. ALLINGHAM prescribes the following:—

Calomel	..	..	..	..	3ss.
Morph. hydrochlor.	..	..	..	..	gr. ij.
Bismuth. subnit.	..	..	..	..	3vj.
Vaseline.	..	..	..	..	3vj.
Glycerin	..	..	..	..	5ij.

Misce, fiat ung.

To be applied night and morning.

CHRONIC ECZEMA.

THE following treatment is recommended by a continental physician:—

Tincture of male fern	..	..	..	3j.
Rectified spirit	..	..	..	3ss.
Tincture of myrrh	..	..	..	3j.
Powdered opium	..	..	..	3j.

Macerate a few days and filter.

The parts affected are first to be washed with potash soap and then painted with the above tincture. In about fourteen days chronic cases show a very healthy condition.

OLD APOMORPHINE SOLUTIONS.

DR. EASBY, of Peterborough, writing to the *Lancet*, says he has some apomorphine solution which was prepared ten years ago. It is dark green in colour, but as efficacious as ever. Its strength is $\frac{1}{50}$ grain of the alkaloid in 5 minims. On July 23 Dr. Easby was called to a man who had swallowed 1 oz. of tincture of opium about an hour before he was found at 1.30 P.M. He at once injected 5 minims of the solution into the right arm, and in less than three minutes free vomiting took place. The man recovered. Age apparently does not affect the potency of this useful drug.

VITREOUS OPACITIES.

PROF. G. E. DE SCHWEINITZ, M.D., of Philadelphia, gives, in the *Therapeutic Gazette*, page 436, particulars of several cases of vitreous opacities of the cornea, which he has successfully treated with fluid extract of jaborandi, in conjunction with the local application of solution of eserine sulphate (gr. $\frac{1}{24}$ to 3j.). Injections of pilocarpine have hitherto been used successfully for the same purpose, but Prof. de Schweinitz has had good results from 10 minim doses of the fluid extract three times a day, sometimes adding sodium iodide when an alteration appears necessary.

TREATMENT OF RINGWORM.

WE call these notes from a discussion on the subject at Nottingham. Dr. Phineas Abraham mentioned a method of treatment which for some years past he had found very useful. An ointment, containing carbolic and salicylic acids (of each $\frac{1}{2}$ a drachm to 1 drachm to the ounce), was rubbed in with a stiff brush twice daily, the scalp being shaved occasionally, kept closely cropped and always greasy, a cap being worn and changed daily, and the head washed with an antiseptic soft soap once a week. Dr. Alfred Eddowes described a modification of Unna's chrysarobin treatment of ringworm of the scalp. The essential preparations are a mild sulphur ointment and a compound chrysarobin ointment. During the first week the scalp is washed every two or three days with soft soap or soda and water and dressed daily with sulphur ointment. For as many weeks as

necessary afterwards the scalp is systematically treated by the chrysarobin and the sulphur ointments according to Unna's plan.

LEUCORRHOEA FORMULÆ.

THE following formulæ are of French origin, being recommended by Gallois:—

Pulv. catechu..	..	..	..	3iv.
Pulv. myrrha..	..	..	..	3iv.
Aq. calcis	..	..	..	3viij.

Macerate over night, and filter.

To be used as an injection three times a day.

Potassii chloratis	..	..	..	3j.-5ij.
Vin. opii	..	..	..	3iss.
Aq. picis	..	..	..	3viij.

Fiat sul.

Add two or three dessertspoonfuls of this solution to a quart of hot water, and use as an injection night and morning, particularly in cases of leucorrhœa associated with endometritis, polyps, or fibroids. The duration of the injection should be about five or six minutes. In the case of young girls who have leucorrhœa without true vaginitis, the parts should be bathed with Goulard's lotion or a weak carbolic lotion (1 in 200), and for such strengthening internal remedies are desirable. The following is a tonic powder which is of great benefit, especially when taken about the usual menstrual period:—

Ferri sulph. gran.	..	..	..	3j.
Ferri carb. sacch.	..	..	..	3iij.
Pulv. cinchonæ rub.	..	..	..	3j.
Pulv. cinnamomi	..	..	..	3j.
Pulv. ergotæ	..	..	..	3j.

Misce.

The dose of this is 10 to 15 grains with each meal, the larger dose being given immediately before and after the menstrual period.

A SYMPOSIUM ON DYSPNŒA MEDICINES.

IN the pharmacology and therapeutic section of the British Medical Association a discussion on "Dyspnœa and its Treatment by Drugs" was opened by Professor Gairdner, who, after describing the varieties and causes of dyspnœa, spoke of the remedies. It is necessary to guard against the administration of opium when the dyspnœa accompanies pneumonia, as then the effect of even minute doses may be fatal. If the trouble arises from extra pulmonary causes other than hæmatic, such as some fluid effusion, diuretics should be employed if the urgency permit. Of these Dr. Gairdner had an old and abiding preference for cream of tartar as at once the most manageable, the most popular, and the most safe of all diuretics—a fact verified by the experience in Scotland, at least, of much more than a century. Professor Leech spoke of the dyspnœa occurring in some disturbances of the respiratory organs and in cardiac troubles, specially emphasising the value of the nitrites when it is associated with dry lung-sounds. Nitrite of amyl may stop a dyspnœic attack, but the nitrites of ethyl and sodium and nitro-glycerine are far more effective. The effect of amyl nitrite only lasts about two minutes whilst the influence of the others named lasts three hours or more. A teaspoonful of a 3-per-cent. solution of ethyl nitrite is the most convenient form for administering a nitrite in dyspnœa. For the relief of dyspnœa which nitrites have failed to cure the vapour of ammonia may be tried. The vapour may be inhaled with care from warm water or diffused in the room. Professor Leech also mentioned that some asthma-cures contain nitrites—this is a mistake. It is nitrate of potash which is put into such powders. Dr. Wilberforce Smith said that in "spasmodic paroxysms" relief was in a certain proportion of cases obtained from belladonna, preferably a few drops given with little or no water, in order to secure rapid absorption, or administered by a spray-producer. Mr. Frederick Pearce, F.R.C.S., pinned his faith to aconite in acute spasmodic asthma: 5-minim doses of Fleming's tincture produce almost immediate relief. Oxygen and strychnine, digitalis, and iodide of potassium were amongst the drugs also spoken well of.

NOTES ON CYPRUS PRODUCE.

OLIVE CULTURE IS NEGLECTED.

ALTHOUGH the olive-tree is indigenous to Cyprus, and the wild olive grows freely in many parts of the lower slopes of its mountain-ranges, the cultivation of the tree has never, apparently, been carried to an extent that has enabled it to be considered a staple article of export trade. Under the Venetian rule, it is said, steps were taken either to encourage or to compel the cultivation of the wild olive in some parts of the country, but the production at that time does not appear to have been considerable.

Even now the oil made is mostly consumed in the island. The oil is roughly made, but it is of excellent quality, the opinion of experts being that if more attention was paid in its preparation it would be able to compete with some of the best Italian oils.

The Government are now taking steps to promote the extension of the cultivation and the transplanting and grafting of wild olives, especially in villages which have no sufficient resources to fall back upon in bad years. When a young wild olive tree is transplanted it is left for four or five years before it is considered sufficiently well set and strong enough to be grafted, and after grafting it takes three years before producing fruit. Thus seven years elapse between the transplanting of the tree and the time when it begins to give a return, but if the tree were grafted a year before it is transplanted, three years might be saved in the process.

THE CAROB OR LOCUST-BEAN TREE.

The carob-tree flourishes in a wild state in many parts of Cyprus; and its cultivation (which is now one of the chief industries of the island) is effected by grafting. The pod or bean of the cultivated tree was formerly used as an article of food, but for some years past it has been chiefly made use of as a food for cattle, and what is grown in the island is nearly all exported for the latter purpose.

The carob-crop in 1890 was rather above the average—viz., 24,193 tons, of an estimated value of 74,924*l*. The Cyprus carob-trade is not a new one, but it is only recently that it has attained its great dimensions. In 1745 the export of carobs was 225 tons. The trade was at that time a monopoly, and this monopoly was not abolished until 1827. In 1852 there was an exportation of 1,350 tons of carob beans, and in 1872 one of 10,000 tons. After that time the demand grew for it as an article of food for cattle. The tree requires a good deal of rain, and the yield is greatly dependent on this and other conditions. Frost in winter, and hot and dry winds in the early summer, are both equally injurious to the tree.

HONEY MIGHT BE MADE PROFITABLE.

The Cyprus bee, a variety indigenous to the island, has a splendid reputation as a honey-maker. This reputation is extended beyond the island, and Cyprian queen-bees are occasionally exported from Cyprus to other countries. Bees are kept in many villages, and in some places the hives are formed of earthen pipes let into the sides of the houses. The honey is of good quality except in the carob districts, where the carob-flower is believed to impart a disagreeable flavour to it. At the present time neither honey nor wax is produced in sufficient quantities to make it worth while to export it.

SPONGE-FISHING TO BE FARMED OUT.

The Cyprus sponge-fishery is a valuable one, but it is mostly carried on by regular sponge-fishing boats from the islands of the Grecian Archipelago, each boat paying a small duty to the Cyprus Government for the right to fish. The declared quantity of sponges taken in 1889 was 14,543 oke, valued at 12,415*l*.; but in the following year very few boats came, and the quantity taken was declared only at 1,353 oke. It is estimated that, well managed, the receipts from this industry ought to be worth about 20,000*l*. a year, and the Government proposes to farm out the fishery in order to

turn it to a better account than has hitherto been the case.

SUMACH.

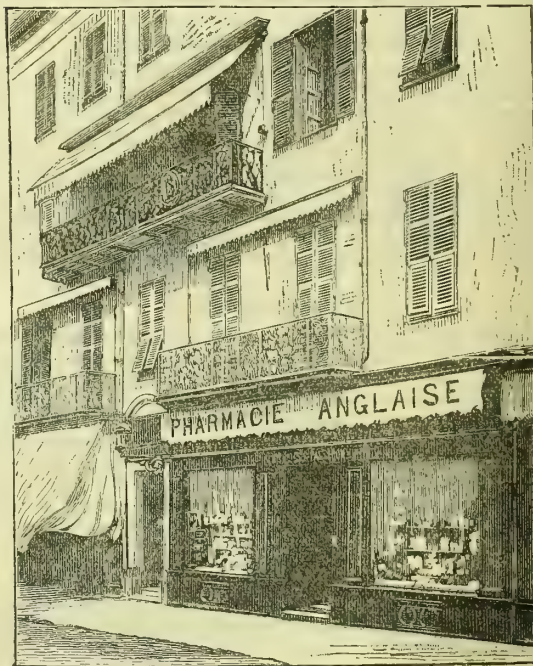
The sumach is an indigenous wild shrub. In 1877 the export of sumach was valued at 950*l*. It is used for tanning purposes, but so little care was taken in gathering, collecting, and preparing the leaves for export, that the Cyprus sumach never found a good market. Of recent years an enterprising company at Limassol has taken some pains both in the selection and in the preparation of the leaves. It has also introduced machinery for grinding, and has shown that Cyprus sumach, when properly handled, is as good as that of any country. In 1890–91 215,403 oke, valued at 803*l*., were exported.

COLOCYNTH AND OTHER DRUGS.

The colocynth-plant grows wild in Cyprus, and the fruit or seed-pod is an article of export trade. In Venetian times the produce was put at 2,500 oke a year, but in 1889 the export was returned at 4,616 oke, valued at 461*l*., and in 1890 at 7,103 oke valued at 739*l*. There are several other medicinal herbs and products (such as scammony, colchicum, squills, &c.) in the island, as also some mineral springs, but little or no use has hitherto been made of them.

A RIVIERA PHARMACY.

AN account of pharmacy in the Riviera would be incomplete, writes Mr. S. M. Burroughs, without a mention of the establishment of Messrs. Nicholls & Passeron at Nice. This business was started many years ago, and has now come to be a sort of English and American headquarters. It is situated on the Quai Massena, a wide promenade along the western bank of the river, and within pistol-shot of the sea. This avenue is not exposed to the sea-winds so much as the



Promenade des Anglais, which faces the water, and it is, therefore, preferred by many delicate persons for this reason. Several of the principal shops are on this street; the river-bank adjoining the drive-way is ornamented with rows of palm-trees, and a tall eucalyptus, which might be considered a giant even in Australasia, stands at the corner of the bridge.

The pharmacy has the appearance of a first-class English establishment; there are two large show-windows, always containing specimens of the newest, latest, and best, as well

as the old-established, products of England and America. Mr. Nicholls possesses the English Major qualification, and is well known throughout the length of the Riviera. Nice is by far the largest of the great resorts in the South of France. The rents on the Quai Massena are very high, but the business can stand the expense. The pharmacy was refitted about twelve years ago; the mahogany work was done by a Marseilles house; it is beautifully finished, though, perhaps, a little too massive, the wood being $1\frac{1}{2}$ to 2 inches in depth. The recess bottles were supplied by the York Glass Co., and have a very pretty effect through the plate-glass doors in front of the shelves, which protect the goods from dust. The only difficulty attending the use of this style of bottle in hot countries is that the composition sometimes melts, allowing the label to fall; this might be remedied by the use of a stronger cement. Messrs. Nicholls & Passeron have a number of excellent proprietary preparations, the chief of which are the eucalyptus vinegar and vin névrossthénique. The eucalyptus vinegar has a delightful fragrance, and is a very agreeable addition to the bath, and as a general toilet-water. It has a pleasant odour of eucalyptus, and possesses considerable antiseptic properties. They sell it very largely in 16-oz. bottles. It has a good sale all along the Riviera. Mr. Nicholls is one of the few English chemists on the Riviera who has obtained the French qualification. Mr. Passeron is a qualified French chemist, and speaks English fairly well. Their business is by no means confined to English and American trade, although they do a great deal of that. Their customers are very cosmopolitan, many of them being Russians, Spaniards, Australians, &c. The staff consists of five assistants (two English, two French, and a German) and four porters. Both Mr. Nicholls and Mr. Passeron take an active interest in the business. Copies of prescriptions are charged at 1s. each; this charge became necessary as some patients ask for several copies of their prescriptions.

Nice is quite a little Paris by the sea. In the railway station is a long row of eucalyptus-trees. The Avenue du Gare leads from the station to the river, and has a row of huge plane-trees on each side. Nicholls & Passeron's pharmacy is near the corner of this street and the Quai Massena. Every one visiting the Riviera goes to Nice, and every visitor to Nice walks up and down the favoured promenade of the Quai Massena, so that no place is better known than the English pharmacy. There are several first-class English doctors in Nice, from November till about May 1. Like the chemists, they are very busy during the winter season.

Mr. Nicholls paid a visit to England last summer, but got so tired of the continuous rain that he has decided not to revisit his native land for pleasure very soon. The summer-time is largely spent in making up large stocks of goods for winter use, both for the dispensing and retail departments. At this season it is customary to begin work very early in the morning—4 to 6—and to rest and sleep from 11 until 4 o'clock in the afternoon. Some of the English pharmacies on the Riviera close entirely in the summer-time, as is the case with Squire's, at San Remo; while Messrs. Nicholls & Passeron, also Mr. Cruzel at Monte Carlo, and Mr. Ginier and Messrs. Rondet & Co., of Cannes, keep open all summer, though the trade done at this season of the year is hardly more than enough to pay expenses. Last year was said to be the best of any on the Riviera for many years, which speaks well for the growing popularity of these favourite winter resorts. Dry air and sunshine are the distinguishing characteristics of them all. A visit from Dr. Wendt, a sanitary commissioner of the *New York Record*, has led to important improvements being made in some of the Riviera towns, which will tend to make them even healthier places of resort than before, through the supply of pure water, and the adoption of better systems of drainage. It is hardly necessary to add that Messrs. Nicholls & Passeron are old subscribers and regular readers of THE CHEMIST AND DRUGGIST. I think there is no publication read by them and their assistants with greater interest.

CREAM-COLOURING.—According to *Rundschau* a mixture of 1 part of chrysoïdin and 2 parts of dextrin makes a satisfactory colouring for cream. One part of the mixture should be mixed with 250 parts of water, or more, before use, and a sufficiency of the solution added to the cream.

LEATHER-DYEING.

THE following particulars in regard to leather-dyeing are taken from an article in the *Leather Trades Circular*. The information is such as is often useful for druggists to know:—

The tendency of leather to fix the aniline colours without the aid of mordants renders these dyes particularly applicable in leather-dyeing. Fine-grain leather cannot stand treatment with alcoholic solutions, so that the aqueous dyes are preferable, and if alcoholic solutions have to be used they should be diluted to the verge of precipitation. Acid colours are more important than the basic. Tanned leather must generally be bleached by drawing it several times through a strong, warm, sumach decoction, or leaving it immersed therein for a few hours. Dyes which do not take uniformly on the leather must be mordanted; in nearly all cases they are best applied by painting them on. The most important of the saline mordants, in this branch are the different soaps. A good, hard, white, soda-soap is generally the best, Castile being recommended.

When the skin has been painted it is rinsed with cold water while upon the table, and well stretched with a brass slicker; another coat of the dye is applied, and again washed off with cold water; the skin is then rubbed until the water runs off clean. Colours that require to be darkened are brushed over with a solution of Salzburg vitriol (ferrosulphate), a mixture of ferrous and cupric sulphates, 25.3 grms. of which are dissolved in 3 litres of water. The skin is finally washed with clean water, and dried.

Dark Brown.—Eight parts of fustic, 1 part of logwood, 2 parts of Brazil wood, 1 part of sanders, and $\frac{1}{2}$ part of quercitron are boiled with soft water for one hour, and strained through linen. The vitriol treatment serves to darken the shade; for light brown this is omitted and the skin primed with dilute potash.

Olive Brown.—Two parts of Hungarian fustic, 1 part of quercitron, and $\frac{1}{4}$ part of logwood are boiled, and the solution applied upon a strong potash priming; vitriol treatment follows.

Cutch Brown.—A decoction of $\frac{1}{2}$ kilo. cutch, 60 grms. of copper sulphate, and 40 litres of water is applied upon a feeble priming.

Chestnut Brown.—The moistened leather is primed with a solution of 1 kilo. of copper acetate in 50 litres of water, slicked out, and then painted with a solution of yellow prussiate of potash in feeble acid water.

Chocolate Brown.—Brazil wood ($1\frac{1}{2}$ part) is boiled with water (45 parts) for two hours, and a little iron acetate added, according to shade.

Red.—Cochineal in a linen bag is boiled with water containing about 2 per cent. of aqua ammonia.

Alizarin Red.—A feeble flesh colour is produced by brushing the leather with a solution of alizarin in dilute soda, and then rinsing with soap-water.

Scarlet.—Zaffer extract, diluted with 60 parts of water containing 1 part of tartar, is painted on a feeble annatto bottom.

Ordinary Red.—A decoction of sanders-wood is used upon a feeble priming of alum free from iron.

Dark Green.—Quercitron (4 parts) and logwood (1 part) upon a strong priming of vitriol.

Light Olive Green.—A decoction of fustic (1 kilo.), archil ($\frac{1}{4}$ kilo.), and water (20 litres) is painted on a light bottom of Prussian blue. For *picric green* an aqueous solution of picric acid is substituted for the fustic and archil.

Lemon Yellow.—Turmeric (1 part) is digested in alcohol (4 parts) for twenty-four hours, diluted with water, and applied upon a feeble potash bottom.

Barberry Yellow.—One kilo. of barberry-root, 30 kilos. of water, and 200 grms. of iron-free alum.

Orange.—A red priming is given by Brazil wood, and fustic applied to impart the yellow. Seventy-five of the former to 25 of the latter produce a red orange, equal parts an ordinary orange, and 25 to 75 a yellow orange.

Chrome Yellow.—The dye is first applied with a solution of 30 grms. red chromate of potash in $\frac{1}{2}$ litre of water, and is next fixed by 30 grms. acetate of lead in $\frac{1}{4}$ litre of water.

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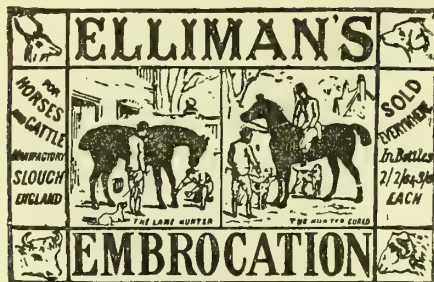
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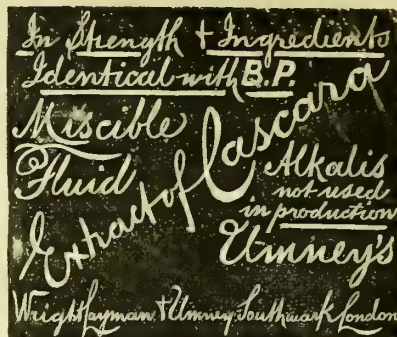
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Editorial Comments.

SAFFRON IN TINCTURE OF RHUBARB.

A CORRESPONDENT very properly calls attention to the practical aspects of the prosecutions of Lincolnshire shopkeepers for the sale of tincture of rhubarb alleged to be deficient in saffron. We reported these cases a fortnight ago, and this week supplement our reports with an extract from the proceedings of the Holland County Council regarding the matter. It would appear from this that in addition to deficiency of from 25 to 50 per cent. of saffron, the analyst—who, by the way, is a pharmaceutical chemist—certified that the tinctures contained turmeric. The shopkeepers, perhaps on account of their ignorance of the nature of the drugs which they had sold, made little attempt to defend themselves, and in the face of the analytical reports conviction was inevitable. While that may be satisfactory from the pharmaceutical point of view, we question if it is so satisfactory in a strictly legal sense. For these cases create a precedent, that precedent being that an analyst is able to detect deficiency of saffron in tincture of rhubarb. By what subtle analytical methods Mr. Southwell succeeded in determining this it

would be interesting to know. There is no difficulty in proving the presence of turmeric, but in the case of saffron we are dealing with a substance whose value can only be ascertained by an approximate determination of its tinctorial power, and this, as Mr. Proctor has admirably shown in the "Manual of Pharmaceutical Testing," is a matter of no little difficulty where the saffron is in a free state. Obviously such determinations can have no application in the case of tincture of rhubarb which contains other colouring-matters than saffron, and one or more of these are of a kindred colour to the saffron. Moreover, our correspondent points out that of a dozen samples of the tincture which he examined, no two were identical in colour, and the oldest were the palest—this apparently being due to partial destruction of the saffron colouring-matter by sunlight and deposition of altered extractive matter. These facts have an important bearing upon the Lincolnshire cases, and when considered with the absence of any known methods for the estimation of saffron in the tincture, there appear no just grounds for making the decisions a precedent. This is a point which did not come before the Holland County Council. There the members were more concerned as to whether the omission was important or not. Probably it is not, in a medicinal sense, for as Dr. Lauder Brunton says, "Saffron has but little action. It is used as a colouring-agent and as a slight carminative." It is also, perhaps, a rather antiquated relic to be retained in modern pharmacopœial preparations, but those things have little concern with the buying and selling of tincture of rhubarb. The British Pharmacopœia directs a definite amount of saffron to be put into the tincture, and if anyone is charged with a departure from the official authority, and cannot prove his *bona fides*, as was done in the Stockton case three years ago, he must suffer the consequences. *Bona fides* in the matter of saffron can only be proved by synthetical evidence, since, we believe, analytical processes, either by estimation of specific gravity, extractive matter, or tinctorial power, cannot detect deficiency of the peculiar colouring and flavouring ingredient of the tincture. If Mr. Southwell has been able to satisfy himself to the contrary he has made a valuable discovery, and he will be doing a good service to pharmacy by making his process public. There is great need for accurate records of tincture-analyses being extensively made known, for the British Pharmacopœia, while being taken as the standard by analysts, has not yet adopted the system, already recognised on the Continent, of adding ascertained physical factors to the descriptions of processes. These are highly necessary, for if anything has been proved by Messrs. Farr and Wright during their tincture-research, it is that though we may put everything in a Pharmacopœia tincture, it follows by no means that we can take the substance of everything out with the menstrua employed. Hence the necessity for recognised analytical data, and this necessity was admirably shown in the Stockton case, where the seller of a tincture of rhubarb would undoubtedly have been convicted had it not been for Mr. F. W. Fletcher's exhaustive papers on tinctures, published in THE CHEMIST AND DRUGGIST, through which the defence was able to show that the analyst's standards were erroneous.

HIGH SENNA PRICES.

In normal years half the crop of Tinnevely senna has already passed through the London warehouses by the middle of October, but although the total imports of this variety of the drug average not far short of 4,500 bales a season, only about 600 packages of the 1892 harvest have

been landed in this port up to the present moment. So small a supply might safely be taken to presage an extremely scanty crop, if it were not generally known that large quantities of the drug are habitually kept in reserve by the Indian speculators to be dumped down upon our market as soon as our buyers have been worked up to a suitable pitch of nervousness by the assiduous repetition of apparently authoritative reports of a total failure of the Tinnevely senna-crop. These rumours of scarcity have been particularly loud this season, and although we should not like to suggest that they may not have been founded upon fact, it is well to remember that in the past they have more often proved misleading than true. The mild Orientals who endeavour to control the senna-market at the other side are as adept in keeping half a season's crop of that old-established remedy up their sleeves, to be played off upon us at a convenient time, as was Ah-Sin in the concealment of four-and-twenty packs of cards about his garments; and the announcement that a couple of thousand bales of senna-leaves were landing in London has suddenly disturbed the equilibrium of our market upon more than one occasion.

The prices paid at the last auctions for leaves of moderate and good quality were to a large extent the result of purchases by the agents of American drug-houses. When American firms make up their minds to buy, they are in the habit of doing so with quite an un-Republican disregard of economy. To match such a price as 1s. 5½d. per lb. for leaves which, in seasons of ample choice, would not even be considered of first-class quality, we must go back a good many years, and do not believe that that figure has been surpassed at the London auctions since the autumn of 1880, when fine bold leaves brought 1s. 6d. per lb.

One strong argument in favour of the continuance of high prices for good Tinnevely leaves lies in the fact that just before the arrival of the first consignments of the season our stock was much below the average. Last year's harvest had proved but a mediocre one in point of quantity (3,540 bales was the full extent of our imports of senna from all parts in 1891), and in respect to quality it was much below par. On the other hand, the crop in 1890 was a very large one, and during that year our imports attained the high figure of 6,956 bales. Besides that heavy crop there has only been one other instance of an abundant harvest during the last ten years—namely, in 1884—but in 1883, and still more so in 1885, the harvests were undoubted failures. Whatever the cause, it seems to be clear that the senna-growing industry in Southern India is decaying, and the shrivelled, yellow, and blighted appearance of the bulk of the crop brought to market during the last ten years or more indicates plainly that much less care is now bestowed upon the drying of senna than formerly, while the diminishing average size of the leaves shows that the first consideration in the minds of the growers is to harvest the leaves with the least possible delay. In the most flourishing years of the Indian senna industry the leaves were carefully gathered just before they had attained their full maturity, and slowly dried in the sun. In those times the average price of the drug was far higher than it is now, and the value of produce of the kind to which it belongs much less liable to be influenced by circumstances of artificial creation. The cultivator could then afford to bestow more attention upon the preparation of his produce, and the merchant did not stand at his back with importune urgings to throw the goods on the market before their natural time of maturity, in order to take at the flood a continually changing tide. In this respect it must be admitted that modern business methods have distinctly contributed to lower the standard of this as of many other products—rhubarb, for one—which require de-

liberate and slow treatment in order to attain full perfection of appearance and medicinal efficacy.

LE CARON, EX-PHARMACIST AND SPY.

MAJOR AND DOCTOR HENRI LE CARON, sometime President of the Illinois Pharmaceutical Association, and the man whose evidence formed one of the most dramatic episodes of the Parnell Commission of three or four years ago, has just published his experience of "Twenty-five Years in the Secret Service." The story is a skilfully-written one; in its main features it must, we suppose, be true, and for anything we know to the contrary, it is accurate in every detail.

In our thirty-fourth volume (January to June, 1889) we published several references to Major Le Caron, *alias* "the man Beach," as Sir Charles Russell was fond of calling him. It came out in the course of his evidence that he had been practising as a sort of physician-pharmacist in America, and the famous doctor was good enough himself to give us some particulars of his pharmaceutical career. These were published with his portrait in our issue for February 23, 1889. The Major informed us that for the past twenty years he had taken great interest in the cause and progress of pharmacy. He had been proprietor of chemists' shops in Chicago, Braidwood, and Braceville, all in the State of Illinois. He was one of the promoters of legislation for the regulation of the practice of pharmacy, a charter member of the Illinois Pharmaceutical Association, and an honorary member of the Michigan Society. He had, he said, devoted his services, at his own expense, during more than one session of the Legislature, to secure the passage of the Pharmacy Act now in operation in the State of Illinois. He was an ex-President of the Illinois Pharmaceutical Society, and had written a number of papers on pharmacy. He was at that time the nominee of his Society on the State Board of Pharmacy, and it was understood that when he came to England he was holding a commission from his friend Mr. Englehard, the editor of the *Western Druggist*. He told us he was known as a pharmacist to that gentleman, to Professor Ebert, Professor Oldberg, and others. Subsequently we published a letter from Mr. A. C. Stocking, of New York, and formerly editor of the *National Druggist* of St. Louis, who had been acquainted with the redoubtable major, and recalled his "tall, spare figure, sharp eyes, and dark, parchment-like face." Mr. Stocking testified to the peculiar fitness which Le Caron manifested for the eminent positions in pharmacy which he had occupied.

More striking, perhaps, because less intentional, were the testimonies of his more intimate pharmaceutical associates. Mr. Englehard described Henri le Caron as a "swarthy, courteous, genial, and, in some respects, able man, whose voice was heard at nearly every meeting of the Illinois Pharmaceutical Association, and whose influence was felt in all debates of importance. No man was better known to the druggists of his State, and none seemed to take a deeper interest in measures affecting their commercial welfare." Mr. Englehard seemed genuinely astonished that Le Caron had never betrayed in manner or word the dual character he was sustaining. This was evidently one other respect in which Mr. Englehard had not discovered his friend's ability. On the revelation of Le Caron's "career of fraud and black-hearted duplicity," the *Western Druggist* demanded that his "name and memory should be blotted from the roll and records of the Association." Another Western editor urged his readers to journey to the San Francisco meeting of the American

Pharmaceutical Association, in order to vote for the expulsion of Henri le Caron on account of conduct "derogatory to a man and a pharmacist."

In his book Le Caron makes no mention whatever of his occupation as a chemist. He very briefly alludes in two or three places to his medical studies and practice. He commenced his curriculum at the Chicago Medical College, after he had accepted from the British Government his appointment as a spy on the Irish-American Fenians, but he seems to have taken his M.D. degree at Detroit. Then, he says, he commenced practising at Braidwood, a suburb of Wilmington. He joined the Medical Society of his State,

"and assisted in founding the State Pharmaceutical Society. My activity did not even stop here, and, in addition, I took a very active part in bringing about much-needed legislation on the question of the practice of medicine. In these days there was no such thing as a State law regulating the practice of medicine or pharmacy, and I—let me frankly confess it—as much for the sake of popularity as anything else, spared no pains, even going to the extent of 'lobbying' in Springfield, the State capital, in the interest of legislation on these matters, in which I was very successful."

Some time later he casually mentions that Michael Davitt stayed three days with him as patient and guest, and in the latter part of his time in America he says he connected himself with one of the largest pharmaceutical houses in the States, and travelled in whatever direction he pleased. His success was so great that the house referred to parted with him with extreme reluctance. These are actually all the glimpses he gives of that section of his dual life which was not on the heroic level. It would have been absurd, of course, in a book like this to enter into minute details of his business career; but we cannot help thinking that it would have been more truly artistic to have brought the stirring scenes of the spy's life into more effective relief from the daily round of ordinary duty which, after all, must have occupied the greater part of the twenty-five years under review. Mr. Le Caron represents himself as Homer represents his warriors—as always in action. He has the most unfeigned admiration for the hero of his work, and we may be excused for thinking that vanity may be one of the motives for the author so completely ignoring the shop as he has done. However this may be, the Major has told a thrilling story, or, at any rate, one side of it. Some of his victims, who could not all have been so simple as they appear in this narrative, may yet have something to say.

COMMENTARY.

THE SALE OF POISONS.—It was scarcely fair on the part of the judge in the Neill trial to examine the chemist witness in the way he did without first posting himself up in the Act of Parliament. "Did you keep the order?" and "Why did you not register the sale of what had been supplied when he said he was a medical man, and you found he was not? Have you any reason to give?" were questions which distinctly implied that the chemist had contravened the statute. Of course the chemist ought to have been prepared with the answer that he had not kept the order, and had not made the entries, because the law did not require him to do these things. Judges and coroners are privileged persons, but their comments on the way people conduct their business are sometimes very serious. The law, it may be, is not sufficiently stringent to suit their views. If so it is the Legislature, not the chemist, who should be criticised.

THE VINISECTION CONTROVERSY.—We mentioned last week that Mr. Lawson Tait, of Birmingham, whose eminent position as a surgeon could not be ignored, had challenged

Sir James Paget, Sir George Humphry, Sir Andrew Clark, and Dr. Samuel Wilks "to point out a single instance in their own works where they had adopted experimentation on living animals with any advantage." In a style of studied discourtesy towards Mr. Tait, those authorities, in a letter to the *Times*, "decline to enter into any further public discussion on the question of so-called 'vivisection,' for the following reasons: Firstly, that, after full consideration, they are satisfied that the scientific aspect of this question cannot receive adequate and just treatment in the columns of a newspaper; and secondly, because it is hardly possible for them to name any progress of importance in medicine, surgery, or midwifery which has not been due to, or promoted by this method of inquiry."

This is the familiar tone of the family doctor: "There is our oracular assertion. It is not for you, the public, to know the reason why; it is for you simply to submit to our demands." But as those demands include the repeal of an important Act of Parliament, it is probable that these gentlemen will have to give good reasons to the public, or submit to the control which seems so irksome to them. In his rejoinder, Mr. Tait says they knew, when they contributed their views to the Church Congress, that their statements of vague generalities would appear in countless newspapers, and they have no right to shirk the responsibility they have so recklessly incurred. They know, too, that every kind of subject—relating, it may be, to law, medicine, theology, engineering, &c.—may be, and has been, discussed in the newspapers with the greatest advantage to all concerned. Therefore to answer as these gentlemen have done is to beg the question, and to formulate a deliberate insult to common sense. "And, as a hint to one of them," adds the writer "let me say in passing that no one knows better than Sir Andrew Clark how to discuss matters medical in the public newspapers when they concern the details of the illnesses of eminent patients or the death-bed of a Poet Laureate. The conduct of the President of the College of Physicians has always been a puzzle to us who believe that the head of that august body cannot be an exception to its stringent rule against advertising."

Local Notes

MR. JAMES WRIGHT, 111 Union Street, Glasgow, has been appointed wholesale agent for Scotland for Burn's Embrocation.

MR. J. H. L. DORE, of 21 Wilson Street, Finsbury, E.C. has been appointed agent for Messrs. P. Merlino & Sons essential-oil distillers, of Reggio, Italy.

THE YORK GLASS COMPANY (LIMITED) have removed their London office and show rooms to new premises at Finsbury Chambers, 76 Finsbury Pavement, E.C.

THE works of the Liquor Carnis Company (Limited) will shortly be removed to Aston Clinton, near Tring, in Buckinghamshire, but the London office will remain at 50 Holborn Viaduct.

MESSRS. JAS. ROBINSON & CO., of Norwich, are introducing to the trade their 'Norwich Extract of Malt with Cod-liver Oil.' It is a well-made preparation, of exceptionally good flavour.

MR. JOHN DAVIS, of 90 Pepys Road, New Cross, has brought out his "Domestic Year-Book for 1893." It is an illustrated almanac for distribution by chemists, and contains a good selection of appropriate text with abundant space for the chemist's special announcements.

A NEW illustrated catalogue of glass bottles of every kind, as well as of boxes, cases, and syphons for the aerated-water trade, has just been issued by Messrs. Kilner Brothers, of King's Cross. It contains particulars of a good number of

novelties. Messrs. Kilner Brothers will send a copy of this catalogue to any buyer of such goods.

WE are informed that Messrs. Hertz and Collingwood have made a contract with Messrs. Burroughs, Wellcome & Co., whereby the latter firm will undertake the entire distribution of the Franz Josef and Levico medicinal waters throughout the United Kingdom and all English speaking countries.

MR. HELBING'S latest "pharmacological record" deals further with the question of eucalyptus oil standards. He and Dr. Passmore have been examining the "Platypus" brand of eucalyptus oil (which we favourably reported on a week or two ago), and they find that it is remarkably constant in physical characteristics and eucalyptol content. Upon this basis they again urge the exclusion from medicinal use of any eucalyptus oils which do not conform to the rigid tests that they have proposed. For the details of their experiments we must refer those interested to the "record" itself.

MESSRS. ARMOUR & CO., whose London offices are at 59 and 60 Tooley Street, ask us to state that to any of their friends and customers who intend visiting the World's Columbian Exhibition next spring, they will take pleasure in giving a letter of introduction to their firm in Chicago. On presentation they will extend every courtesy, and afford them the opportunity of inspecting their packing-house and extract-of-beef and canning factory, where modern improved methods of manufacture and scrupulous cleanliness prevail. This is the factory where 2,000,000 pigs and vast numbers of other beasts are sacrificed annually, and we believe the laboratory is on a commensurate scale.

MESSRS. BARNETT & FOSTER, of the Niagara Works, Eagle Wharf Road, have just produced in costly style a very interesting album of testimonials to the excellence of their aerated-water machinery and appliances generally. Besides a large number of printed testimonials, the album contains some fifty or more facsimiles of letters, and is decorated with nearly two hundred portraits of their customers, among whom are many chemists. It is introduced by a fine portrait of Lieut.-Colonel Foster, the head of the firm, with two of the chiefs of his staff. The volume is handsomely bound, and is an interesting souvenir of business transactions.

Gazette.

PARTNERSHIPS DISSOLVED.

Elliot, J., and Elliot, E. A. Savage, under the style of Elliot & Elliot Kingsbridge, Devonshire, surgeons, apothecaries, and accoucheurs.

Fiander, W., Self, T., and Adams, H. W., under the style of William Fiander & Co., Newport, I. of W., mineral and aerated-water manufacturers; so far as regards the said T. Self.

Fox-Thomas, E., and Mullins, D., under the style of Cooling & Co. Newark-upon-Trent, aerated-water manufacturers.

James, J. D., and Evans, H. T., Blackwood, Monmouthshire, surgeons.

Payne, F. J., and Iffenthaler, L., under the style of Payne & Co., Cullum Street, E.C., financial, commission, general, and chemical agents.

SCOTCH SEQUESTRATION.

Gray, J. J., Cults, Aberdeen, chemist and druggist, October 21, at 2 Palace Hotel, Aberdeen.

THE BANKRUPTCY ACTS, 1833 AND 1890.

RECEIVING ORDERS.

East, Margaret, Poplar, mineral-water manufacturer.

Downing, Samuel George, Gillingham, Suffolk, surgeon.

Wright, James, Swansea, temperance-drinks manufacturer.

Sinclair, Charles Forgan, Green Grove, Horsforth, near Leeds, surgeon and physician.

ADJUDICATIONS.

Downing, Samuel George, Gillingham, Suffolk, surgeon.

East, Margaret, Poplar, mineral-water manufacturer.

Sinclair, Charles Forgan, Horsforth, near Leeds, surgeon and physician.

Tuke, John Henry, Cambridge Street, Fimlico, surgeon.

Wright, James, Swansea, temperance-drinks manufacturer.

NEW COMPANIES

MONTGOMERIE & CO. (LIMITED) has been formed in Scotland, with a capital of 10,000*l.*, to acquire and carry on (1) the business of manufacturers of a new beverage made solely from celery, similar to coffee, presently carried on by Mr. John Montgomerie, at 654 Eglinton Street, Glasgow; and (2) Mr. Montgomerie's right and interest in a process for manufacturing extract of malt bread, biscuits, rusks, &c. The price to be paid to Mr. Montgomerie for the patents and goodwills of both businesses, and plant and utensils, is 2,300*l.* in cash and 200 (the whole) of the fully-paid ordinary shares. The stock is to be taken over at 1,461*l.*, the net cost price.

ECCLESTON OIL-REFINING COMPANY (LIMITED).—Capital 2,000*l.*, in 10*l.* shares. Objects: To carry on the business of oil-refiners, manufacturers of colours, grease, &c.; manufacturing chemists, dyers, salters, druggists, &c. The first subscribers (who take one share each) are:—B. F. Glover, St. Ann's, St. Helen's, mining engineer; W. Tyrer, Woodleigh, Prescott, solicitor; W. J. Ashton, Stafford Road, St. Helen's, teacher; G. C. Whitfield, 25 Cowley Hill Lane, St. Helen's, accountant; Jesse Boydel, Cowley Hill Lane, St. Helen's, tailor; G. H. Watkins, 128 Cropper's Hill, St. Helen's, oil merchant; and J. Heaton, Prescott Road, St. Helen's, brickmaker. Registered without articles of association. Office, 57 Eccleston Street, St. Helen's.

T. W. LAWSON (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Objects: To acquire the business of T. W. Lawson, and to carry on the business of aerated and mineral water and essence makers, &c. The first subscribers (who take one share each) are:—J. Hilton, Blue Bell, Moston, licensed victualler; E. Mottram, 42 Cooper Street, Manchester, beer, &c., retailer; R. Frost, 255 Deansgate, Manchester, licensed victualler; J. Armstrong, Harpenden, Manchester, surgeon; T. W. Lawson, 275 Rochdale Road, Manchester, wine, &c., retailer; and W. H. Wadsworth, Moston, beer, &c., retailer. There shall not be less than three nor more than six directors, and the first are J. Armstrong, E. Mottram, J. Hilton, and R. Frost. Qualification, 50*l.* Remuneration, 100*l.* divisible, except T. W. Lawson, who shall receive, as managing director, 100*l.* per annum and one-third of surplus profits after payment of 7 per cent. on the preference shares and 10 per cent. on the ordinary shares.

KETTERING MINERAL-WATER COMPANY (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Objects: To acquire and carry on the business of aerated and mineral water manufacturers now carried on by W. Cunliffe and C. Holt, at Kettering, under the name of the Kettering Mineral water Company, and to manufacture mineral and aerated waters, beverages, cordials, liquors, &c. The first subscribers are:—W. Cunliffe, Kingston-on-Thames, 50 shares; C. Holt, Kettering, solicitor, 50 shares; G. A. Eldred, Kettering, wine merchant, 25 shares; G. E. Abbott, Kettering, shoe manufacturer, 25 shares; T. Bird, Kettering, 25 shares; J. W. Hart, Kettering, builder, 20 shares; and J. B. Noble, Kettering, ironmonger, 5 shares. There shall not be less than three nor more than five directors, and the first are: G. A. Eldred, G. E. Abbott, T. Bird, and W. Cunliffe. Qualification, 25*l.*; remuneration, to be determined in general meeting. Registered office 2 Gas Street, Kettering.

THE PEOPLE'S REMEDIES COMPANY (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturing and dealing in patent or proprietary medicines and other preparations; sanitary, surgical, electrical, chemical, photographic, &c., apparatus; soaps, cosmetics, perfumes, aerated waters, &c. The first subscribers (who take one share each) are:—F. T. Depree, 17 High Street, Exeter, goldsmith; A. O. Depree, 5 Suffolk Street, Pall Mall, yacht-broker; R. Wane, 106 East Dulwich Grove, S.E., artist; S. H. Egan, 28 Hugo Road, N.W., architect; H. W. Côtón, 35 Doris Street, Kennington, publisher; W. S. Masters, 17 Albion Road, Wandsworth, S.W., publisher; and John Foster, 13 Belgrave Terrace, Lee, gentleman. There shall not be less than three nor more than five directors, and the first shall be appointed by the above-named subscribers. Qualification, 100*l.*; remuneration, one guinea for each board attendance, and one-fifth of surplus profits after payment of 10-per cent. dividend, divisible.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BORTHWICK—MOSS.—On August 31, at H.B.M. Consulate, Yokohama, before R. de B. Layard, Esq., Acting-Consul, and afterwards at Christ Church, by the Rev. E. Champneys Irwine, M.A., Robert W. Borthwick, chemist and druggist, manager for Messrs. North & Rae (Limited), Yokohama, and eldest son of Mr. Thomas Richardson Borthwick, Bathgate, Scotland, to Emily, elder daughter of Mr. E. J. Moss, Woodside, Yokohama, and Cirencester, England.

HARTLEY—BROWN.—On October 15, at the parish church, Otley, Yorks, by the Rev. J. A. Woodhouse, Joseph Henry Hartley, 6 Chandos Road, Stratford, to Annie, daughter of Henry Brown, of Otley.

DEATHS.

ALDRIDGE.—On October 4, A. J. Aldridge, chemist and druggist, Brighton.

BARRS.—On July 27, J. Barrs, chemist and druggist, W. Bromwich. Aged 69.

EDWARDS.—Mr. Edwards, representing Messrs. Evans, Sons & Co., whose death on the *Lake Winnipeg* on his journey to Montreal, we reported on August 27, died, it appears, from the effects of an overdose of chloral, and was buried at sea. On the night of August 17, he retired about 10 o'clock after enjoying himself on deck, and, by mistake, took an overdose of chloral, which he was using as a sleeping-draught. Although everything possible was done he expired in about twenty minutes. Mrs. Edwards, who accompanied him on his journey, was prostrated by the unfortunate occurrence, and the greatest sympathy was felt for her by the passengers. The funeral service was read by Captain Herriman, and the body was committed to the deep. Mrs. Edwards returned to England by the same vessel.

LINGING.—On September 28, Bine Linging, chemist and druggist, Norwood. Aged 84.

LOGGIN.—On October 10, at High Street, Stratford-on-Avon, Mr. C. F. Loggin, chemist and druggist. Aged 45. Mr. Loggin took a keen interest in local affairs, and was highly respected by his fellow-townsmen.

NICOL.—On October 10, John Nicol, chemist and druggist, Partick, N.B. Aged 52.

PARR.—Mr. Samuel Parr, formerly a pharmaceutical chemist in business at Nottingham, died in that town last week, at the age of 76 years. He was very highly respected by all classes in the town where he had lived for so many years. He was for many years head of the firm of Parr & Atherton, and was a Vice-President of the British Pharmaceutical Conference when it met at Nottingham in 1866.

POLLITT.—On September 22, Joseph M. Pollitt, chemist and druggist, late of Radcliffe. Aged 42.

SCAWIN.—Mr. Thomas Scawin, J.P., of the firm of Messrs. Scawin & Burn, chemists, Market Place, Durham, died at his residence in that city on October 18. He was born within the city, in which he spent the whole of his life, and was 79 years of age. Recently he had been in a weakly state of health, and was on Saturday night seized with a fit, from the effects of which he never rallied. He was chairman of the Durham Gas Company, and during his life has interested himself in the commercial welfare of the city.

THOMAS.—The death is announced of Mr. Joseph Josiah Thomas, chemist and druggist, Porthcawl, after a brief illness. The deceased gentleman leaves a widow and four children.

WILLIAMS.—On September 29, Richard Williams, pharmaceutical chemist, St. Clears. Aged 41.

"CINCHONA," says the Wynaad correspondent of the *Madras Mail*, "is not flourishing, and it is very disgusting to see our fine Ledgers dying out, for we had hitherto hoped that they were impervious to canker."

NOTES FROM THE GREAT ANDES OF THE EQUATOR.

MR. EDWARD WHYMPER'S work, "Travels Amongst the Great Andes of the Equator," has been one of the hits of the book-season, and the first edition was sold out within a few days of its appearance. The author's wanderings in the Ecuadorian wilderness, recorded in the book and illustrated with a degree of excellence as yet rare in books of this kind, took place as far back as 1880, Mr. Whympere allowing the record of his journey to incubate for a decade before giving it to the world. The principal object of Mr. Whympere's journey was the observance of the effects of low pressure; hence, after a short stay at some of the principal cities of the Republic, he turned his attention straightway to the ascent of Chimborazo, which he accomplished safely, though not without suffering great hardships. Mr. Whympere as all travellers in Ecuador must do, trod constantly in the footsteps of his great predecessors, and the names of De la Condamine, Bonpland, and Humboldt are strewn freely through his pages. Mr. Richard Spruce, one of the ill-rewarded pioneers of the cinchona industry, is also referred to on more than one occasion; but though Mr. Whympere is evidently well acquainted with his work, he does not himself tell us anything new about the industry with which, in the pharmaceutical mind, the name of Ecuador is most prominently associated. His only reference to the bark-collecting trade, in fact, is a rather grim reminiscence of the ascent of one of the less-known mountain giants of the Republic—

THE FATE OF THE BARK-COLLECTOR.

In his search for the Sara-Urcu Mountain, Mr. Whympere on one occasion camped with his party under an overhanging cliff of mica-slate known as Corredor Machai, or "The Hunter's Refuge," at an altitude of 12,779 feet. "At mid-day," says the explorer, "I despatched two men across the valley to advance provisions in the direction in which we supposed Sara-Urcu was situated. . . . They returned with a human skull, which they had picked up not far away. 'I know that skull,' said the Spy; 'it belonged to a man who went out searching for quinine-bark. There were twenty of them altogether, and four came back. This one laid down to sleep: a snowstorm came on, and he did not wake again.'" "Searching for cinchona-trees, to strip them of their bark, is a favourite occupation in this country," adds the author in a footnote. That, it should be remembered, was twelve years ago, when the trouble was still worth the risk.

CHLORATE OF POTASH AS AN OXYGEN-PRODUCER.

Chlorate of potash was tried by the party with, apparently, beneficial results as a remedy in mitigating the distressing symptoms produced by the combined deprivation of the natural quantity of oxygen in the atmosphere at high altitudes. Members of Mr. H. W. Bellew's expedition to Kashmir and Kashgar had told Mr. Whympere that they munched dry chlorate of potash with good results, its action being probably due to the fact that the large proportion of oxygen in the drug supplies to the blood the ingredients which in those regions it fails to derive from the air, thus restoring through the stomach what the lungs lose, and relieving the nausea and headache produced by the circulation of an inefficiently oxygenated blood. Mr. Whympere tried it first when camping on Chimborazo at 16,664 feet of altitude, and he thus describes the effects:—"We were feverish, had intense headaches, and were unable to satisfy our desire for air except by breathing with open mouths. This naturally parched the throat and produced a craving for drink, which we were unable to satisfy—partly from the difficulty in obtaining it, and partly from trouble in swallowing it. . . . Of course there was no inclination to eat; but we wished to smoke, and found that our pipes almost refused to burn, for they, like ourselves, wanted more oxygen."

"This condition of affairs lasted all night and all the next day, and then I managed to pluck up spirit enough to get out some chlorate of potash, which, by the advice of Dr. W. Marcet, had been brought in case of need. Chlorate of potash was, I believe, first used in mountain travel by Dr.

Henderson in the Karakorum Range, and it was subsequently employed on Sir Douglas Forsyth's mission to Yarkund in 1873-74, apparently with good effect. Before my departure Dr. Marcet urged me to experiment, with a view of confirming these experiences. Ten grains to a wineglass of water was the proportion he recommended, the dose to be repeated every two or three hours if necessary. . . . After taking it the intensity of the symptoms diminished, there were fewer gaspings, and in some degree a feeling of relief. Louis Carrel also submitted himself to experiment, and seemed to derive benefit, but Jean Antoine sturdily refused to take any 'doctor's stuff,' which he regarded as an insult to intelligence. For all known ills, from dysentery to want of air, there was, in his opinion, but one remedy, and that was Wine, most efficacious always if taken hot." But Mr. Whympere appears on the whole to be sceptical about the unpleasant feelings experienced upon Chimborazo being due to want of oxygen, and states that, personally, he did not consume an ounce of chlorate of potash during the whole journey.

THE USES OF ADVERTISEMENT.

Mr. Whympere is evidently not unaware of the value of advertisement which purveyors of requisites for such a journey as his may reap from a mention of their names in the inevitable "Book of Travel." With charming *naïveté* he tells us that he had promised a manufacturer of "tinned ox-cheek" an advertisement upon his return. Unfortunately, when the ox-cheek was called upon to do its duty on the Chimborazo every tin of it turned out to be putrid, and had to be pitched into space over the cliffs. "I am advised," warily continues the explorer, "that it might be considered libellous to publish the name of a person who has sold putrid meat, and I much regret that it cannot be given the publicity that he deserves. He caused much loss and severe labour." But if the meat-man cannot be pilloried, a rival house can at any rate be advertised at his expense, and a score paid off indirectly, by the statement that "Messrs. Crosse & Blackwell did not supply the ox-cheek, and did supply some of the rest; and, as one would expect, their goods were found satisfactory. Their preserved soups, in particular, were excellent for our purposes."

PILLS FOR SALE.

On another occasion, however, when dealing with provisions, Mr. Whympere is all too modest in concealing names. The occasion in question was on his return journey to the coast, when, anticipating the famous auction held by Lord Randolph Churchill at Fort Salisbury, our explorer cleared out his surplus stock by public sale for hard cash, though at the reverse of a sacrifice. This is how he disposed of his pills:—

"Some of these goods were purchased by the amiable Hebraic Yankee. In the interstices of the provision-cases all sorts of things which it was supposed might be useful were stowed away; amongst the rest, each tin contained a little pill-box, and each box held three little pills, and every unit was sufficient to effect its purpose. There were a hundred or so boxes to be got rid of, and the Jew was eager to trade for them. 'Now, Mr. —,' said I, as they were handed over, 'each of these little treasures is warranted to do its work.' But he was suspicious; and, on going home, took the contents of a box, and subsequently took to his bed. I heard all about it, and went to see him, expecting to find him doleful. 'Sorry to hear you are ill, Mr. —. Have you tried those pills?' and found that he was delighted with his bargain. 'Real fine medicine that, Mister,' he exclaimed, almost rapturously; 'there's no mistake about that medicine!'"

It is really too bad of Mr. Whympere to deprive the deserving pill-manufacturer of so splendid an advertisement; at any rate, we suppose we are not far wrong in assuming that the pills were really "worth a guinea a box."

ECUADORIAN CHARGES.

Provisions of European origin are almost ludicrously dear in Ecuador. "They asked 2s. 3d. for a threepenny cake of soap at Ambato. A piece of sponge which might have been obtained for less than sixpence in England cost me a peso (2s. 8d.) at Quito, and 3s. 4d. was the price at the capital *per pound* for English salt. Spirits of wine cost me 3s. per

pint at Guayaquil, and 10*d.* at Quito. Common raisins, at the same place, cost 3*s.*, and camphor 4*s.*, per lb. Medicines and fancy goods were sold at still larger differences from European prices. I could have sold my stock of quinine for more than its weight in gold.

"The high price of foreign commodities was attributed to excessive duties and the expense of transit. Still, there appeared to be a good margin left, and I doubt if anyone was satisfied with less than a hundred per cent. profit. Everywhere there appeared to be openings for commercial enterprise, either for retailers or for wholesale transactions, yet the country seemed to have little attraction to Englishmen, for at the time of my stay there were only three in Quito. Of other foreigners there were about twenty-five French, a dozen Germans, and ten Italians, Danes, and Swedes."

But, personally, Mr. Whympier would not advise anyone to embark a single shilling in Ecuador, for there are an unknown quantity of earthquakes and revolutions to be taken into account.

QUININE AND SULPHATE OF ZINC.

Quinine proved useful in mountaineering. At the Tambo (a hut) of Tortorillas, 12,828 feet high, Mr. Whympier, was overcome with dizziness, feverishness, and intense headache, and had to be supported by two of his people part of the way. He says "I took 30 grains of sulphate of quinine in the course of the night, and was covered up with a mountain of blankets, and in the morning became all right again." The only other remedy which the party appear to have used freely was solution of sulphate of zinc, as a remedy against inflammation of the eyes and snow-blindness. "Medical men," we read, "recommend 2 or 3 grains of sulphate of zinc to an ounce of water. In practice I find that the solution may be made stronger with safety and benefit, and that 6, 8, or 10 grains to the ounce is not too much to use. Although the inflammation may be reduced quickly, and the absolute inability to see may soon pass away, the eyes remain tender and weak for a long time (after a bad attack, even for weeks and months), and they are more liable to be affected than before, unless extra precautions are taken." When attacked by snow-blindness, the eyes become extraordinarily sensitive to light. "The lids refuse to open; tears come freely, and, coagulating round the lashes, glue the lids fast. To apply a lotion effectively the lids must be forced open, and the instant this is done the patient will imagine that red-hot needles are being driven through the eyes into the brain. The pain is acute, and sometimes makes strong men howl." In their fourth camp on Chimborazo the whole of the travellers were incapacitated by the complaint. "Foreseeing what was coming, a brew of sulphate of zinc was made in our largest can, and served out wholesale. It was piteous to hear the Ecuadorians wailing under their little booth."

Pamice, as might be expected in so volcanic a country, is found in large quantities in the interior of Ecuador, and natural blocks of it are sometimes hollowed out and employed as filters. On the summit of Mount Pichincha there were a large number of lumps of over a foot in diameter.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

CASCARIN.

THIS is a name given by M. Leprince to a proximate principle obtained from cascara sagrada. It forms prismatic needles of an orange yellow. It is tasteless and inodorous, soluble in alkaline solutions, with a dark purple-red colour. It is insoluble in water, soluble in pure alcohol and in ether less soluble in chloroform. If perfectly dried its composition is $C_{12}H_{10}O_6$.

A NEW PTOMAINE.

DR. A. B. GRIFFITHS has obtained a ptomaine from a cultivation of *Micrococcus tetragenus*. The ptomaine is a

white solid, crystallising in prismatic needles. It is soluble in water, giving a feeble alkaline reaction. It forms a chlorohydrate, a chloroaurate, and a chloroplatinate, all crystallisable. Nessler's reagent gives a green precipitate, tannic acid a brown one, slightly soluble. The formula appears to be $C_5H_6NO_2$. It is a poison, and produces death in thirty-six hours.

THYMOL FROM THE OIL OF MOSULA JAPONICA.

DR. Y. SHIMOYAMA and Mr. H. Ono, of the Pharmaceutical Institute, Tokio University, have subjected the oil of *Mosula japonica* to a critical examination (*Apoth. Zeit.*, p. 439). From 38 kilos. of the dried plant they obtained by water-distillation 81.01 grammes of ethereal oil, or 2.13 per cent. This oil had a specific gravity of 0.820 at 17.5° C., and was found to be *lævo*-rotatory. On subjecting the oil to the cold of a freezing mixture there was no separation of crystals, but after treatment with soda, 32.4 grammes, or 44 per cent., of crystals was separated from 72.52 grammes of the oil by freezing. On drying the crystals, they were found to melt at 50° C., and an analysis proved that the substance was thymol. We have thus added another source of that antiseptic, and it is a good one too.

HOW TO MAKE HYPOPHOSPHITES.

PROFESSOR L. E. SAYRE stated at the meeting of the American Pharmaceutical Association:—Mix a sufficient quantity of hydrate of calcium with three times its weight of water to which a third of pure alcohol has been added. The mixture is introduced into a long-necked flask and heated gently on a sand-bath. When the mixture has attained a temperature of 50° to 60° C., small pieces of phosphorus are gradually added, until the action has almost ceased. The apparatus is allowed to cool, and the solution filtered through asbestos. Pass carbonic anhydride into the filtrate, and again filter to separate the carbonate formed. The filtered liquid is freed from alcohol by distillation in a retort; the residual solution is evaporated to perfect dryness, and the white powder thus obtained preserved in well-stoppered bottles. The hypophosphite may be crystallised in the retort by slow evaporation.

ASSAY OF ALKALOIDAL EXTRACTS.

At the recent meeting of the German Apotheker-Verein* Mr. A. Partheil communicated a paper through Professor E. Schmidt, of Marburg, on this subject. The peculiarity of his process is that the alkaloidal residues from the respective extracts are supersaturated with $n/100$ or $n/1,000$ sulphuric acid, and neutrality is restored with a corresponding standard soda, an ethereal solution of iodeosin (2 milligrammes in a litre of ether) being used as an indicator. The method of extraction is Dieterich's lime-ether one. We mention all essential particulars, and those who wish more detail should consult *Pharmaceutische Centralhalle*, 36, p. 524.

Extract of Nux Vomica.—Rub 1 gramme of the extract with 3 grammes of water, and mix with it 10 grammes of quicklime. After the mixture has cooled, dry, powder, mix with some paper pulp, and exhaust in a Soxhlet's apparatus by means of ether (this takes three or four hours). Mix the percolate with 75 c.c. $n/100$ sulphuric acid, and evaporate the ether by heating. Filter the solution into a 100 c.c. flask, and dilute with water to 100 c.c. Put 50 c.c. of this into a 250 c.c. stoppered bottle, and pour upon it a finger's breadth layer of ether, and a little of the iodeosin solution. Then run in $n/100$ soda, shaking constantly until the watery layer becomes of a distinct rose colour.

Extracts of belladonna, henbane, aconite, and conium are treated similarly, but 2 grammes are taken, and 50 c.c. of the standard sulphuric acid suffices, as well as two or three hours' extraction with ether. The following are the alkaloid values of $n/100$ acid:—

1 c.c. = 0.00364	grm. nux vomica alkaloids.
1 c.c. = 0.00289	" atropine or hyoscyamine.
1 c.c. = 0.00533	" aconitine.
1 c.c. = 0.00127	" coniine.

Of course the amount of standard alkali used is to be deducted from half the volume of the acid employed.

Practical Notes and Formulae.

SALOL GLYCERINE.

THIS is a preparation of salol which may be used for application to the throat or the skin. A. Suchomel gives the formula in the *Pharmaceutische Post*. Rub up 150 grains of salol with 75 grains of gum acacia and 1 drachm of water to make an emulsion, then add sufficient glycerine to make 3 oz.

GLYCERINE SUPPOSITORIES.

PROFESSOR J. P. REMINGTON stated, in a paper to the American Pharmaceutical Association, that no formula gives as much satisfaction as the following (which we quote from the *American Pharmaceutical Journal*):—

	Gr.
Sodium carbonate	40
Stearic acid	80
Glycerine	1,080

Dissolve the sodium carbonate in the glycerine, add the stearic acid, heat carefully (preferably by the use of a water-bath) until effervescence ceases; the solution is then poured into a suppository-mould to make twelve suppositories.

There is no necessity for cooling the moulds with ice, although there is no objection to this in warm weather. As each suppository contains about 90 per cent. of glycerine, they must be protected from the action of moist air, which has a tendency to liquefy them. Several expedients are resorted to. Each one may be wrapped in tinfoil, or quickly dipped in melted paraffin; or each one may be enclosed in a small glass vial without a shoulder, and made for the purpose of holding one suppository. Professor Remington did not express an opinion on the B.P. formula.

GERMAN FLUID EXTRACTS.

THE last German Pharmacopœia made five fluid extracts official. This was not exactly the introduction of fluid extracts into Germany, for they had been introduced there from the United States, and several native houses also manufactured them. But they are becoming popular now, and Dr. O. Linde has thought fit to report to the *Pharmaceutische Centralhalle* on the quality of four leading makes, compared with what he made himself by the German Pharmacopœia process. The results are not very complimentary to the commercial supply. We give them briefly:—

Ext. Cascaræ Fl.: Standard sample, s.g. 1.078, and 28 per cent. dry residue. The commercial samples varied from s.g. 1.043 to 1.081, with 18.04 to 28 per cent. dry residue.

Ext. Condurango Fl.: Standard, s.g. 1.031, and 20 per cent. dry residue. Commercial, from s.g. 0.970 to 1.025, and 8.9 to 19.65 per cent. dry residue.

Ext. Secalæ Cornuti Fl.: Standard, s.g. 1.050, and 16 per cent. dry residue. Commercial, s.g. 0.995 to 1.052, and 13.02 to 18.47 dry residue.

Frangula and hydrastis fluid extracts showed equally variable results, and there is apparently much need for closer attention to the quality of these products.

ESSENTIAL-OIL EMULSIONS.

MR. H. KAHN states (the *Apothecary*) that a good emulsion of turpentine, or of any other volatile oil, may be made by the following formula:—

Oil	½ fluid oz.
Tragacanth	30 grains
Syrup	1 fluid oz.
Water enough to make	4 " "

To the oil contained in a dry bottle add the tragacanth and shake: add 1 fluid oz. of water, agitate vigorously. Then add the syrup in portions, shaking after each addition, and finally enough water, in portions (shaking after each addition), to make 4 fluid oz.

FOWLER'S SOLUTION.

PROF. OSCAR OLDBERG calls attention in the *Apothecary* to the unsatisfactory nature of Fowler's arsenical solution. It is well known that this is not a solution of arsenite of potash, for one-half of the arsenious acid is uncombined. Caustic potash is much preferable to bicarbonate of potash, and an entirely successful formula, resulting in a product

containing K_2HAsO_3 and not liable to decomposition, is, Prof. Oldberg says, the following:—

Arsenous oxide in fine powder	10 grammes
Solution of potassium hydrate	225 "
Compound tincture of lavender	30 cubic centimetres.
Distilled water, a sufficient quantity.	
To make	1,000 " "

Mix the solution of potassium hydrate with 100 cubic centimetres of distilled water, add the arsenous oxide, and boil the mixture until the powder has been completely dissolved. Add enough distilled water to make the product measure 970 cubic centimetres, and then add the compound tincture of lavender. Filter through paper.

The reaction with potassium hydrate requires very much less time than with potassium bicarbonate, and complete solution results, which keeps well. In the present U.S.P. formula it is directed that the compound tincture of lavender be added to the solution before the final volume is made up by the addition of water. This always results in a turbid product. In order to get a perfectly clear solution it is necessary to add all the water required before the compound tincture of lavender is poured into it.

ULCERATED CHILBLAINS.

DR. BROGG (*Internat. klin. Rundschau*) prescribes in ulcerated chilblains the following salve:—

Acid, carbolic.	gr. xv.
Unguent. plumb.	5v.
Lanolin.	5v.
Ol. amygdal. dulc.	5iiss.
Ol. lavandul.	gtt. xx.

M.

Apply two or three times a day.

PETROLEUM HAIR-TONIC.

Pure winter-bleached paraffin oil, free from acid	cong. j.
Chloroform	3ss.
Oil of bergamot	3iij.
" lavender	3iij.
" cloves	3iij.
" neroli	5j.

M.

—*Druggists' Circular*.

CRESCENT HAIR-DYE.

(Single bottle.)

Nitrate or sulphate of copper	5vj.
" of silver	3vij.
Distilled water	3iij.
Solution of ammonia	a sufficient quantity

Dissolve the salts in the water, and add the solution of ammonia carefully until the precipitate is redissolved.

This, properly applied, will produce a very black colour; a lighter shade, even to light brown, can be secured by diluting the solution.

RAVEN'S WING HAIR-DYE.

(Two bottles.)

I.

Nitrate of silver	3iiss.
Distilled water	3xij.
Solution of ammonia	sufficient

Dissolve the nitrate of silver in the water, and add the solution of ammonia until the precipitate is redissolved.

II.

Pyrogallie acid	3ij.
Gallie acid	5ij.
Eau de Cologne	3ij.
Distilled water	3vj.

These formulæ we quote from the *Druggists' Circular*. The first is apparently a modification of the formula which we published a few years ago, as the result of an analysis of a popular hair-dye. In the second, or two-bottle dye, the gallic acid is peculiar. What use can it be? There is no question of the superior advantages of dye containing pyrogallie acid. Without that or a sulphide the hair may go through all the prismatic colours.

C. & D. Recipes.

Contributed by Subscribers of THE CHEMIST AND DRUGGIST.

HOUSEHOLD REQUISITES.

Blue Marking-ink.

Nitrate of silver	3iv.
Strong solution of ammonia	3iss.
Bicarbonate of soda	3iv.
Sulphate of copper	3ij.
Powdered gum arabic	3vj.
Distilled water	3ij.

Dissolve the nitrate of silver in the ammonia solution, and the other solids in the water. Mix the two solutions.

Crimson Marking-ink.

Nitrate of silver	3j.
Carbonate of soda	3iss.
Tartaric acid	3ij. 9ij.
Strong solution of ammonia	3ij.
Carmine	gr. vj.
Powdered sugar	3vj.
„ gum arabic	3x.
Distilled water	a sufficiency.

Dissolve the silver nitrate and sodium carbonate separately in a pint of distilled water, and mix the solutions. Wash the precipitate by decantation with 2 pints of water three times; collect the last on a filter, and wash with a fourth pint of water; drain well; transfer the precipitate to a mortar and rub up with the tartaric acid; when effervescence ceases add the ammonia (in which the carmine has been dissolved), then the sugar and gum (previously made into a cream with water). Finally make up to 3vj. with distilled water.

Note by Editor.—If the blue ink were made on the same principle as the crimson one it would be much better. In that case the copper salt should be dissolved in the ammonia. The second ink is in every way an excellent one.

Baking-powder.

(1)

Powdered tartaric acid	3xvj.
Bicarbonate of sodium	3xxj.
Ground rice	3i.

M.

(2)

Cream of tartar	3xxij.
Bicarbonate of soda	3xvj.
Wheaten starch	3i.

M.

A teaspoonful to each pound of flour.

Curry-powder.

Pulv. coriand.	3ij.
„ zingib.	3ij.
„ capsici	3iss.
„ cardam. sem.	3iv.
„ plp. nig.	3iij.
„ cumin. sem.	3ij.
„ caryoph.	3i.
„ turmeric.	3xij.

M.

Another Formula.

Coriander	3iij.
Turmeric	3iij.
Black pepper	3j.
Ginger	3j.
Mustard	3j.
Allspice	3iv.
Cardamoms	3iv.
Cumin	3ij.

All to be in powder, and well mixed.

Eau de Luce.

Tinct. benzoin.	3j.
Ol. lavand.	gtt. x.
„ succin. rect.	gtt. v.
Liq. ammon.	3ij.

M.

AT THE COUNTER.

"SILVER LATTY" and "dodrandean wien," which come from near Manchester, are fresh. There is a customer in that locality, too, who does not intend to put up with substitution. He orders "bottle Jackson's Feruge, non other will do."

THIS was scarcely "At the Counter," but it was not very far off. It was in the home of a pharmacist. A youth of the mature age of five and a half years, and who has a decided liking for long words, recently asked the question, "Mummy, is dad a 'Far-more-suitable' Chemist?"

A RETFORD chemist sends the following order:—"pleas send me three Boxes of your loxenges By return of post and a Botel of your Cof Mexter the sekent sise Botel i dont no Wot to send for het But put Wot hes send the Bel Wet het and i send the mone By return of post no more at present."

THE following little scene is reported from a pharmacy in the West-end:—Servant: "Mrs. — wants to know if you can tell her where she can get chloride of lime best." "Oh, yes; we sell it." "Yes, she knows that, but she thought she could get it cheaper at an oil-shop or somewhere, if you would tell her where to go."

HOW COULD HE MAKE A MISTAKE?—A Hull chemist sends us the following note which he received from a careful customer:—

"If you please to change this Maginish and send some Cream me tartor and half a pound of Harrot and one pound of Segel. Please not to make a mistake."

SUBSTITUTE FOR TARTARIC ACID.—A lady asked a Worthing chemist last week, "Could she use some tartar emetic she had found in a cupboard in place of tartaric acid for a drink?" The conscientious dispenser intimated that she could use it for the purpose, but that it would be advisable to send an intimation of her intention to the Coroner.

AT A DEMERARA COUNTER.—A Georgetown chemist sends us the following amusing collection of orders received at his counter:—

"One box railway pills" (Radway's wanted).

"One tin hair soup" (hare).

"8c. [4d.] cursicum wine for pain in the djaints."

"4c. satisfaction" (sassafras).

"One bottle red blacking to clean yellow boots."

"4c. white black pepper" (white pepper).

"4c. savolallee. One penny stinking plaster."

"4c. harmonium to swell up cakes and bread."

"4c. akwa pharty for goldsmith to try gold."

"4c. virginsgrease to put on sores" (verdigris).

"One bottle Wotser sauce."

"One box Bitchum pills."

"One box Bosslickam ointement."

"A penny costironsoaps."

"4c. starch to dust hairysyphilis" (erysipelas).

"4c. galop [jalap], 4c. hiseinglass."

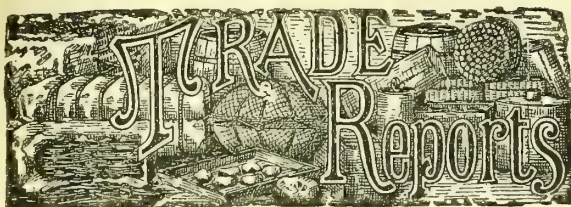
"4c. tinter of catechist" (catechu).

"If you please sell bearer a bundle of white hass hair to put pan fiddle stick" (bow hair).

"4c. euraka nuts."

A blackman came in and asked for a bottle of Gardiner's rheumatic compound. He was supplied with it and went away. He returned the next day, stating he had used the whole bottle and was not relieved at all, calling the assistant who served him a scamp. "But how is it possible that you have used the whole bottle already, you only bought it yesterday, and if you drank a tablespoonful three times a day that bottle should last at least five days," said the assistant.

Everything was clear then. Patient said he rubbed his whole body with it but didn't drink any. He bought another bottle, and we have not seen him since."



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 20.

London. Business in the produce markets generally continues to be very good, and among the articles showing alterations in value there is again a heavy balance in favour of those which are quoted dearer. In two important classes of chemicals, quinine and bromine salts, the week has been one of considerable excitement. The first closes distinctly higher, and in regard to the present all that can be said to-day is expressed in the formula, "all quotations withdrawn." Caffeine and cocaine are firm and tending higher. Tartaric acid is at length showing an upward movement, and with it cream of tartar is advancing. Quicksilver and mercurials are higher, and nitrate of silver has followed the improvement in silver metal. Salicine and pilocarpine are higher, but carbolic acid, bleaching powder, and other disinfectants are going down the hill at full gallop. In drugs we have to report a rise in cod-liver oil, jalap, Cape aloes, star-anise and oil of star-anise, Japanese oil of peppermint, civet, gentian-root, camphor, and cumin-seed. Cinchona also showed some improvement at the auctions, but Persian opium is lower. The following are the chief alterations in outside products: Higher—China galls, linseed, fenugreek-seed, coriander, glycerine, shellac, gambier, indigo, indiarubber, cutch, sticklac, Japan wax, Manila copal, Kowrie gum, animi (bean and pea sizes), and tea. Lower—Cloves and Singapore damar gum. Most spices are quiet. The Bank-rate was raised to 3 per cent. to-day. Bar silver is worth $39\frac{5}{16}d.$ per oz.

Liverpool. According to our Liverpool correspondent, castor-oil has advanced considerably on the market, while Chilian and Californian honeys are also somewhat dearer. For guinea grains rather more money is asked, but quillala has not gone up as it was hoped it would. Linseed is considerably higher.

New York. Our latest American mail advices are dated October 12. In the week ending that date a considerable amount of business had been done in the New York drug and chemical markets, the major part of it being for home consumption. Carbolic acid had receded in value, the demand having become very slack. Drums quoted 16c. Balsam copaiba is in demand, and firm, with a hardening tendency. For Central American 35c. is asked. Balsam Canada firmly held at \$2 to \$2.25, according to holder. The bromide makers had advanced their quotations for domestic Bromide of potassium to 26c. and 27c., while foreign was offered at 24c. There was a strong trade-demand for Norwegian Cod liver oil, and prices showed an upward movement, while sales were reported at \$22½ to \$23. Arnica flowers were dearer, at 12c. to 14c. for old, and 14½c. for new crop. Much attention has been paid to Curaçao aloes in consequence of reports announcing short supplies in the West Indies. About 300 boxes had changed hands at higher prices and the stocks were being concentrated. Short Buchu and Senna leaves are in excellent demand at 13c. to 17c. for the former, with small stocks; while *Lycopodium* had advanced to 57½c. and 65c., according to brand. *Cascara*

had risen to 11c. with very little offering, and for *Senega* from 55c. to 60c. was asked, while Mexican *Sarsaparilla*, on the other hand, might be had at 9c. per lb. Tonquin-beans strong, with small supplies and sales of 3,500 lbs. Angosturas up to \$2.75. Celery-seed was lower, but canary, mustard, and fenugreek seeds had advanced.

Vanilla growing in India.

The question whether vanilla could be profitably grown in India has lately engaged the attention of some of the organs of the press in that country. It was at first denied that vanilla had been cultivated commercially in India, but the *Madras Mail* now points out that the plant is not only grown by amateurs in South India, but is cultivated on an industrial scale at the Jardin Colonial at Pondichery, a French settlement, under Government auspices. In this garden a space of about 1½ acre is devoted to vanilla cultivation. The vanilla is planted under shady trees in rows on a kind of espalier; the rows are about 3 feet apart, and 4 feet high at the time of flowering. Fertilisation is carried out by hand by means of a hair pencil, and the production of pods is very abundant. The vanilla is sold in Pondichery at the rate of 1 anna per pod, and pays very well at that price. Vanilla is also grown to a considerable extent at the Filature Savana. Both the Filature and the Jardin Colonial have the advantage of Artesian wells, so that a plentiful supply of water is always available—a necessity in vanilla cultivation. M. Achart, the Chef du Culture of the Jardin Colonial, has devoted himself to vanilla cultivation for several years, and his success has been very marked.

Eucalyptus-growing in British Burmah.

The Government of Burmah are losing no time in investigating the capacities of the newly-acquired territory for the propagation of economic products. Eucalyptus-growing has been tried recently, and appears (the Chief Conservator of Forests thinks) to have every prospect of success, although hitherto the experiments, tried in the districts of Minbu, Myingyau, and Meiktila, have been failures owing to the distrust of the natives of all innovations and their unfortunate tendency to boil the seeds given them by the Agricultural Department before putting them in the ground. In the Bhamo division the plants are doing well, but they are not so successful in the plains, where they will not live without constant care and attention. The most successful varieties are *E. rostrata*, *E. citriodora*, and *E. punctata*. Of a total of 3,800 plants put out, 665 are alive. The species that have done best on the hills are *globulus*, *rostrata*, and *leptopheba*.

ACID (CARBOLIC) is much lower. *Liquid* is being pressed for sale at 1s. 1d. to 1s. 2d. per gallon for 95-per-cent. Crystals may be had at 4¼d. per lb. for 34 to 35 degrees.

ACID (CITRIC).—Very quiet. The price ranges from 1s. 6d. to 1s. 6½d. per lb., according to quality, though one of the makers still asks 1s. 6½d. per lb. for B.P. acid. Juice is offering at 21l. 10s. to 22l. f.o.b.

ACID (TARTARIC).—There has been a distinct improvement in the price of this article, principally on account of the advance in the cost of raw material. English (B.P.) acid is quoted at 1s. per lb. by the maker, second-hands offer at 11¼d. to 11¾d. per lb., according to brand. One of the largest German makers is sold out for the present year. His agents ask 11¾d. per lb. for January-March delivery.

ALOES.—Small sales of fine bright Cape aloes are reported at 25s. per cwt., which shows an advance. There have been no arrivals this week.

ANISE.—For new Russian seed 23s. to 23s. 6d. per cwt. ex warehouse, is asked, while old seed, rather dark, may be had at about 1s. less. The Constantinople market is dull, with a heavy stock.

ANISE (STAR).—None is offering on the spot. The quotation for arrival (November-December shipment) has gone up to 86s. per cwt., c.i.f. terms. Business has been done at 82s. 6d. c.i.f. for October-December shipment.

BALSAM (COPAIBA).—The market is dull and quiet at

1s. 7d. to 1s. 10d. per lb. for bright to good Maranham, and 1s. 5d. to 1s. 7½d. for fair to good bright Bahia.

BLEACHING-POWDER has declined, and may now be had at 8½ 15s. on the spot here, 7½ 15s. f.o.b. Liverpool, and 7½ 10s. to 7½ 15s. on the Tyne.

BROMIDE OF POTASSIUM.—The advance of potassium bromide by the English makers reported last week was the prelude to a further rise on October 14, when prices were raised another 1d. all round, making the quotations from 1s. 2d. to 1s. 3d. per lb., according to quantity. *Bromide of sodium and bromide of ammonium* were then quoted at from 1s. 6d. to 1s. 6½d. per lb., according to quantity, but to-day the market is very excited and all quotations have been withdrawn by the English makers. A telegram has been received by the agents of the German convention announcing that, in consequence of a resolution taken at the meeting of the German bromine producers held to-day, the price for German bromine has gone back to the point it occupied before the invasion by the Americans of the European markets—that is to say, from 1s. 8d. to 1s. 10d. per lb., according to quantity. Cables have been received from America announcing that a new convention among the bromine makers there has been definitely agreed upon, and we understand that the American producers have agreed among themselves to discontinue selling in the European markets, and have succeeded in re-establishing with their German competitors the arrangement by which each party keeps to its own side of the Atlantic. As a result of these events, it is not possible to-day to buy bromide of potassium at any price, and it is expected that the makers will agree upon revised quotations to-morrow. It is said that the advance then to be established is likely to be 5d. or 6d. per lb.

CAFFEINE.—Both pure alkaloid and citrate are quoted at 6s. to 6s. 3d. per lb. at present, but with the advancing price of denatured tea some belief in higher prices in the near future appears to be entertained in manufacturing quarters.

CAMPHOR (CRUDE).—The market is very firm, and it is said that an advance of 5s. has been paid for Japan, 15 piculs having changed hands at 155s. per cwt. this week. The stock is now becoming concentrated, and very little is available, the bulk being controlled by a holder whose minimum figure has long been 160s. per cwt. The c.i.f. quotation for *Japan camphor* is 145s. per cwt. A shipment of *China camphor* is due; the holders of this parcel ask 150s. per cwt., but for arrival from 135s. to 140s. c.i.f., according to position, is asked.

CAMPHOR (REFINED).—There is no alteration in the price, but some of the German agents say that they expect a rise to-morrow.

CANARY-SEED.—The market is steady, but unchanged. *Turkish seed* may be had at 80s., *Spanish and Morocco* at from 82s. 6d. to 90s. per 464 lbs. There have been pretty heavy arrivals from Constantinople.

CARDAMOMS.—The export of cardamoms from Ceylon during the period from January 1 to September 26 has been:—1892, 259,517 lbs.; 1891, 210,223 lbs.; 1890, 237,496 lbs.; 1889, 208,614 lbs.

CASCARA SAGRADA.—Dearer. Sales have been made on the spot at 45s. per cwt., it is said, and there is no more to be had at the price.

CEVADILLA.—Prices remain exceedingly high. *Veratrine* has been raised to 62s. to 65s. per lb. for the alkaloid.

CINCHONA.—At Tuesday's fortnightly auctions a fairly large quantity of bark was offered, the catalogues comprising:—

	Packages	Packages
Ceylon cinchona	884	of which 857 were sold
East Indian cinchona	297	" 239 "
Java cinchona	58	" 58 "
West African cinchona	235	" 235 "
South American (Calisaya) cinchona	755	" 545 "
Cuprea bark	664	" 51 "
	2,893	1,985

The assortment of bark was a fairly good one; red barks, as usual, formed the great bulk of the Ceylon supply, while

among East Indian barks the yellow varieties predominated. Competition was pretty brisk throughout the sales, and almost the entire offerings (not counting Cuprea) sold at an average advance of about 5 per cent. upon the previous sales—the unit being now from 1¼d. to 1½d. per lb. The following were the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works	159,184
Messrs. Howards & Sons	58,970
Agents for the Frankfurt-o/Main and Stuttgart works	44,720
" Brunswick factory	30,832
" American and Italian works	20,463
" Auerbach works	14,782
" Paris works	8,670
Sundry druggists, &c.	41,628
Total quantity of bark sold	378,649
Bought in or withdrawn	105,837
Total quantity offered	484,486

It should be remembered that the quantity of bark purchased gives no indication of the equivalent of quinine sulphate secured by the buyer. The following were the prices paid:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary thin and woody to good bright quilly chips, 1¼d. to 3d.; dull and dusty stem chips, 1¼d. to 2½d.; ordinary spokeshavings, 1¼d. to 1½d.; very dusty ditto, 2d. per lb. Grey varieties: Ordinary woody to good bright stem and branch chips, 2d. to 3½d.; good root, 4½d. per lb. Yellow varieties: Thin and dull branch, 2½d.; ordinary stem chips, 3½d.; good chips mixed with root, 6½d. per lb. Hybrid root, 3d.; shavings, 4½d.; stem chips, 2½d. to 4½d. per lb. *Renewed.*—Red varieties: Ordinary to fair bright stem and branch chips, 1¼d. to 3d.; fine ditto, 3¼d. to 4½d. per lb. Grey medium to fine bright quilly stem and branch chips, 5d. to 8½d. per lb. Hybrid stem chips, 3d. per lb.

EAST INDIAN CINCHONA.—*Original.*—Red varieties: Ordinary dull chips, 2¼d. to 3d. per lb. Yellow varieties: Ordinary woody thin to good bright quilly stem and branch chips, 2d. to 6d.; a few fine lots, 6½d. to 7d.; fair to fine spokeshavings, 3½d. to 6½d.; dusty root, 4d. per lb. Grey varieties: Dull to good partly quilly stem and branch chips, 2½d. to 3½d.; good bright spokeshavings, 5½d.; good quilly chips, 5d. to 5½d.; fair root, 4½d. per lb. *Renewed.*—Fair red chips, 3½d.; woody yellow chips, 3½d.; fair shavings, 5d.; fair quilly grey chips, 5d. to 5½d. per lb.

JAVA CINCHONA.—Fair yellow chips, 2½d. to 3d. per lb. **WEST AFRICAN CINCHONA.**—Good bold split, slightly silvery spotted red quill, rather irregular, 3½d. to 4d.; good chips, 2½d. to 3½d. per lb. Nearly the whole of this consignment was country-damaged.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian Calisaya (mostly damaged), in fine bold heavy quill, 8½d. to 9½d.; good but somewhat irregular ditto, 6d. to 7d.; broken quill and chips, from 5½d. down to 3½d. per lb.

CUPREA BARK.—Fifty-one bales (imported in August, 1883) sold at 2½d. per lb. The exports of cinchona from Java during the month of July were 279,094 Amsterdam lbs., and in August 492,530 Amsterdam lbs. The exports for the two months of July and August of the last five years are given as follows:—

	1892	1891	1890	1889	1888
	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.
Government plantations	27,379	113,794	12,487	122,143	11,021
Private plantations	744,247	1,804,418	397,532	634,160	425,432
Total	771,626	1,918,212	410,019	756,333	436,453

The exports from Ceylon between January 1 and September 26 have been:—1892, 4,885,509 lbs.; 1891, 4,047,285 lbs.; 1890, 6,529,317 lbs.; 1889, 7,151,076 lbs.

CIVET has been in demand lately, and higher prices are asked—7s. 6d. per oz. for fine quality.

COCAINE.—The manufacturers report a brisk demand, with firm prices; 18s 6d. per oz. is their general list quotation for bulk, but one can still buy at 18s. per oz.

CONDURANGO.—Eighteen bales of this bark, of which there have been no arrivals for some time, have come to hand, and will be offered at the next drug-sales, when they are expected to bring high prices.

COPPER (SULPHATE).—In London it is possible to buy at 14l. per ton, but Macclesfield brand is held at 14l. 7s. 6d., f.o.b., in Liverpool.

CORIANDER-SEED.—Markets are rising under the influence of small supplies and greatly diminished stocks.

CREAM OF TARTAR is rising in sympathy with tartaric acid, and from the same cause. For best white French crystals 83s. per cwt. is asked, but we do not believe that that price has yet been paid.

CUBEBS.—Seventy-one bags were imported from Singapore in the *Kintuck* this week.

CUMIN-SEED.—Both the *Malta* and *Morocco* varieties are firm, but there is no alteration in price to record. The average crop of Malta seed is not quite so large as our last report indicated. It runs from 20,000 to 30,000 cwt., or 1,000 to 1,500 tons. We hear to-day that 44s. per cwt. has been paid for good Malta.

ELATERIUM has been in pretty strong demand lately. For *Maltese* an offer of 2s. 10d. has been refused; 3s. is wanted by the owners.

ERGOT OF RYE.—There is nothing doing, so far as we can learn; but prices remain firm at 2s. 3d. per lb. for good bold *Russian*, and from 2s. 6d. to 2s. 10d. per lb. for *Spanish*.

FENUGREEK-SEED.—Arrivals of some importance have taken place from Morocco this week.

GALLS.—Usual shape China galls on the spot are firmly held for 55s.; the last quotation for arrival was 49s. c.i.f. terms, at which business is reported. For plum-shape there are buyers at 54s., c.i.f.

GENTIAN has advanced lately, and prices have been raised fully 2s. per cwt. Good root is now held for 18s. 6d. to 19s., while for powder 22s. 6d. to 23s. is required.

GLYCERINE.—The market is still hardening, and it is now doubtful whether 43s. per cwt. would be accepted anywhere for double distilled s.g. 1.260. Most of the makers ask 44s., and some require 46s. per cwt. for this kind of glycerine. "We expect very much higher prices this winter," say two of the principal agents.

GUM ACACIA.—The consignments of *Soudan* gums (announced in our last issue to be on the way) are now arriving in Liverpool; but the bulk appears to consist of hard, glassy gums, not well suited for druggists' use. The market is quiet, and genuine Soudan sorts are selling slowly at from 65s. to 75s. per cwt., according to quality. *Senegal* gums are offering very cheaply indeed—*Bas du fleuve* being quoted at from 45s. to 50s. per cwt., f.o.b. Bordeaux, while *Galam* is more or less nominal.

GUM BENZOIN.—The arrivals this week have been rather heavy, and a fair supply of this gum will probably be offered at auction next Thursday.

INDIARUBBER.—Medium qualities are in demand at full prices. Fine *Pará* is firm at 2s. 10d. per lb.

INDIGO.—The following is a detailed estimate of the output of indigo in British India for the coming season, as compared with that of 1890-91:—

	Coming Crop	Last Crop
	Maunds	Maunds
Lower Bengal	14,000	30,814
Behar	44,000	87,133
Bengales Provinces ..	9,000	10,056
Doab	20,000	22,523
Total maunds ..	87,000	150,506

The periodical sales of *Central American* indigo were held on

Monday, when 323 serons were offered. Half of this sold at 6d. per lb. advance all round, ordinary *Sobres* realising from 4s. to 4s. 7d., and common to ordinary *Cortes* from 3s. 2d. to 4s. 1d. per lb. *Flores* were not offered. The demand for red sorts was unusually strong.

IPECACUANHA.—There have been no arrivals, and the market keeps very firm, although we do not hear of any business in *Rio* root. For *Cartagena* 6s. 6d. per lb. is said to have been paid to-day.

JABORANDI.—There is scarcely anything of good quality to be had. For the small quantity of fine green leaves still in existence in our market 1s. 2d. per lb. is asked, while the ordinary grey leaves that have been offering for some time have lately been sold at 10d. per lb.

JALAP.—Reported rather firmer. A fair quantity sold on the spot yesterday at 1s. 5d. to 1s. 5½d. per lb. for good *Vera Cruz*. Some pale and split tubers are still offering at 1s. 6d. per lb., but for good quality 1s. 7d. is the quotation.

LINSEED is very firm at 54s. to 55s. for *Sicilian*, 39s. to 41s. for *Russian*, 40s. to 42s. for *East Indian*, and 39s. to 42s. for *River Plate*. All these quotations are per 416 lbs.

MAGNESIA SALTS.—*Epsom salts* quotations (ex-ship London) are from 85s. to 90s. for kegs; 70s. to 85s. for casks; and 60s. per cwt. for bags. The landed prices in London are 3s. 6d. per ton above these rates. *Carbonate of magnesia* costs from 37s. 6d. to 52s. per cwt. for block or powder, and 8d. per lb. for ponderous.

MERCURIALS.—After the advance in quicksilver the mercurial manufacturers on Monday raised their prices 1d. per lb. all round, making *calomel* 2s. 8d. (down to 2s. 6d. for 2 cwt.), *corrosive sublimate* 2s. 6d., red and white *precipitate* 2s. 11d. per lb., with corresponding reductions for large quantities.

NUX VOMICA.—Our imports of nux vomica this week consist of 445 bales from Cochin, per "Clan Fraser."

OIL (COD-LIVER) is in better demand abroad. It is said that the stock in Norway is almost *nil*, while there are only 200 barrels left in Hamburg, and that, in the event of any considerable demand, buyers will have to fall back upon London. It is also reported that the equivalent of 74s. 6d. per barrel has been paid in Bergen.

OILS (ESSENTIAL).—Oil of *Star-anise* is again dearer, 6s. 2d. per lb. being now asked on the spot, and 5s. 7d. per lb. c.i.f. for shipment. We hear from China that in the week ending September 15 forty piculs *star-anise* oil were sold at \$248 per picul for delivery within three months. For Tonquin oil of star-anise 5s. 7d. per lb. c.i.f. terms is now asked, a fair business having been done slightly below that figure. Oil of *Cloves* remains unchanged, and it is very unlikely that any reduction will be made in the price this year, even if the raw material should again sink to its former value. *Menthol* is held for 10s. 3d. per lb. on the spot. *Japanese peppermint* oil has advanced to 6s. 3d. on the spot for ordinary brands, at which business has taken place. *Cocking's* oil is held for 8s., bids of 7s. 6d. having been refused. For arrival sales have been made at 5s. 11½d. c.i.f. terms for ordinary brands. American oil, H.G.H., on the spot is quoted at 12s. 3d.

OPIMUM.—The London market remains firm but quiet. There is a fair trade in druggists' kinds at full prices—viz., 7s. 3d. to 7s. 6d. per lb. for firsts, and 6s. 9d. to 7s. per lb. for seconds—but no speculative business whatever. *Persian* opium is offering more freely for arrival, at 10s. per lb., and on the spot quotations are also rather easier—viz., 11s. per lb., London terms. Old *Salonica* opium is offering at 8s., but new is held at such high prices as to be a dead letter as regards business. Our Smyrna correspondent writes, under date of October 8:—"Advices from Amsterdam, received on October 8, state that the Dutch Government has contracted hitherto for 600 cases, 150 deliverable in November and 450 for December, at an average cost of 7s. 6d., c.i.f. Consequently, the sellers will not have much margin left when taking into consideration the risks they have to run before their shipments are accepted and paid for. The arrivals of new opium to date are 2,900 cases, against 2,400 last year. A little rain has fallen in the upper

districts; but a good deal more will be required before the ground is in a fit state for the autumn sowings."

ORRIS.—The crop has been a fair though not a large one, but in the face of the belief that there was a large stock (computed at 50 tons) in the hands of speculators in Italy at the beginning of the season, prices are generally expected to decline. The *Verona* root has mostly passed out of first hands at the basis of 58s. per cwt. for fine quality, but of the *Florentine* crop much remains unsold still.

PILOCARPINE (pure and hydrochlorate) is quoted at 2s. per gramme nominally, but owing to the almost total absence of workable *Jaborandi*-leaves it is difficult to secure supplies of the chemical.

POTASH SALTS.—*Chlorate* is offering here at 7½d. per lb. for immediate, or at 7¼d. per lb. for November delivery. Contracts for next year may be made (with second-hand holders) upon the basis of 6½d. per lb. f.o.b. Liverpool.

QUICKSILVER.—The principal importers on Monday raised their quotation half-a-crown—to 6l. 10s. This advance, though generally foreseen, was rather a disappointment to the bulls, who had expected a much stronger rise. The Chinese, who are the largest customers for the metal, and who have bought very little lately, are said to be entering the market again, and hopes are therefore entertained that a further advance is about to occur. To-day the second-hand sold at 6l. 8s. 8d.

QUININE.—After more than a week of stagnancy the market has again assumed a lively appearance, and considerable sales are said to have been made (mostly by two factories, Mannheim and Auerbach, direct) for delivery next year. Auerbach, a few days ago, sold 36,000 oz. for delivery all over 1893 at 9¾d. per oz.; and Mannheim is said to have placed fully 150,000 oz. at 10d. per oz. for January–March, and 10¼d. per oz. for March–May delivery. On the spot, second-hand dealers have disposed of about 20,000 oz. German bulk (B. and S. or Brunswick) at 9¾d. per oz. To-day the B. and S. and Brunswick agents ask 11d., and the Auerbach man 10¼d. per oz. for delivery, but the first named brand does not offer for 1893. Howard's brand unchanged at 1s. 1d. to 1s. 2d. in tins. German bulk has been sold on the spot at 9¾d. to 10d. per oz., second-hand.

SALICINE, as is often the case at this time of the year, has advanced in price. The makers now ask 6s. 6d. per lb., the last nominal quotation having been 5s. 3d. per lb.

SHELLAC.—Last week closed very quietly, with small sales of TN orange for October delivery at 86s., and for December at 85s. 6d. per cwt. *Garnet* lac sold on the spot at 74s., first *Button* at 93s. to 95s., and TN *Orange* at 83s. to 85s. per cwt. Early this week the tone improved both for spot and futures. At the auctions on Tuesday moderate supplies were offered, and of the 881 cases shown, 390 sold, without much competition, at an advance of 1s. per cwt. on second orange. *Button* lac remained steady. *Garnet* was not offered. The quotations were as follows:—*Second orange*, worked, fair bright curly but broken, 86s.; blocky to strong flat red, 83s. to 85s. per cwt. Unworked, fair reddish to good bright flat, 83s. to 88s.; blocky and livery, 81s. to 83s. per cwt. *Button* lac, fair pale blocky firsts, 92s.; pale seconds, 88s. per cwt. Under date of September 28, Calcutta reports a strong European demand, with a fair amount of business and a rising market. *Button* lac was steady at full prices, but *garnet* remained neglected.

SILVER (NITRATE) is rather dearer in sympathy with the advance in the metal. To-day's price is 2s. 2d. per oz.

SODA SALTS.—*Nitrate* is firm, with sales at 8s. 7½d. to 9s. per cwt. for ordinary to refined on the spot. For shipment prices are rather higher. *Crystals* are quiet at 67s. 6d. landed (66s. from the London makers) or 65s. ex-ship. To-day's Tyne quotation is 57s. 6d. per cwt. *Caustic* soda is quoted at 10l. 5s. for 70 per-cent. on the spot or in Liverpool, and 9l. 2s. 6d. for 60 per-cent. The Tyne price for 76–77 per-cent. is 11l. 10s. per ton. *Bicarbonate* in kegs 7l. 5s. ex-warehouse.

SPICES.—The improvement in *Cloves* has not been altogether maintained. From 3d. to 2¾d., c.i.f. terms, was accepted for shipment, according to position, this week. At auction 1,099 bales Zanzibar cloves were offered, but only a

few lots sold, at 2½d. to 3d. per lb., for fair slightly dark to bright. This shows a rather lower market. Fair picked Penang cloves brought 10d. to 10½d. per lb. *Bengal Ginger* has sold privately at 29s. 6d. per cwt. Other kinds, although reported to have been in good demand previous to the sales, were rather dull at auctions. A few lots common dull Jamaica brought from 54s. to 56s. at auction, while *Cochin* sold at 87s. to 87s. 6d. for fair bold cut, 44s. 6d. to 48s. for rough ends to medium rough, and 67s. for small native cut. *Arrowroot* was quiet at the auctions, with sales of fine Bermuda at 1s. 6d. and common to good St. Vincent at 3d. to 4d. per lb. *Black pepper* rules steady but unchanged, with sales at auction of ordinary dusty to good fair Singapore at 3½d. to 3¾d. per lb. A few lots of *White pepper* (Penang) realised 4½d. per lb., showing a steady market. *Pimento* is steady, with sales of common to fair at 2¾d. to 3d. per lb. *Mace*, *Nutmegs*, *Cassia lignea*, and *Chillies* are quiet and rather dull of sale.

STICKLAC.—Siam lac is higher in price. None is offering for arrival, and on the spot 75s. per cwt. is said to have been paid for fair quality.

WAX (JAPAN).—37s. 6d. per cwt. has been paid on the spot for good pale squares, and there are now buyers at 38s. per cwt. For arrival 33s. to 34s. c.i.f. has been paid.

THE LIVERPOOL MARKET.

ANISE.—Some Russian seed of last crop, good clean, offers at 21s. 6d. to 22s. per cwt.

CALABAR BEANS.—A recent arrival of 26 bags good sound beans has been sold at 1¼d. per lb.

GUINEA GRAINS.—Sixty-five bags new clean seeds have sold freely at 21s. 6d. to 22s. 6d., and latter price is now asked for any small lots offering.

HONEY.—There is more doing in all descriptions. The market has been cleared of pile 3 *Chilian* at prices ranging from 21s. 6d. to 23s. *Californian* is selling at 37s. 6d. to 47s. 6d., according to grade.

LINSEED.—The past week has been characterised by a steady rise in all grades, and values are about 2s. to 3s. per quarter higher.

OIL (CASTOR).—There has been a strong upward move during the week in sympathy with the rise in silver, and a good demand. The spot price for good seconds *Calcutta* is now 27½d.; first pressure *French*, 28½d.; second pressure, 27½d. per lb.

QUILLAIA BARK.—The expected advance has not taken place, and small parcels have been placed at 15l. 15s., at which it is now firmly held.

THE DUTCH MARKET.

AMSTERDAM, October 13.

THE cinchona auctions to be held in Amsterdam on November 3 will consist of 177 cases and 4,809 bales, about 414 tons, divided as follows:—From Government plantations, 61 cases and 366 bales, about 37 tons; from private plantations, 116 cases and 4,443 bales, about 377 tons. This quantity contains, of Druggists' bark: *Succirubra*—quills, 95 cases; broken quills and chips, 32 bales, 40 cases; root, 14 bales; *Officinalis* quills, 42 cases; and of Manufacturing bark: *Ledgeriana*—broken quills and chips, 3,714 bales; root, 775 bales; *Officinalis*—broken quills and chips, 36 bales; root, 13 bales; *Hybrid*—broken quills and chips, 213 bales; root, 12 bales. The manufacturing bark contains about 18 tons sulphate of quinine, or 4.52 per cent. on the average. About 4 tons contain 1–2 per cent., 36 tons 2–3 per cent., 128 tons 3–4 per cent., 116 tons 4–5 per cent., 53 tons 5–6 per cent., 34 tons 6–7 per cent., 16 tons 7–8 per cent., 7 tons 8–9 per cent., 6 tons 10–11 per cent. sulphate of quinine.

DEATH IN A CHEMIST'S SHOP.—A man named Smith, a commercial traveller's porter, at Lincoln, being seized with faintness, entered the shop of Mr. Cottingham, chemist High Street, to rest, but expired within five minutes. At an inquest held on the body a verdict of death from natural causes was returned.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Saffron in Tincture of Rhubarb, P.B.

SIR,—In view of the recent prosecutions in Lincolnshire, reported in *THE CHEMIST AND DRUGGIST*, where the tincture in question was alleged to contain a deficiency of saffron, I have compared about a dozen samples, all of official strength, obtained from various sources. I find no two are perfectly identical in colour, one sample, two years old, being much lighter than another recently made. If, therefore, the colouring-matter of saffron is affected by sunlight, as it appears to be, I should like to ask, "Is there any method of estimating saffron in old samples of tinct. rhei?"

In conclusion, what is the medicinal value of saffron? Most of the authorities seem to regard it as valueless except for its colour. In that case, one would suppose rad. rhei contained sufficient colour in itself; again, tinct. cinchona co. would probably lose little of its activity were the saffron omitted altogether.

October 18.

RAD. RHEI. (146/13.)

The Irish Privy Council's Inspector of Pharmaceutical Examinations

SIR,—In the account of our annual meeting, on the subject of Dr. Duffey's report, I am made to say that "some of his criticisms were unjust." As well as my memory serves me, this does not bear out the context of my remarks, as my intention was to indicate that it would be unjust as well as unwise to carry out his suggestion to have a rule passed to exclude boys from presenting themselves again who had failed in two matriculation examinations.

Yours faithfully,

12 Grafton Street, Dublin,
October 17.

WILLIAM HAYES,
President.

Homœopathic Dispensing.

SIR,—Under "Homœopathy" in your correspondence last week, the information you give is not so full as it should be, although fairly correct. Each of the attenuations of carbo animal. should occupy forty minutes in constant trituration, or two hours for the three triturations, and a mortar should be kept specially for that one medicine.

In the next recipe given, the helonias dio. ϕ and the chin. arsen. are intended to be dispensed in separate 3j. bottles, and each bottle labelled with the dose, the two bottles put into a divided cardboard box, and the label on the cover of box. If they were mixed, how could they be taken on alternate days?

I am a firm believer in homœopathy, and often deplore the inaccurate way in which homœopathic prescriptions are dispensed. In my opinion, no one who has not served an apprenticeship to a homœopathic chemist should be allowed to dispense a homœopathic prescription.

I am a regular reader of your valuable journal, and fully appreciate the information given week after week. I do not believe, if your subscription for it were doubled, any of your subscribers would do without it.

2 Bank of England Place,
Plymouth, October 18.

Yours truly,

H. SAYER.

A Wrong Address.

SIR,—We notice under your Bankruptcy Report *Re* C. B. S. Norton, of this street and town, you have chosen to locate him at 78 Castle Street, where for the past eighty years we have conducted our business. Though by no means exempt from many troubles, we are thankful to have escaped the right to a position in this column of your journal. It is strange that, in wandering from Mr. Norton's real address, you should have hit upon the number of the only other chemist in the street. Perhaps you would not mind inserting Mr. Norton's true address in your next issue, and pointing out the error of this.

Yours respectfully,

WEBB, FARDON & Co.

[We regret the error, which occurred from the circumstance that Mr. Norton's address is given as at 78 Castle Street, in the Pharmaceutical Register].

Hard on G. K.

This is how a facetious subscriber comes down on a slip by one of our subscription clerks:—

What I wish to remark,
And my meaning is plain,
My subscription is paid,
I can't pay it again.
But, tarnation! old hoss, I really must say,
I guess you're too warm on,

Yours truly, G. K.

A Rare Book and a Good Medium.

Mr. Tilley, who had an advertisement in our Exchange column, writes:—

"There seems to be a great want of Allen's 'Commercial Organic Analysis,' for, in reply to the advertisement, I have received one telegram and ten or twelve letters for same. Is there no chance of another edition being issued? I have had vols. i. and ii. on order from Messrs. Churchill for nine months."

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

How it has been done.

In reply to our Hobart correspondent, we have quite a shoal of letters, with specimens showing how the following directions can be put on a label for a 3j. phial:—

Dose: Three drops in half a wineglassful of water, three times a day on alternate days until the desired result is obtained, and then omitted for a week or ten days, and resumed again, until all pain in the side ceases, and no palpitation troubles any more.

We print a selection of the replies. The space occupied by the above is $2\frac{1}{2}$ in. by $\frac{1}{2}$ in.

SIR,—I should advise our Hobart friend to add to his next stationery order $\frac{1}{12}$ dozen 1d. lithographic peas—an indispensable line with me, and I also presume with many other London chemists who are called upon from time to time to write a label for Sir Andrew Clark's euonymin pills, to be followed by Hunyadi Janos, &c., next morning.

If our friend goes in largely for homœopathy, he might advantageously practise a few of Dr. Kidd's elongated directions. I enclose two samples.

Yours obediently,

Camberwell, October 14.

G. F. EGG.

[The directions in this case are written on a circular label, $1\frac{1}{2}$ in. diameter; one-half only of this space is occupied by the distinct writing]

SIR,—The homœopathic prescription from Hobart should not be dispensed in a 3j. bottle at all, but in two 3j. bottles

labelled No. 1 and No. 2 respectively, and laid side by side in a flat box with the label of directions on the cover—the intention of the prescriber being for the patient to take helonix one day and arseniate of quinine the next. In homœopathic practice drugs are never mixed.

"C. H." will thus have no difficulty about the length of the directions; but even supposing they had to be placed on a 3ij. bottle, as he seems to think, it is by no means an impossible task, as the enclosed label will, I think, testify.

Yours truly,

C. S. ASHTON.

Brighton.

[Mr. Ashton's 3ij. phial label bears writing as distinct as the black type used for headings in this column.]

SIR,—In your "Dispensing Notes" of this week I notice that a Hobart subscriber ("C. H.," 132/37) has had a difficulty with the directions you quote for 3ij. drops. Surely, the difficulty is not so insurmountable as he makes out. No doubt small calligraphy is necessitated; but it can be made distinct enough. I enclose 3ij. bottle with label affixed, in response to your invitation, and, as you may see, I have inserted an imaginary number and patient's name, for which I found room.

Your old contributor,

DUNALBA. (148/02.)

[The space occupied in this case is $2\frac{5}{16}$ in. by $\frac{7}{16}$ in.; a second specimen is a pill-label, with a space $\frac{1}{4}$ in. diameter.]

Three drops in half a wine glass of water three times a day on alternate days, until the desired result is obtained, and then omitted for a week or ten days & resumed again until all pain in the side ceases and palpitation troubles no more.

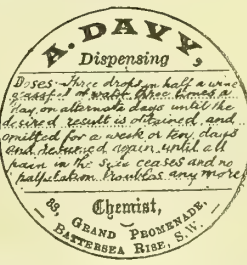
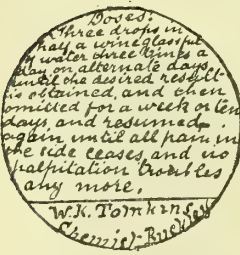
No. 12345... Mr. C. H. Hobart.

PREPARED BY

HEADLAND & COMPANY,

Homœopathic Chemists,

BRIGHTON & HOVE.



W. G. MURCHIE,
Chemist and Druggist,

Doses: Three drops in half a wine glass of water three times a day on alternate days, until the desired result is obtained, and then omitted for a week or ten days & resumed again until all pain in the side ceases and no palpitation troubles any more.

LOCKERBIE.

¶ 142/49. Mr. H. Cleaver, senior apprentice to Mr. W. B. Jevons, Market Rasen, sends a 3ij. phial labelled with admirable distinctness.

14/42. Bonner (Rugby) sends two beautiful specimens, the smaller being on a space $1\frac{13}{16}$ in. by $\frac{3}{8}$ in. As "Bonner" says, this is "perfectly easy to read."

142/37. Mr. F. F. Elliott (Marlow) has succeeded in putting the directions on a slip-label $1\frac{1}{2}$ in. by $\frac{1}{16}$ in.

142/62. Mr. Owen A. Clark (Bury St. Edmunds) produces a clear label, the writing being far from microscopic, though on a space of $2\frac{3}{8}$ in. by $\frac{1}{8}$ in.

143/4. Busy Man (York) says:—"Homœopathic chemists usually send their medicines out in bottles contained in paper cases, and this will admit of a label 2 in. by $1\frac{1}{2}$ in., upon which it is quite easy to write the directions. Nor is it difficult to put the same instructions upon a label 2 in. by $\frac{3}{8}$ in., and this is not too large for a 3ij. round-shouldered phial." [His specimens prove his assertion.]

143/3. Mr. John R. Walker, apprentice to Mr. A. Thompson, takes the cake for minuteness. On a pill-label $\frac{1}{8}$ in. diameter he puts the whole directions, yet a fourth of the space is occupied by name and address, and there is room for eight or ten words more. This correspondent says:—"I have not written them nearly so small as I am able to, but sufficiently so for the purpose, leaving them quite legible. Should all doctors give such copious directions as these, the dispenser's work would be rendered much more tedious, and require great care."

142/52. Mrs. Tomkins, wife of Mr. W. Kingston Tomkins, Buckley, sends two exceptionally distinct labels, both circular. The smaller is $1\frac{3}{16}$ in. diameter, and this is occupied to the depth of 1 in.

141/35. Mr. George W. Hodder (Frome) has produced a good circular label, diameter 1 in.

142/61. Mr. J. H. Street (Burton-on-Trent) puts the whole of the wording on a retail slip.

We have also to acknowledge satisfactory responses from 145/64, Phar mak'-you-acute (Edinburgh); 143/41, Mr. W. G. Murchie (Lockerbie); 171/92, Mr. Arthur Davy (Battersea Rise); 144/38, Mr. J. A. Center (Edinburgh).

Further satisfactory solutions of the difficulty have been received from Mr. D. Hendry (McMillan's, Glasgow), Mr. W. D. Porter (Dublin), Mr. W. O. Gelston (Thompson & Capper, Liverpool), Mr. C. A. Macpherson (Edinburgh), Mr. John J. Thomas (Alle Farmacia Anglo Americana, Largo Sarofalo, Chiaja, Napoli), Mr. F. H. Foster (Plymouth), 146/45 Nil Desperandum (Southampton), Mr. Claude F. Henry (Edinburgh), and Mr. W. H. Thomas (Peacock & Co, Bristol). The last-named has performed the feat of putting the directions in a space 1 in. \times $\frac{3}{16}$ in., but his specimen was received too late for reproduction with the typical facsimiles printed above.

Ergot and Iron Mixture.

138/73. Ergo wishes to know whether a chemist would be justified in dispensing the following prescription for a second, or even a third time, especially if he has reason to believe that the prescription he receives is not the original, but a copy; it being presumed that the medicine is taken strictly according to directions:—

Tr. ferri perchlor.	..	..	..	3ij.
Ext. ergot liq.	..	..	..	5ss.
Spt. chloroformi	..	..	..	3ij.
Aquam ad..	..	..	..	5vj.

One-sixth part every four hours.

[This is a case where caution and common-sense will go far. The chemist dispensing this for two or three times ought to have learned something of the history of the patient,

and must judge accordingly. There is nothing in the prescription itself to prevent it being dispensed when required, although if required for a male patient there ought to be a doctor in attendance.]

Altered Strychnine.

SIR.—The following prescription was dispensed on October 11, and was brought back to-day, when it had changed to a clear claret colour. It was sent out in a glass-stoppered bottle. I have read your note on tinct. nucis vom. and acids in "Art of Dispensing," and will be glad to know if the change of colour can be prevented:—

Acid. nitro-hydrochl. dil.	..	..	..	3iv.
Liq. strychniæ	..	..	..	3ij.

M.

Dose: Eight drops.

My customer says she has generally found it change to yellow, but not such a deep red.

Yours truly,

October 15. F. F. (142/47.)

[This is a change that cannot well be avoided; the depth of colour depends upon the age of the acid; the fresher it is the more will it affect the alkaloid.]

Hyd. Oleat. c. Lin. Potas. Iodid.

144/15. *Lux* (1) has difficulty with the following prescription, and wishes to know how best to dispense it; he obtains "an unpleasant-looking, black compound":—

Ungt. pot. iod. c. sapone	..	..	..	3vj.
Hydrarg. oleat., 20 per cent.	..	..	..	3ij.

[Make the ungt. (lint. ?) strictly in accordance with B.P. formula. Put the oleate of mercury in a mortar, add the liniment of iodide of potash and soap gradually, or in accordance with the old instructions (see "Art of Dispensing"). (2) The best way to obtain a neutral solution of quininæ sulph. is to order from your wholesale house soluble sulphate of quinine. This is a commercial article and soluble, according to Martindale, 1 in 12.]

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMIST'S AND DRUGGIST'S DIARY, p. 517.

For all particulars regarding Educational and Examination matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

130/17. *Glyco-cucumeris*.—The preparation appears to have contained a powder in suspension. We do not know it.

129/71. *C. J. M.*—Probably an iodide. Try, please, and let us know.

129/65. *Yorkshireman* gives us neither his name nor address.

130/5. *Subscriber*.—Lady Mary Wortley Montagu brought the idea of inoculation for smallpox from Turkey in 1721. Vaccination, or inoculation with cowpox virus, was proposed by Dr. Jenner in 1793.

129/64. *Scotch Minor*.—Many Scotch assistants with Minor qualification come to London, and seem to get settled. At any rate, the sound of the Doric is quite familiar where knights of the pestle most do congregate. You should not come without money to tide you over a month or two, if necessary.

130/38. *Camphoid*.—(1) The preparation Camphoid is one originated by Mr. William Martindale, who states, in the "Extra Pharmacopœia," that it is "A solution, 1 in 40, of pyroxylin in equal parts, by weight, of camphor and absolute alcohol." (2) *Vin. Sem. Colchici*, U.S.P.:—

	Parts
Colchicum seeds, in No. 20 powder	.. .. 15
Stronger white wine sufficient to make	.. 100

Macerate seven days, and filter.

The wine is a mixture of 7 parts of sherry and 1 part of spirit.

130/33. *Nux Vomica*.—Why should you use mercury and potassium iodide for Blackheads? The trouble is not syphilitic. Use a loofah in washing with Eichhoff's superfatted sulphur-camphor-peruvian-balsam soap; take a teaspoonful of compound syrup of hypophosphites at 12 and 4, and apply the following lotion at bedtime:—

Sulphurous acid	..	..	..	3ij.
Glycerine	..	..	..	3j.
Rose-water to	..	..	..	3ij.

M.

127/66. *Speciality*.—(1) You may add about $\frac{1}{4}$ minim of oil of savin to each Female Pill. That amount can do no harm, and probably not much "good" from the point of view of females who want an ecbolic rather than an emmenagogue. A course of aloes and iron pills is perfectly safe for those whose menstrual functions are legitimately out of order. Pills containing oil of savin should be labelled "poison." (2) Equal parts of poppies and chamomiles are used for making fomentations. To make a liquid extract pour upon 1 lb. of the mixture 15 oz. of boiling water. Infuse two hours, and squeeze out 10 oz. of the infusion; reserve this. Treat the marc with 3 successive pints of water by decoction, and evaporate the liquors to 2 oz., which dissolve in the 10 oz.; add 4 oz. of spirit, set aside for a day, and filter.

130/33. *A. S.*—Thanks. Better let the matter drop now.

143/10. *E. Arden*.—Curare, the South American arrow-poison, is the heliish drug referred to by Tennyson.

128/4. *Photography*.—We have not the formula for Rowland's "Kalydor."

134/24. *M. G.*—The hair-dye is black.

136/66. *B.*—Bicycle-lamp Oil:—

Sperm oil	..	..	..	..	3x.
Crystal oil	..	..	..	..	3x.
Camphorated oil	..	..	..	..	3j.

M.

The "best oil" is ol. cetac. alone.

136/73. *S. H.*—Thanks.

136/2. *Bitartrate* (Dublin).—French Cream of Tartar.—An average analysis is $\text{KHC}_4\text{H}_4\text{O}_6$, 93 per cent.; K_2O , H_2O , 1.73 per cent.; $\text{CaC}_4\text{H}_4\text{O}_6$, 4.78 per cent.; insoluble, 0.23 per cent.; and moisture, 0.3 per cent.

131/56. *J. D.*—Black Drink for Cattle:—

Acid sulph...	..	..	..	..	3j.
Ol. tereb.	..	..	..	..	3ij.
Ol. lini ad	..	..	..	..	3xij.

M. Ft. haust.

This dose is for a full-sized beast; half for a yearling. This mixture is not always uniform unless the acid and linseed oil are frequently agitated, and allowed to stand some time before the addition of the turpentine.

141/57. *O. G. W.*—Syrupus Violæ.—Infuse fresh violet flowers (1 lb.) in boiling water ($2\frac{1}{2}$ lbs.) for one day; strain through fine linen without pressure, and in every 2 pints of infusion dissolve 4 lbs. of sugar, boil to a syrup, and filter through felt syrup-bag.

130/31. *Battery.*—(1) As a Cement to Fix the Carbon in your Bichromate Battery use asphalt; but it will be more profitable to send the cell to some practical electrician, who will fix it firmly, and still leave you a good margin of profit. (2) The sample of Plant-food contains soot, carbonate of lime, chlorides—not nitrates. Try a mixture of bone-ash and ordinary soot.

144/39. *Quinon.*—To Filter clear the Orange Quinine Wine which you have made, shake up with freshly-calced kaolin and filter, wetting the filter-paper with water first. When making quinine wine in future, detannate the wine before adding the quinine. For method see index of previous volumes.

14/73. *I.*—To prevent your solution of Hydrogen Peroxide Bursting the Bottles when put up as *Golden Hair-dye*, use a 10-per-cent solution; see that it is slightly acid, by the addition of a very small quantity of sulphuric or hydrochloric acid; store in a cool place, and, although not essential, in the dark. For windows or showcases you had better put up a few dummies of chloroform or camphor water. Your solution may be alkaline, which would readily account for the tendency to burst the bottles; acid solutions are much more stable.

131/36. *Amylum.*—We can detect no other perfume thanorris-powder in your violet-powder.

130/31. *Battery.*—A Book on Bankruptcy Law is published by Edingham Wilson, Royal Exchange, London, at 1s. 6d.

137/57. *Tabakfabrik.*—You will find formulæ for tobacco flavours in THE CHEMIST AND DRUGGIST, but it is illegal to use them without getting the consent of the Board of Inland Revenue.

133/18. *W. I. W.*—Listerine Substitute.—THE CHEMIST AND DRUGGIST, January 30, 1892, page 136.

136/63. *J. W.*—We know of nothing that will retard the growth of hair on the eyebrows.

137/35. *Cymro.*—As lampblack is the colouring of printer's ink, we fail to understand what you mean by bleaching, or what your object is.

132/39. *Constant Reader.*—Glycerine Jelly for Microscopy.—The following is Squire's formula:—Soak 100 grammes of French gelatine in chloroform-water, and when soft drain. Dissolve the gelatine in 750 grammes of glycerine by the heat of a water-bath, and add 400 grammes of chloroform-water to which 50 grammes of white of egg has been added. Mix, boil for five minutes, make up the weight to 1550 grammes with chloroform-water and filter in a warm chamber, preventing evaporation as much as possible.

137/34. *H. W.*—Your poem is too irregular in metre to be printed.

133/30. *J. M.*—If you are a subscribing associate of the Institute of Chemistry you can be elected a fellow on application. But see our Educational issue of September 17 in regard to this and all the other questions which you ask.

129/56. *Subscriber (B. in F.).*—Nursery Hair Oil:—

Stavesacre seed, bruised	3j.
Alkanet	3ij.
Olive oil	3iij.
Vaseline oil	3iij.

Mix and macerate for a fortnight, then strain and perfume suitably.

130/66. *J. Watt (Essex).*—(1) A good Clear Liniment for Sprains is:—

Lin. saponis	3ij.
Tinct. arnicæ	3ss.
Lin. camph. co.	3ss.

M.

(2) Teething-powders.—See reply 109/28 on September 24.
(3) Rat-poison.—See page 55, July 9, and last volume index. (4) Yes; purified neatsfoot oil mixed with a little heavy mineral oil is sometimes used for watches. (5) Itch-lotion.—See THE CHEMIST AND DRUGGIST, March 5, 1892, page 357, reply 242/20; ointment, ung. sulph. co. You will see from this reply that if proper use is made of THE CHEMIST AND DRUGGIST, by binding, and referring to the index when necessary it is exceedingly good for business.

132/54. *J. J.*—Boric acid would be of little use for preserving the Ink and keeping it free from mould; but salicylic acid is likely to be beneficial. Try it in the proportion of 1 oz to 4 gallons of ink, and use 1 oz. of bruised cloves with every 2 lbs. of the logwood. The salicylic acid, like the cloves, should be added at the beginning of the process of manufacture.

Information Supplied.

Pulv. Alkaline Co.—In reply to 125/41, under heading "Information Wanted," pulv. alkaline comp., or pulv. potassæ co., is a formula for a Throat Hospital powder for post-nasal use, of which the following is a copy:—

Potass chlor pulv.	ʒj.
Pot. ss. bicarb. pulv.	3j.
Sodii chloridi	3ss.

M. Ft. pulv.

A teaspoonful in a small tumbler of hot water to be drawn through the nose each evening.

The quantity of chloride of sodium is sometimes increased by the prescriber; but in cases where "pulv. alkaline comp." is written simply, the above would be the correct thing to supply.

Dublin.

J. F. MEYLER.

125/41. Pulv. Alkali Co. (Bell):—

Pepsin	3iij.
Pulv. aromat.	3iij.
Sodii bicarb.	ʒj.
Mag. carb. pond.	3ss.

Norwood, S.E.

BIRCH.

[The first is apparently what is wanted.]

Dr. Burney Yeo's Inhalation.—The following may be what "Kilogramme" inquires for. It is frequently dispensed here:—

Iodoform (pulv.)	gr. x.
Ol. eucalypti	ʒiv.

Solve.

Sig.: Use 4 or 5 drops on the sponge of the respirator three or four times daily.

Leith.

M. A. (142/7)

Antiseptic Inhalation for Perforated-zinc Inhaler:—

Iodoform	gr. xxiv.
Creosoti	ʒiv.
Ol. eucalypti	ʒiij.
Chloroformi	ʒiij.
Alcoholis	3ss.
Æthe. is	3ss.

M.

—Med. Annual, 1891, page 382.

Perhaps the above will be useful to "Kilogramme."

Sandown, I.W.

GEORGE BROWN.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
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SUPPLIED regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ.

The Pharmaceutical Society of Ireland.

South African Pharmaceutical Association.

The Midland Pharmaceutical Association of New Zealand.

The Central Association of New Zealand.

Otago Pharmaceutical Association.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

Tasmanian Pharmaceutical Society.

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Summary.

M. LIPPMANN, the Parisian professor, has made further advances in regard to photography in colour.

THE statutory meeting of the Chemists' Association (Limited) has been held, and progress reported.

A PERSON at Cardiff who calls himself a chemist and druggist has been fined for the illicit sale of beer.

THE fourteenth annual Brewers' Exhibition is being held this week, and we print some notes gathered by a representative who visited it.

A NORTHERN contemporary is complaining that analysts show lamentable lack of uniformity in their results of the analysis of cattle-foods.

A PARTICK midwife has succeeded in an action for slander-damages which she brought before the Court of Session against a local doctor-druggist.

THE list of Bankruptcy Reports is somewhat heavy this week. The cases refer to chemists and druggists and chemical and colonial brokers.

WE reprint some thoughts by Mr. George J. Seabury on “Modern Pharmaceutical Journalism,” which are worthy the attention of all live men of business.

IN an Editorial Note we give particulars regarding such restrictions as there exist upon the sale of medicinal specialities in the principal countries on the Continent.

IT will be seen from our Winter Session section that the Leeds Association has held its twenty-fourth annual meeting. We also report meetings held in Brighton, Dundee, and London, and an important pharmaceutical paper read by Mr. Harold Wyatt, jun., to the Liverpool Students' Association.

THE first of the Scotch University medical examinations under the new ordinance (which admits women to degrees) has been held, and the daughter of a Dundee chemist reads the ladies' list of merit at Glasgow.

IT is reported that Mr. Ludwig Mond has succeeded in making bleaching powder from the waste chloride of the Solvay alkali-process. He passes volatilised ammonium chloride over a magnesia mixture, when ammonia, hydrochloric acid, and chlorine are successively liberated and collected. We give a description of the process.

A MANCHESTER assistant has succeeded in recovering a sum for deferred salary which he had agreed to temporarily forgo in order to meet his employer's convenience. The matter was afterwards disputed, and had to be settled by a judge. Another assistant, who claimed salary from an employer, lost his case because the evidence failed to show that he had been engaged by the employer.

THE PHARMACY AND POISON LAWS OF THE UNITED KINGDOM.

Price 2s. 6d. Post free, 2s. 9d.

(Copies will be posted on Monday to subscribers who have ordered this work.)

THIS is the most complete conspectus of the laws governing pharmacy and the sale of poisons in the United Kingdom which has ever appeared. It contains the text of all the statutes (Great Britain and Ireland), and full comments and illustrative cases. Also Hansard's reports of the debates in Parliament before the Pharmacy Acts of 1833 and 1869 were passed, and the *Law Times* reports of the case of the limited company which was argued up to the House of Lords. In appendices are given details of the Pharmacy Laws of the Australasian Colonies, of Canada, and of Cape Colony.

The book will be obtainable through the usual wholesale houses.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

WEDNESDAY, NOVEMBER 2.—*Edinburgh Chemists' Assistants' and Apprentices' Association*, 36 York Place, at 9 Presidential address.

THURSDAY, NOVEMBER 3.—*Chemists' Assistants' Association*, 103 Great Russell Street, W.C., at 9 P.M. Dr. William Hill on “The Prevention of Voice Troubles and Sore Throat.”

THURSDAY, NOVEMBER 3.—*Dundee Chemists' Assistants' Association*, at 9 15 P.M. Musical and social evening

English News.

The Chemists' Association (Limited).

The formal statutory meeting of this Association (required by the Act to be held within four months of registration) was held at the company's premises, Curtain Road, E.C., on Friday, October 21. Mr. Martin Magor (Birmingham), the chairman of directors, presided, and there were also present Messrs. R. Walton, Wm. Hole, L. Walters, W. Corbett, L. Woolley, and T. Fawcett (secretary).

The Chairman said that their undertaking was inaugurated in July last with the design of enabling retail chemists, by co-operation, to trade as wholesale men, and to acquire profits in addition to those accruing from retail trading, being from 20 to 25 per cent. on druggists' sundries, and from 5 to 10 per cent. on patent medicines, less working expenses. The response to the prospectus had been quite equal to expectations. As to the results of the working of the company since it was floated, July was a very broken month. In August, however, there was a material increase, not only on the previous month, but also an increase of 800% on the corresponding month of last year, of Messrs. Thompson, Walters, Hole & Co.'s trading—a most encouraging result. September, again, showed an increase on the returns of August of 500%, and of nearly 950% on those of September, 1891. This increase had accrued without any extension of the staff, and on the same basis of expenditure as that formerly existing; but since then a traveller had been engaged to push the business in the south and east parts of the kingdom, formerly untouched by them. Taking September, which was certainly not the best in the year, as an average month, the profits, unless something unlooked for occurred, would be such as to enable the directors to pay a fair *ad interim* dividend, and also a bonus on the business done, within the next three or four months. There was still room for an increase of membership, and he desired that all the craft should know that by the payment of 25% a membership was assured which gave a fair dividend on the money spent and a bonus on every transaction with the Association.

Mr. Wm. Corbett proposed a vote of thanks to the Chairman, which Mr. L. Woolley seconded. The vote was accorded, and the proceedings terminated.

Drug Contract.

The contract for the supply of whole linseed to Bromley (Kent) Union has been secured by Mr. D. Grinstead, of Bromley, at 2*l.* 14*s.* 10*d.* per two quarters.

Fire.

Seeing flames issuing from the premises of Mr. Collins, chemist, 86 Wells Street, Hackney, on Sunday night, a policeman broke open the door and rescued the inmates—Mr. Collins, his wife, and child—who had ascended to the roof for safety. Later a second outbreak occurred, and the house was completely destroyed.

Fall of a Chemical-works Chimney.

A large chimney, 50 yards high, at the alum-works of Peter Spence & Co., Goole, which had been built some twenty years since, fell with a great crash on Friday of last week. Four men were seriously injured. The chimney was badly crooked, and was being straightened.

Consolations by Poisoning.

A lady, describing herself as Mrs. Gordon, was found in a dying condition at Charing Cross Hotel, and was removed to the Charing Cross Hospital, where she died. From a letter it was evident she had taken a large quantity of chlorodyne for the purpose of suicide, and at the inquest it transpired that there were nine empty chlorodyne-bottles in her room. A doctor was of opinion that it was a case of chlorodyne-poisoning.

Martha Townsend, a servant at Clifton, had tried to kill herself by taking some balladonna, but medical treatment succeeded in saving her life. She was taken to the Bristol Infirmary, and there, watching her opportunity, she was

more successful. She got possession of a bottle containing a mixture of iodine and carbolic acid, and took about an ounce of it, with a fatal effect.

Julia Callan, 59, a single woman, residing at Chiswell Street, Finsbury Square, had 300*l.* left her by a former master some three years ago. She never did any work after. At times she would drink to excess, and had been heard to say, "When that money has gone, I shall soon go after it." The money had been spent some time. She poisoned herself with carbolic acid last week.

William Johnson, 61, a tailor, of Acton Street, Gray's Inn Road, who had often told his daughter that he was tired of life, rid himself of it last week by the aid of a draught of carbolic acid.

The Wrong Bottle.

Another of the familiar mistakes with carbolic acid is reported from Bush Hill Park, near Enfield. A woman, desiring to give to an infant a dose of some innocuous medicine, sent a girl of 11 years of age to get the bottle which contained it from the mantelshelf in her bedroom; and in the twilight the child brought a bottle containing carbolic acid lotion, and the woman administered to the infant a teaspoonful of that poison, with painful and fatal results. The bottle which contained the poison was exactly similar in size and shape to that in which the infant's medicine was kept, and so the mistake was one which the Coroner's jury reasonably regarded as falling short of criminal negligence.

Sequah's Servant Suffers through Having No Agreement.

At the Darlington County Court, on October 20, Alfred Bell sued the Sequah Company (Limited) for 17*l.*, balance of wages. The evidence of plaintiff was to the effect that he was engaged by Mr. Bailey, an agent of the Sequah Company, at a salary of 3*l.* 10*s.* a week, to go abroad to manage business for the company. He commenced his engagement at Durham, and sailed last December for Monte Video with Bailey. The company were to give him an agreement, but he was told it was not ready, but would be forwarded to him. Bailey gave him 4*l.*, instead of 14*l.*, for wages. They stayed six weeks at Monte Video, but the Government would not permit them to work. They then went to Barcelona, in Spain, where Bailey discharged him because he did not know the Spanish language. The 17*l.* he sued for was the difference between what he received and the amount due. The agreement was to be for three years.

His Honour: You ought to have got the agreement signed before you went out.

The Plaintiff: But the money is owing.

The Judge: It may be owing in one sense, but it is not owing in the sense that you can recover it at law.

His Honour, then, in the absence of any agreement, nonsuited the plaintiff, but did not make any order as to costs.

A Chemist Commended by a Coroner.

Mr. Carttar, Coroner for South-east London, held an inquest last week at Forest Hill on the body of Nancy Florence Fenwick, aged 23, a single woman. The deceased lived with Mr. John Sullivan, a retired solicitor, and was addicted to drinking. She had of late complained of want of sleep. She wanted to take opium, but Mr. Sullivan refused to sanction this. When he returned home one evening he found her dead, and at the inquest he identified as in the deceased's handwriting the words, on a piece of paper, "Please give the bearer sixpennyworth of laudanum for aching face." The paper was taken for the deceased to the shop of Mr. Clarke, chemist, 2 Swiss Terrace, Stanstead Road, Forest Hill, by a lad. Mr. Clarke said he could not serve sixpennyworth, as it was too large a quantity, and gave him three-pennyworth, charging 1*d.* for the bottle. Mr. Ethelbert Clarke, chemist, gave evidence to the same effect.

The Coroner: There is no restriction as to the quantity you may supply, I believe?

Witness: None at all.

The Coroner: Well, I think it very creditable, Mr. Clarke, that you refused to sell a larger quantity. It is not every chemist that does so, I find.

Mr. Clarke: I thought threepennyworth would meet the requirements of the case, and that is why I refused to supply more.

A Chemist Charged with the Illicit Sale of Beer.

At the Cardiff Police Court, on Wednesday, William Bateman, described as a chemist and druggist, of Court Road, Saltmead (whose name, however, does not appear on the register), was charged with the illicit sale of beer. A policeman said on Sunday, October 16, he watched the defendant's house, and between 12 noon and 1 P.M. he saw twenty-one men and twenty-five women enter, and twenty-two of the women leave, apparently carrying jugs or bottles under their aprons. At 1 P.M. he, with another policeman, entered the house, and in the passage met a woman, who ran back into the middle room and put a 1½ pint bottle of fresh beer on the table. Mrs. Bateman was washing jugs and glasses in the same room. Witness asked her what beer was sold, and she replied, "Nothing but herb beer." There was also a quart bottle containing beer on the table. In the front room, which was used as a shop, were the defendant, two men, and two women, and a gallon jar about half-full of fresh beer. In a cupboard under the stairs witness found a 4½-gallon cask wet with fresh beer, and which had been recently emptied. In the back garden the soil was noticed to have been recently disturbed, and a 4½-gallon cask, wet with fresh beer about the bung-hole and tap, was found buried among the soil. The other constable corroborated. For the defence Mrs. Bateman, defendant's wife, said she made and sold herb beer, and only herb beer, with the exception of a pint of fresh beer which had been got for her husband's supper, was in the house on the day the police entered. A witness supported this statement. The Bench, however, found the case proved, and inflicted a fine of 10s. and costs, or a month's hard labour, the vessels to be confiscated.

Get your Whisky in Clerkenwell.

At the last meeting of the Clerkenwell Vestry, Mr. J. K. Colwell, public analyst, sent up his report on articles submitted to him for analysis by the Vestry inspectors during the quarter. There were 50 samples:—7 of butter, 3 adulterated; 6 of milk, 1 adulterated; 11 of ice-cream and 7 of lemon-ice, none adulterated; 8 of rum, 3 adulterated; and 11 of whisky. It was not stated in the report whether any of the whisky was adulterated, and Mr. Weston, whose great point is always as to pure drinks, asked why. Mr. Kelly: Oh, don't bother, Weston! Mr. Weston: Perhaps you will hold your tongue. There are plenty of jackasses on the board without you. (Laughter.) The Chairman (Mr. W. Robson) called the speaker to order, and Mr. Weston, proceeding, said he was pleased to see there were no cases against ice-cream vendors, especially after some people had said London was going to be poisoned by ice-cream from that locality. And now as to the whisky. (Laughter.) They knew as well as he did that there were many places where whisky was sold which was not fit to drink—(hear, hear)—and the analyst had not told them how many of the eleven samples taken were adulterated. The Chairman: None, I take it. The report was received.

The Effect of Justice Hawkins's Judgment.

One of our reporters asks us if it is usual for the chemist to refer the applicant for vermin-poisons to the oilman over the way; or does the chemist only do this when he suspects his customer? The other day a very mild-looking man asked at a chemist's in Islington for three-pennyworth of rat-destroyer. A lady happened to be behind the counter, and she rather severely made reply: "Not here; at the oilman's, over the way." And the stuff got at the oilman's had no apparent effect upon the vermin.

Does the Board Provide "The Art of Dispensing"?

Though at all times there are plenty of applications for vacant appointments, the applicants are not so ready as some might suppose to do all that is asked of them. There were about thirty applicants for the post of medical officer (resident) at the City Road Workhouse, and Dr. Norton, assistant at the Highgate Infirmary, got the position. The next gentleman in point of favour with the Holborn Board of Guardians was called into the board-room and asked if he would take the place vacated by Dr. Norton. "Certainly," he said, he would. "And will you be prepared to do your

own dispensing?" "Ah, that requires consideration. I will, if you please, think over it and let you know." This was allowed by the Guardians, and the result at present is unknown.

A Dishonest Carman.

At the Hanley Quarter Sessions on October 21, William Cotton, carman, in the employment of Mr. Lewis Amable Fresson, chemist and druggist, Parliament Row, Hanley, was indicted for having stolen the sum of 1*l*. Mr. Doddam, who appeared for the prosecution, said prisoner was employed by his client in clearing certain premises in Tontine Street, Hanley, from which prosecutor was removing to Parliament Row, on June 15 last, and the money was stolen from a package on the shelf.

The prisoner, who had been previously convicted seven times, made no defence.

The Recorder said, considering the prisoner's past record, it was a question as to whether he should not be sent to penal servitude.

Prisoner: I wish you would, with all my heart.

The Recorder, continuing, said no doubt prisoner had been exposed to sudden temptation, and he was very hard up at the time he committed the offence, therefore he would let him off with nine months' imprisonment.

Killed Rather than Cured.

At the Liverpool Police Court on October 20, before the Stipendiary, a respectably-dressed man named Collins, described as a pill maker and vendor, was charged with assaulting Catherine Scott, of 58 Baptist Street, Liverpool. From the complainant's evidence it appeared that when prisoner went home on the previous evening she refused him admittance, owing to his having failed to pay his rent. The only money she had received from him was 3*s*. in return for a sum she had lent him, in order that he might be enabled to purchase the ingredients from which he manufactured his pills. Prisoner assaulted her with a poker, and from her appearance—her head being covered in bandages—she must have been roughly handled. The prisoner made a statement to the effect that he had been a lodger, and went to the house to take away his property. As he was going out of the door, carrying his bundle, complainant rushed at him with a poker, and somehow she fell down and hurt herself. He admitted having broken several panes of glass. Considerable amusement was caused whilst the case was proceeding by complainant exclaiming that her experience was that prisoner's pills killed rather than cured people. The Stipendiary inflicted a fine of 5*s*. and costs.

The Mattei Medicines.

The *Medical Press and Circular* has been threatened with an action for libel by a firm of solicitors acting on behalf of Count Mattei, for stating that his remedy is utterly valueless for the purpose for which it is recommended, and that it is in every respect a delusion and a snare. "From that position," says our contemporary, "we are not prepared to retire."

Lectures on Pharmacy Law.

Mr. Wm. Kirkby, lecturer on pharmacognosy at the Owens College, delivered in the college on Wednesday night the first of a series of lectures on "Pharmacy Law." The subject is apparently not regarded with much interest in Manchester, as the attendance was very small. Invitations to attend had been given to the members of the local Association, but only two of them—Mr. W. Lane and Mr. A. Blackburn—put in an appearance. The lecture proved an interesting one, worthy of a much larger audience. It might, perhaps, seem presumptuous, Mr. Kirkby said, for him to pose as an exponent of pharmacy law, but pharmacy law was now included in the examination schedules, and it was possible that they might get a better knowledge of the subject from a pharmacist than from one who looked at the subject from a purely legal standpoint. In this hope he entered upon his task. Reserving details for future lectures, Mr. Kirkby passed in general review the laws as they have and do affect dealers in drugs, beginning with the old apothecaries, of whom, he said, the pharmacists of to-day were the lineal descendants.

Irish News.

Pharmaceutical Society's Evening Meetings.

These meetings, which have been allowed to lapse for some years, are about to be revived. The opening meeting of the season will be held on Monday evening, November 1, at 8 o'clock, in the Society's House, 67 Lower Mount Street, when Professor Tichborne will deliver a lecture on "Carbonic Acid" and show experiments of much interest.

Enough Grievances on Hand.

The Irish Medical Poor-law officers have been refused an interview by the Chief Secretary on the subject of their grievances.

100 Grains of Chloral Would not Kill.

On Saturday last an inquest was held at Kingstown on the body of Colonel William Hale, who died of a bullet wound, self-inflicted. Dr. Flinn deposed that he was called to deceased on Thursday, who was then suffering from the effects of a large overdose of chloral, 100 grains having been taken. Restoratives were applied, and next day deceased seemed to be still under the influence of chloral, and, being refused further medicine, was found twenty minutes later with a bullet embedded in the brain. The jury found that the deceased committed suicide whilst of unsound mind. The chloral was obtained, through a medical prescription, at a local chemist's.

Hospital Grants.

The Dublin Corporation have made the following grants to the undermentioned hospitals:—

	£		£
Jervis Street Hospital ..	450	Coombe Hospital ..	500
Mercers' " ..	300	Incurables' " ..	350
City of Dublin " ..	300	Hospice for Dying ..	450
Meath " ..	300	St. Mark's Hospital ..	150
Mater " ..	500	Eye and Ear " ..	100
Sir P. Dun's " ..	350	Children's " ..	200
Steeven's " ..	150	Orthopaedic " ..	200
Cork Street " ..	300		

The usual grant of 450*l.* was withheld from the Rotunda Hospitals owing to a requested alteration in their charter not having been made.

Scotch News.

Slandering a Nurse

In the Court of Session last week, an action was tried before Lord Kincairney and a jury, in which Mrs. Reid Whiteinch sued Dr. Edward Coyle, druggist, 300 Dumbarton Road, Partick, for 250*l.* damages for slander said to be contained in a statement by the defendant that the pursuer had poisoned a woman upon whom she had been called to attend in childbed. The plaintiff stated that the woman had symptoms of premature labour, and she gave her to soothe her pains half a teaspoonful of "labour tea"—ergot of rye. The defender had said that the dose was not half a teaspoonful, but half a teacupful, which would have been a highly injurious and excessive dose. The effect of the drug was to affect the woman's system with blood-poisoning, which showed itself, amongst other symptoms, by gangrene in the left arm. Both the woman and the child died. The plaintiff averred that the blood-poisoning arose from an injury to the woman's left hand, received two or three weeks before her death. She said further that information was given to the police. A *post-mortem* examination was made. It was found that the woman had not been poisoned by the drug, but had died from natural causes. Mrs. Whiteinch said that she had suffered in her feelings and business. The defendant denied damage, and said with reference to the *post-mortem* examination that it was difficult to trace excessive doses of ergot of rye in the body after death. Evidence was given at considerable length. The deceased woman's husband stated that when Dr. Coyle was called in, after examining his wife

he said, "My good woman, you are poisoned." After hearing counsel, the jury gave a verdict in favour of the plaintiff on two of the issues submitted to them: (1) that on October 14, 1891, the defendant falsely and calumniously stated to Stephen Moore that the pursuer had poisoned his wife, Mrs. Agnes Moore, or used words to a like effect; and (2) that he falsely, calumniously, and maliciously, and without probable cause, stated to Archibald McKenzie, detective officer, Partick, that Mrs. Moore had been poisoned by a drug given to her by the pursuer, which had caused her death, or used words to that effect. Upon the first of these issues the jury assessed the damages at 25*l.*, and on the second they awarded 40*l.* The trial of the case extended over three days.

A Golf-shield.

The appended engraving represents a golf-shield in oak, with bold silver *repoussé* work, which has been presented to the golf section of the Edinburgh Pharmacy Athletic Club by Messrs. T. & H. Smith & Co., manufacturing chemists, Edinburgh and London. The centre is a figure of a golfer



driving from the tee, surrounded by a laurel wreath and surmounted by the arms of the Pharmaceutical Society. The shield will be played for quarterly by the members of the club. It was manufactured by Messrs. Brook & Son, goldsmiths to the Queen, Edinburgh.

A Dundee Lady Medical.

Miss Agnes Jane Anderson, daughter of Mr. A. B. Anderson, chemist, Dundee, has passed the first professional examination for the degree of M.B., C.M. Miss Anderson heads the ladies' list of merit, and has also carried off a valuable scholarship which has been provided by Mrs. Arthur, of Barshaw—viz., 25*l.* for three years—for the student of the first year of medicine who scores the highest number of marks in the first professional examination of the Glasgow University in October. Miss Anderson is the first Dundee lady medical.

Selling Methylated Spirit without a Licence.

At the Irvine District J.P. Court on Monday, a Kilwinning druggist was charged with having sold a quantity of methylated spirit without licence. It appeared that the Inland Revenue officer to whom the stuff had been sold had given the bottle to another officer stationed some distance off, and that the latter officer had sent it to the analyst at Somerset House. The analyst's certificate was produced. The Justices expressed a very strong opinion to the effect that a portion of the liquid alleged to be methylated spirit sold by the accused should have been left with the defendant for analysis, as was the practice under the Food and Drugs Act. Mr. W. S. N. Patrick, solicitor, Dalry, who appeared for the defendant, also objected to the acceptance of a certificate in absence of the analyst himself. The Supervisor explained that the production of the certificate only was to save costs. The case was ultimately, on the recommendation of the Bench, withdrawn.

Analysing the Analysts.

The Arbroath Agricultural Association has been testing the value of analysts' reports of cattle-feeding stuffs. Samples of the same linseed cake were sent to three analysts of good repute, and the reports showed wide differences. According to the *North British Agriculturist*, the percentages of the most important constituents of the cake were thus declared by the respective analysts:—

	No. 1	No. 2	No. 3
Oil	12.76	14.83	15.70
Albuminous compounds ..	24.14	32.37	33.25
Starch, mucilage, and sugar ..	39.54	29.94	30.88

A second trial revealed results nearly as widely divergent as in the first case. The analysts may contend that different parts of a linseed cake vary in constituents; if this be so, the value of analysis as a means of estimating value is considerably discounted.

Paupers' Medicines.

At the monthly meeting of the Barony Parochial Board held in Glasgow on Tuesday, it was reported that during the past month 908 prescriptions, at an estimated cost of 60*l.* 5*s.* 6*d.*, had been dispensed at the four district dispensaries to the outdoor poor in the parish.

The Glasgow Tartaric acid Cases.

The prosecutions against three Glasgow grocers—Andrew Whitelaw, 52 Grove Street; H. & W. Wilson, 20 Titwood Place, Strathbungo; and John Black, 66 Maitland Street—for selling tartaric acid said to be adulterated with lead have been withdrawn by the sanitary authorities of the city. Black produced a warranty from the wholesale firm from whom the acid was bought, and proceedings against him were therefore dropped. A similar course was adopted in the other two cases on the ground that the percentages of lead were too minute to warrant extreme measures.

French Pharmaceutical News.

(From our Paris Correspondent.)

IN BOILING ACID.—A terrible accident occurred recently at the Kuhlmann Chemical-works, near Lille. A workman was emptying a retort when, suddenly losing his balance, he fell into a vat of boiling sulphuric acid. He was pulled out almost immediately, but was terribly burned on the legs and back. He now lies at the hospital in a precarious condition.

POISON IN THE HAT.—The numerous cases of poisoning amongst hat-makers have induced M. Jungfleisch, the chemist, to endeavour to discover the cause. He traces it to the nitrate of mercury used in preparing rabbit-skins for manufacturing hats. He found half-a-gramme of mercury in a hat in use. Retail hatters are not exempt from the danger of poisoning by mercury in this way.

NOVELTY IN SURGICAL INSTRUMENTS.—At the last meeting of the Academy of Medicine M. Magitot submitted, on behalf of M. Collin, surgical-instrument maker, a series of surgical instruments which by a new mechanism are so made that the various parts are connected by a system of movable joints. This enables them to be easily taken to pieces for the purpose of cleaning, so that they can be more easily rendered thoroughly antiseptic.

CHEMICALS AND THE PARIS OCTROI.—As already reported in *THE CHEMIST AND DRUGGIST*, Paris pharmacists are taking steps to contest the unfair application of the rules concerning city dues as regards medicaments. The Syndical Chamber of Chemical Products has now issued a lengthy memorial to the Minister of Commerce in regard to glucose, on which a Commission of the Municipal Council wishes to impose a heavy duty. The reason given for the proposed tax is that glucose is unwholesome. The Chamber

points out that beetroot sugar requires more manipulating in order to arrive at purity, and that, both being necessary articles of daily consumption, glucose being the cheaper, it is of greater advantage to the larger number. Glucose has been used in Paris, says the Chamber, for forty years, and is constantly being perfected. It is declared that more than 370 tons of it are used daily in this city.

THE PHOTOGRAPHY OF COLOURS.—At the meeting of the Academy of Sciences on Monday, October 24, great attention was paid to a paper read by M. Lippmann on his researches concerning the photography of colours. The many coloured negatives shown were passed round, and appeared to convince the assembly of the valuable results obtained by the learned Sorbonne professor. M. de Freycinet, the French Minister of War, who was present, evinced great interest in the subject. The tints of these new coloured photographs are obtained on bichromate albumen or gelatine. A thin layer of the substance is spread and dried on a glass plate, and then exposed in the dark-room, backed by a film of mercury. The operations of developing and fixing are performed by simply washing with pure water; the colours then become very brilliant. The theory of the new experiment is the same as that on which M. Lippmann obtained his previous results.

THE FRENCH ACADEMY.—The unexpected death of M. Camille Rousset has caused the name of M. Berthelot, the well-known chemist and permanent secretary of the Academy of Sciences, to be brought forward as a likely candidate for one of the vacant seats in the famous French Academy. It is understood that the academicians are generally agreed as to M. Berthelot's eligibility, he being the author of a large number of scientific works, and the election of the popular chemist would undoubtedly find favour with the general public. As is generally known, the French Academy is the highest of the five academies constituting the Institute of France. The Academy of Sciences, founded in 1666, is one of the most important of the remaining four. It is divided into eleven sections, that of chemistry being one of the most important, and each section comprises six members. There are at present three vacancies in the French Academy, which is quite an unprecedented circumstance.

ADMINISTERING CHLOROFORM IN SMALL DOSES is the method advocated by M. Nicaise for the induction of anaesthesia. The danger of chloroform is thus reduced to a minimum, anaesthesia being induced without the patient suffering from agitation. The process recommended, after taking the usual precautions as to the purity of the liquid and the state of the patient's health, is that of using flannel as a mask. On this the chloroform is to be applied drop by drop. Flannel has advantages over a linen napkin principally on account of its ventilating properties. Not more than 4 drops should be given at the commencement and then the application may be continued slowly, a drop at a time, without removing the cover from the mouth, at the rate of about 12 drops a minute. In this way 10 grammes of chloroform are generally sufficient. If after the operation the patient recovers consciousness too slowly, it may be hastened by patting the cheek or fanning. M. Nicaise has not lost a single patient under his drop system.

Foreign and Colonial News.

A KING TO OPEN A PHARMACY SCHOOL.—The King of Denmark will open the new National School of Pharmacy in Copenhagen, a splendid building erected and equipped at the national expense, on November 1.

BOTANICAL EXHIBITION AT GHEENT.—A botanical exhibition, which should offer many points of interest from a pharmaceutical standpoint, will be held in Ghent (Belgium) from April 16 to 23, 1893, under the auspices of the Royal Agricultural and Botanical Society of Ghent.

OPIMUM IMPORTS IN THE STATES.—The quantity of opium used in the United States has largely increased during the past forty years, and the increase is out of proportion with the increase of population. In 1854 the amount imported

constitution to physiological action had been well shown in the case of the sulphonals. Both Schmidt and Hesse had certainly proved Ladenburg wrong in his deductions on hyoscine and scopolamine, which were probably identical.

Mr. PARRY, in reply, said he thought the action of antidotes was purely physiological. The tests for many of the alkaloids were, of course, somewhat uncertain, but a good number of them could be recognised with perfect certainty. Ladenburg's separation of inactive atropine into its optically-active isomers opened up a new question as to the theories of optical activity which was too long to discuss in his paper.

BRIGHTON JUNIOR ASSOCIATION OF PHARMACY.

THE third annual dinner of this association took place on October 19 at the Café Royal, Brighton. The President (Mr. A. E. Colman) was in the chair, and the company numbered about forty, including Messrs. J. R. Gwatkin, Marshall Leigh, W. W. Savage, Shepherd, Shelvey, Smithson, Histed, &c.

Among the speeches was a toast to "The Pharmaceutical Society of Great Britain," submitted by Mr. YATES and replied to by Mr. MARSHALL LEIGH, who said that the Society had made great headway during the last five years. The Pharmaceutical Society and its buildings were very different to what they were a few years ago. When he visited the rooms some eighteen years ago they were anything but satisfactory, but now they had a splendid examination-room, together with appliances, of which any pharmacist might be proud. The Society had done a great deal to benefit the trade. They were compelling unqualified persons to discontinue the sale of patent medicines which contained poisons. Since the decision in the chlorodyne case given by the chief magistrate in London, the Society had secured penalties from a large number of grocers having a number of branches. On being approached, they elected to pay the fine and discontinue the sale. They were also about to proceed against some eighty or ninety unregistered persons, and in that way they were doing good to the trade. Mr. Leigh also referred at length to the work of the Benevolent Fund.

Mr. STANLEY SMITH, in giving "The Senior Association of Pharmacy," urged that body to take a more active part in movements affecting chemists. He especially suggested early closing as a suitable field for their energies. Mr. W. W. SAVAGE, in responding, said the Senior Association had already borne the burden and heat of the day, and looked to the junior members to take their places. He also alluded to the benefits now enjoyed by assistants compared with those working some thirty years ago. On behalf of his father, who, Mr. Savage said, had attained his 84th year, he offered a Remington's "Pharmacy" for the best herbarium next year, adding that no doubt others would be glad to offer second and third prizes.

Mr. GWATKIN proposed "The Junior Association," for which Mr. COLMAN (President) and Mr. NOSWORTHY (Hon. Secretary) replied.

LEEDS CHEMISTS' ASSOCIATION.

THE annual general meeting of the above Association was held in the library on Thursday, October 20, Mr. E. Yewdall (Vice-President) in the chair. Mr. F. W. BRANSON (Hon. Secretary) read the "Twenty-fourth Annual Report." The Council recorded with pleasure that, through the liberality of the Council of the Pharmaceutical Society, a grant of 20% had been received in support of the educational work of the Association. As a result, arrangements had been made with Mr. W. West, F.L.S., of Bradford, who last winter delivered a course of twelve lectures on materia medica, with practical instruction in microscopy. The attendance was much smaller than the Council had hoped. The grant had also enabled the Council to purchase a cabinet for the collection of materia medica. The library was said to be in good order, and the books are now in the custody of the librarian of the Church Institute, who will issue them to members and associates on application. The Association's room is at all times open, and gives facilities for using with comfort the books and periodicals. A catalogue of the library has recently been issued. Ten new members and fourteen new

associates had been elected during the year. The Council added, "There never was a time when the interpretation of the Pharmacy Act had greater practical interest for those engaged in pharmacy. Recent decisions on the question of proprietary medicines containing legal poisons, their labelling, and who may legally vend them, have great interest. The Pharmaceutical Society has shown a laudable disposition towards actively supporting the principles of the Pharmacy Act by claiming that the duties which that Act sought to regulate can only be exercised by the qualified class which it created. Local associations must feel it to be a duty to maintain their organisation, and thus be ready to give support to these principles."

Mr. S. TAYLOR (Hon. Treasurer) presented his financial statement, and this and the annual report were adopted.

After several votes of thanks had been passed, a discussion took place as to the desirability of arranging a social meeting at an early date, and it was decided to leave the matter in the hands of the new Council.

The officers for the coming year were unanimously elected as follows:—President, Mr. R. Reynolds, F.I.C.; Vice-President, Mr. E. Yewdall, Ph.C.; Hon. Treasurer, Mr. S. Taylor; Hon. Secretary, Mr. W. D. Pollitt; Council, Messrs. F. W. Branson, F.I.C., G. Briggs, C. G. Catterall, P. Jefferson, Ph.C., G. Ward, F.C.S., and G. W. Norfolk; Auditor, Mr. E. Brown, Ph.C.

DUNDEE CHEMISTS' ASSISTANTS' ASSOCIATION.

THE first of the ordinary meetings was held on Thursday last week, when the President's address was delivered by Mr. James A. Kinnear. He took the well-worn text of unity and co-operation among the members, and gave some sound advice. He also referred to the art of social intercourse which he also regarded as essential to the life of the Association. He briefly reviewed the work to be done during the fourth session, and referred to the recent interpretation of the Poisons Schedule. Mr. Kinnear was heartily thanked for his address on the motion of the Honorary President, Mr. Charles Kerr, who presided.

"POISONS AND THEIR DETECTION" is the subject of the paper to be read before the next meeting of the Manchester Pharmaceutical Association, on November 9, by Mr. Charles Turner, of the Manchester College of Pharmacy.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Tyrer, Joseph, 33 Tithebarn Street, and 50 Landseer Road, Everton Liverpool, chemist. Dated, October 21; filed, October 22. Unsecured liabilities, 70% 15s. 12d. Composition of 2s. 6d. in the pound, payable forthwith. Release, &c. The following are scheduled as creditors:—

	£	s.	d.
Anderson, C. L., Liverpool	31	0	0
Jackson, Henry, & Sons, Liverpool	26	13	4
Pollard, F. W., Liverpool	26	0	0
Reliance Advance Company, Liverpool	40	0	0
Southall Bros. & Barclay, Birmingham	25	2	3
Stern, J., Liverpool	40	0	0
Sumner, R., & Co., Liverpool	80	0	0
Thompson, John, Liverpool	423	15	8

SPONGE-BLEACHING.—After sponges are bleached with permanganate they are very sickly-looking, which objectionable appearance is overcome by dipping them into a solution of helianthin.

THE BREWERS' EXHIBITION.

THE fourteenth annual exhibition and market of what we may for shortness call the beverage-trades was opened at the Agricultural Hall, Islington, on Monday. It is a very big affair this year, and the variety of exhibits is a little astounding. One reporter has said that "more than 600 firms are represented, and employment is given at the Hall to upwards of 3,000 persons. Such has been the demand for stall-space that some 200 intending exhibitors have had to be disappointed." Our own reporter did the show earlier in the day, perhaps, than the one who wrote that, and he could only get the number of exhibitors to 300 with a stretch. And as for the 3,000 persons employed at the Exhibition—well, that's another. Strictly speaking, the Exhibition part of the show is subsidiary, or is made subsidiary, to business. First and foremost it is a market, for hither there come from all parts of the country aerated-water makers and chemists (not to mention the brewers and spirit-sellers, with whom we have no concern); they see the representatives of firms with whom they do business; they have a chat, a cigar, maybe a drop of "Scotch" too, and then they come to business. On such occasions it is appropriate that novelties should be introduced. The soul of man delighteth in all that is new, and it is a harmless fancy to humour, for it leads to business. It is not surprising, then, that the path to success lies thick with the rains of novelties. What does the poet say? But never mind the poet. Here is a poem which Mr. Howell, of STEVENSON & HOWELL, served up—a "golden cider," which tastes fruity and is very refreshing. This, our reporter ascertained, contains no synthetic ethers. Nature only has been at the making of the essence, and the result is what might be expected. Then there was another good thing on all fours with it—"Sparkling Mocha." Here we have the true flavour of coffee, and all its stimulating properties, in an aerated beverage. From that we go to rum—"Not much in your line," was the remark; "still here is a rum-colouring, made from sugar, which mixes clear with 66 o.p. spirit." Then the two branched off into a talk about lead in tartaric acid, which is a matter that is exciting considerable disturbance in the aerated-water trade just now, and Mr. Howell complains of the looseness of the B.P. test for lead. He thickens the statement that "an aqueous solution of the acid is not affected by sulphuretted hydrogen" is much too vague; for a solution of an acid undoubtedly containing lead may be made which will not be precipitated by sulphuretted hydrogen. Moreover, it is the very vagueness of the Pharmacopœia which is responsible for the continuance of much plumbiferous tartaric acid in the market, and there is need for greater precision on the point. Will Professor Atfield make a note of this? Granted that the infinitesimal trace of lead in an acid which passes the B.P. test reasonably applied can do no harm to a human being, still there remains the fact that analysts detect it and show it up as black as the sulphide itself. There the shoe pinches.

Following the catalogue, we next touch MESSRS. W. J. BUSH & Co.'s exhibit, with which are associated the manufactures of W. J. Bush, Faye & Co., of Messina. This is placed in a larger booth than that which the firm had last year, and it is a facsimiled reproduction of a portion of the Messina factory. The firm were well prepared for their provincial customers, the principal's being there with Mr. J. J. Woolley and fifteen travellers. That conveys, as well as anything could, the importance of this Exhibition to the trade, and, said Mr. Woolley, "I have been here now for fourteen years. Whatever part of the country I may be in, I come on here, and every year we have got bigger and bigger." The firm had all their best-known soluble essences on show. They are just placing on the market two concentrated oils made by themselves, lemon and orange, 1 part of which represents 25 of the natural oils.

DAN RYLANDS (LIMITED), Barnsley, showed two new sets of aerating and bottling plant for the first time. These were adapted to the use of liquefied carbonic-acid gas. During the past year the company have started the production of compressed carbonic-acid gas at their Barnsley Works, by new processes which they have patented, and which exclude the use of mineral acids. Mr. McEwen, their consulting engineer, has invented a machine for using the gas produced. This machine is very compact, and

is well adapted for those who have little room to spare (3 feet square serves to hold it) and who wish to work with little mess. The company also showed the "Rapid Paragon" turnover filler for use with power. Over 4,000 of the hand-fillers have been sold, and Mr. McEwen told our reporter that a youth at Stockton-on-Tees managed to fill by hand-power with this machine 150 dozen bottles in one hour. This machine, we find, is also now made for working by steam-power. A good show of glassware added to the attractiveness of the company's stand. They are developing this branch rapidly, and are producing many varieties of glassware in addition to syphons and soda-water bottles. The Standard Essence Company's manufactures were also exhibited.

MR. WILLIAM HAY, of Hall, a pioneer in the soluble-essence industry, had a good assortment of his products at the west end of the hall. Close to him were MESSRS. LE GRAND & SUTCLIFF, hydraulic engineers.

Amongst the things which were to be seen at MR. J. J. HICKS's stand was an ingenious cask-filling gauge. This resembles a syphon, the top being N-shaped. The second limb of the N is widened out much beyond the diameter of the rest of the apparatus to form an air-chamber, and the third limb is also widened and graduated. Into the latter water is poured down to zero, and the apparatus placed in the cask. As the cask is filled the liquor goes into the tube and forces up the water in the top part, whereby an indication is obtained of the volume of liquor in the cask. As a rule, Mr. Hicks's exhibits consist mainly of thermometers, hydrometers, and the like. In the former section he showed several novelties, including a mashing thermometer, in a strong wood carrier, which comes out much cheaper than those made of brass. In these the bulbs are replaceable, all being made to a common standard. Another novelty is Fuller's cleanable tap, in which the bore is equal throughout, so that it can be cleaned without removing the plug.

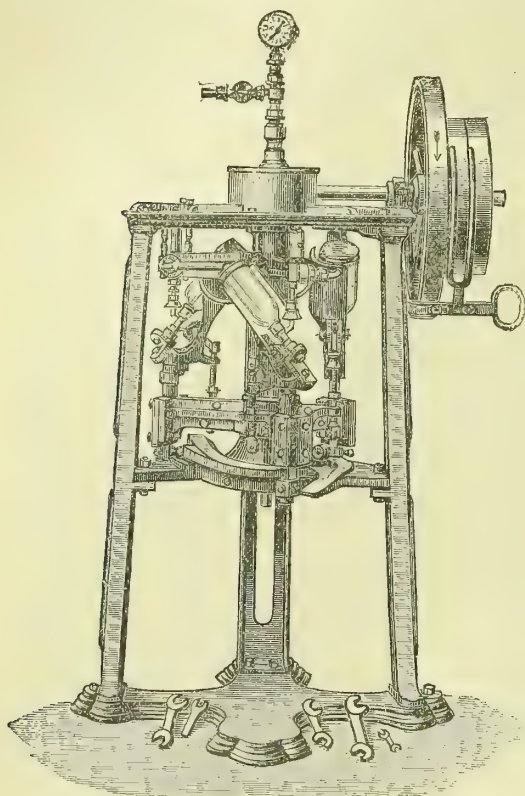
BRATBY & HINCHLIFFE (LIMITED) managed both by their position and the attractiveness of their apparatus to keep a goodly company of critical and appreciative visitors round their stand. The centre of attraction here was, undoubtedly, Chavasse's turnover filling-machines, which work with human-like regularity, and fill 150 to 200 dozen bottles per hour.

MESSRS. W. MEADOWCROFT & SON claim to have the largest bottling-machine on show which has ever been produced. It has 4-inch pumps, with a 12-inch stroke, and can keep ten steam fillers working—that is, produces as much water as will keep fifty horses on the road. The machine is essentially a saturator, so arranged that if it is not used to its full power there is no waste. This is secured by the adaptation to it of a new self-indicating valve, which is actuated by a ball and weight. Whenever the water reaches a certain level in the saturator the ball is filled and drops, cutting off the supply. It is a matter of experience that saturators should never contain more than half their volume of water, otherwise the aerated product is not so brisk. This valve-arrangement of Mr. Meadowcroft's ensures this in spite of careless men. The size of this machine threw the remainder of the exhibit somewhat in the shade, but the firm still continue essence-manufacture.

MESSRS. C. H. GLOVER & Co. were showing their steel-wire bound boxes. They are manufacturers of druggists' wood boxes as well as those for beverages, but the latter sufficed for the Exhibition. These, we may say, after being dovetailed and nailed, have a strong steel wire fitted into a groove round the joints, the result being a box of great strength and durability. Bottle-washing trays and trolleys are made by the firm on the same principle.

There were two novelties in MESSRS. BARNETT & FOSTER's stand to which we should like to call attention owing to their ingenious nature. One was an improvement upon the "Excelsior" turnover filling-machine for stoppered bottles. This has attached to it a syrup-pump with a glass bucket. The capacity of this bucket is altered by moving a small lever, the effect of this being to increase or diminish the quantity of syrup as desired—indeed, it can be reduced to *nil*. It is impossible to see the "Eclipse" syphon-filler in action without admiring the mechanism. It carries three syphons on a slowly-revolving table, and it is in watching the various parts come into play that the interest attaches. When an arm reaches the left-hand standard we see a tiny

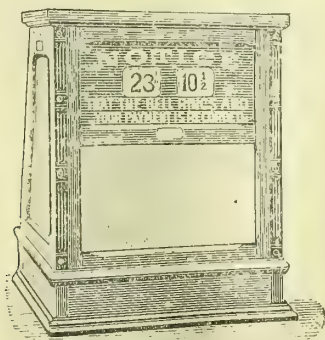
rod rise from the syphon-lever, the syphon is closed, the connection with the reservoir cut off, and we may remove the syphon and put another in its place. Then we see the little rod come into play again, and by the time the arm



gets round to the right-hand stand the syphon has been opened and is being filled. All this was noted, and twelve seconds was found to be the time taken. The machine works with great regularity.

Amongst other firms who exhibited on the ground floor we noticed the following: MESSRS. HASSALL & Co., phosphoric acid. Messrs. Hassall, it may not be generally known, are also manufacturers of pure phosphoric acid (syrupy) for medicinal purposes. MESSRS. HERTZ & COLLINGWOOD, Rosbach water; DURAFORT ET FILS, a fine show of syphons and seltzogenes, with porcelain-lined metal parts; THE SILICATED CARBON FILTER CO.; BRAND & Co., beef-preparations; BOVRIL (LIMITED); F. KING & Co. (LIMITED), desiccated soup; JOHN SYMONS & Co., cyder; THE JOHANNIS CO. (LIMITED); and LOFT'S PATENT CHECK-TILL CO.

THE CASH REGISTER COMPANY, of Manchester, explained to our representative the action of their "International"



check-till. The distinctive feature of this is the dial arrangement (very like that of a gas-meter) for making the record of the sale. When opening the till one hand is used to move the index-levers, whereby the amount of the pur-

chase is brought into the view of the customer and recorded by the dials, and the other hand releases the drawer. It is all very simple in action, and is worth looking into by those who require a handsome till and secure check. Our illustration is of the front of the till, which is quite attractive.

R. W. ANDREWS & Co., makers of filtering apparatus, called our reporter's attention to an "atmospheric yeast-press and beer-filter," which they thought would be useful to manufacturing chemists for quick filtration and collection of precipitates. The filter is a large oblong trough with a false bottom of wire netting fixed in a wood frame. This, after being luted down, has filtering-cloths spread over it, the fluid is put in, and then steam is allowed to pass through the exhaust-pipe. A vacuum is thus created, and filtration goes on rapidly. Of course the surface is large and level.

THE GALLERIES.

The exhibits in the galleries were of the "catering" class, but there also many firms were glad to take space who could not get it below. Here, for example, was MR. WM. GARDNER, with a good selection of sifters and mixers. As some people want sifters, and others mixers, Mr. Gardner now makes these as well as the combined machines. Of the latter the newest thing is the "centrifugal dressing-machine," a sifter which will sift up to, say, No. 200 powder, but simultaneously the machine may divide a mixture into as many as four grades of powder, that being merely a question of sifting-cloths. The work is done by one or more worms, which are revolved with great rapidity inside the cylindrical sieves. The whole works without producing dust.

THE CATLEY ABBEY NATURAL SELTZER COMPANY, of Metherington, have, it appears, secured a firm hold with their water, which is increasing in popularity.

MESSRS. S. CLARK & Co. had a very cosy-looking exhibit of their gas and oil heating-stoves, which many chemists are familiar with as the "Syphon." Beside them were JAMES BOULTON & Co. (LIMITED), the makers of "Semper dulcis" and other chemical manufactures. THE BIRKFIELD FILTER COMPANY and THE GLASS-LINED SYPHON COMPANY (LIMITED) were together at, on the whole, an attractive spot and the representatives of each had ample opportunity for describing their company's products. For the first time we notice JOHNSEN & JØRGENSEN at the exhibition, with some very good samples of s.w. bottles, spirit-flasks, &c. F. KENDALL & Co., of Stratford-on-Avon, also exhibited in the gallery a series of brown colourings, which are claimed to be non-fermentable owing to the fact that they are not made from fermentable sugars. THE NATIONAL CASH-REGISTER COMPANY had their old position in the galleries for a splendid exhibit of their tills.

COMPETITION.

The ginger-ale and non-excisable fermented beverages competition was decided on Tuesday. This was for two silver and two bronze medals, and three certificates. Each competitor (there were about 120) had to submit six bottles of one or of each beverage to the judges, who were Messrs. W. Bratby, J.P., James Johnson, and J. T. Norman, F.C.S. The results were, in the ginger-ale competition: F. C. Batchelor, Alresford, Hants (silver medal); R. D. Green, Brightlington, Yorks (bronze medal); Cater, Hoffell & Forth (very highly commended); G. Hirst, Liversedge (highly commended); and the Tadcaster Towers Brewery Company, York (commended). For non-intoxicating fermented beverages the awards were: E. Lyon, Prescot (silver medal); D. Clifton, Stockport (bronze medal).

In accordance with their custom, Messrs. Hayward Tyler & Co. had a small exhibition of their own at their works in Upper Whitecross Street, E.C. Amongst the novelties which the firm displayed were a 185-gallon cylinder and the "AAL" machine. The latter has been introduced as a powerful machine, specially suited for filling syphons. It is furnished with a 2½-inch pump and a 12-gallon copper cylinder fitted with two draw-off cocks. Great strength and durability are the main features claimed for it. The output upon a ten-hours' working-day is calculated at 1,500 dozen of sweet drinks in patent bottles, 800 dozen of 10-oz. bottles of highly aerated soda water, 200 dozen of large syphons, and 400 dozen of pint syphons. The firm also exhibited a number of their well-known steam and hand bottling machines.

MAJOR EXAMINATION.

Questions set by the Board of Examiners for England and Wales to October candidates, to which are appended model answers.

MATERIA MEDICA.

(Time allowed : Three hours.)

Question 1. Give an account of the aloes of commerce and their physical characteristics.

Answer. The aloes of commerce are derived from various species of *Aloe*, N.O. *Liliaceæ*. Four well-marked varieties occur, as well as subordinate modifications of each.

1. Barbadoes Aloes (from *Aloe vulgaris*): This is imported in gourds or boxes. It is hard and dry, and varies in colour from liver to almost black; its odour is disagreeable, and it has a dull, waxy fracture. When powdered it is olive-yellow. A thin layer moistened with spirit exhibits numerous crystals when examined microscopically. A somewhat more translucent variety with a distinctive odour is called Curaçoa aloes.

2. Socotrine Aloes (from *Aloe Perryi*): When freshly imported it is softer than the preceding kind, and it has a much less disagreeable odour. Its colour is reddish-brown, and its fracture is either smooth and resinous or, less commonly, rough and irregular. The powder is tawny reddish-brown. Crystals are visible in it when treated as already described. Hepatic Socotrine aloes resembles the above save that it is liver-coloured; its commercial value is somewhat less.

3. Cape Aloes (from *A. ferox* and *A. spicata*): This kind has a brilliant conchoidal fracture. Its colour is dark in mass, amber in small fragments, and tawny-yellow in powder. Its odour is aloetic with a certain added sourness. Crystals are not seen in it, and its commercial value is much less than that of the Barbadoes and Socotrine.

4. Natal Aloes is generally greyish-brown and opaque. Its odour is different from that of Cape aloes, from which it is further distinguished by showing crystals in the same way that Barbadoes and Socotrine do.

Question 2. Examine by the microscope the samples of *linseed meal*, 1, 2, 3, and state if any admixture.

Question 3. What are the adulterations of white and yellow wax, and how would they be detected?

Answer. Wax has been adulterated with many substances, such as earth-wax, ordinary hard paraffin, Japan wax, suet and other fats, resin, soap, flour and other starchy bodies, and insoluble matters such as kaolin and bone-ash. Turmeric is also used to give a good colour to inferior yellow wax. In examining a sample it must first be remembered that adulterations will probably affect the melting-point and the specific gravity, hence both of these should be determined. If wax be boiled with water, the cooled filtrate will give a blue colour with iodine if starchy matters be present, and a separation of fatty acid will be produced by adding a mineral acid to the filtrate if there be soap in the sample. Cold rectified spirit dissolves only 3 per cent. of pure wax; a larger solubility would probably indicate adulteration with resin. Hot turpentine entirely dissolves wax, but would leave kaolin, bone-ash, &c., undissolved. Boiling solution of soda ought to have no action, but would produce a brown colour with turmeric, and would dissolve out Japan wax, suet, fatty acids, &c., the filtrate in this case becoming turbid with acid. hydrochlor. dil. If the wax be destroyed by hot sulphuric acid, paraffin and earth-wax will be left, they being but little affected by this reagent.

Question 4. Describe the structure of a transverse section of a root of aconite and horseradish.

Answer. A transverse section of aconite-root exhibits a white central axis of an irregular shape, possessing about seven rays, and having a thin fibro-vascular bundle at each projecting angle. Horseradish-root in transverse section shows a large central column, with its tissues arranged in a radiate and concentric manner, and separated from the firmly adherent cortex by a small greyish circle.

Question 5. Give a description of manna, and how obtained.

Answer. Manna is derived from the *Fraxinus Ornus*, N.O. *Oleaceæ*. It occurs in pale-coloured stalactitic pieces, has a

sweet taste, and is soluble in about six parts of water. It should contain nearly 80 per cent. of mannite [$C_6H_8(OH)_6$]. The other constituents are, besides indefinite matter, a sugar possessing considerable reducing-power, a little mucilage, a still smaller quantity of an offensively-smelling resin, and a glucoside called fraxin, which confers upon a solution of manna the property of fluorescence. It is obtained from trees cultivated in Sicily, by making cuts in the bark about 2 inches long, and just deep enough to reach the wood. The manna exudes from these notches and is allowed to partially harden upon the tree. It is then pulled off, laid upon boards, and exposed to the air till it becomes dry enough to admit of packing.

BOTANY.

(Time allowed : Three hours.)

Question 1. Draw a diagram of the natural order *Gentianaceæ*, and name some of the indigenous plants in the order.

[Note.—Instructions for drawing floral diagrams are to be found in Prantl and Vine's (page 196), and by their aid it will be easy for the student to construct the diagram of the *Gentianaceæ* from the characters of the order. The indigenous plants are *Chlora perfoliata*, *Microcala filiformis*, *Erythraea Centaurium*, *Gentiana* (six species), *Menyanthes trifoliata*, and *Limnanthemum peltatum*. ED. C & D.]

Question 2. What are diatoms and desmids, and state how are they increased, and how do they differ.

Answer. Diatoms and desmids are unicellular algae belonging to the order *Conjugatae*. Sexual reproduction takes place in this order by means of conjugation—i.e., the union of the whole protoplasmic contents of two cells to form a zygospore. Asexual reproduction occurs by the division of the individual into halves. The difference between the two groups may be thus summarised: The diatoms are found both in salt and fresh water, they contain a dark-yellow form of chlorophyll, and are provided with a cell-wall or frustule loaded with silica. This cell-wall is composed of two halves, and is often extremely beautiful. Desmids are green in colour, occur only in fresh water, and have not a silicious envelope.

Question 3. How are starch, gum, and sugar formed in plants?

Answer. (a) Starch is formed in the chlorophyll granules under the influence of light, possibly as a result of the polymerisation of formic aldehyde with elimination of water. From the chlorophyll it is removed in a soluble form either for immediate consumption in the growth of the plant or, more commonly, to be redeposited as starch granules and stored up for future use. (b) Sugar is formed either from previously prepared starch, or *de novo* in the chlorophyll granules. (c) Gum is called a degradation product, and appears to arise from the alteration of cellulose.

Question 4. What are assimilation and metastasis [sic], and in what parts of plants do they take place?

Answer. The term assimilation is ordinarily applied to that formation of organic matter from inorganic carbon dioxide and water which takes place in the chlorophyll granules under the influence of light. This may occur in any green part of the plant but, in most cases, the leaves are the chief seat of the process. Assimilation is accompanied by elimination of oxygen, and tends to increase the weight of the plant. Metastasis is the name given to the chemical metamorphoses which the products of assimilation subsequently undergo, whether such metamorphoses occur in the chlorophyll cells themselves or take place after the removal of the assimilated material to other parts of the plant. Metastasis is not confined to any special organs, but may be carried on in any part of the plant, and equally well in darkness as in light; it is accompanied by the absorption instead of the elimination of oxygen, and does not tend to increase the dry weight of the plant, but rather to diminish it.

Question 5. State the sources of the food of plants, and by what means is it taken up by them?

Answer. The two sources of the food of plants are (a) the air, (b) the soil or other medium in which they grow. The air enters the leaf by means of the stomata, and fills up the whole intercellular system of the leaf just as it fills the lungs of an animal. From this air the carbon dioxide is taken and suffers decomposition, its carbon being retained and its oxygen exhaled. Except in the case of parasitic plants and

saprophytes, it would appear that the whole of the carbon which enters so largely into the composition of the plant is obtained in this way.

From the soil the plant absorbs, by means of its root-hairs, water and the substances dissolved in it. The acid sap contained in the cells, and which saturates their walls, exercises a solvent action on constituents of the soil which would otherwise be insoluble, and thus the absorption of these constituents is brought about. It is from the soil that the plant obtains its hydrogen, oxygen, and nitrogen, as well as its supply of the elements commonly called inorganic.

Question 6. Describe the fruits marked 1, 2, 3, 4, 5, 6.

Pharmaceutical Society of Ireland.

PHARMACEUTICAL LICENCE EXAMINATION.

October, 1892.

PHARMACEUTICAL CHEMISTRY.

Dr. Ninian Falkiner.

1. What are the impurities of syr. phosph. ferri, potassium iodide, and calomel—how are they detected?
2. How can an acetate, a chlorate, and a nitrate be distinguished by chemical tests?
3. What is an alum? Give the formulæ for the official alums.
4. How is ethyl ether prepared? Give formulæ.
5. How does HNO_3 act upon the following:—
Ag, Cu, Fe, Zn, Pt, $\text{C}_6\text{H}_{10}\text{O}_5$, $\text{C}_2\text{H}_5\text{OH}$, $\text{C}_3\text{H}_5(\text{OH})_3$.

GENERAL CHEMISTRY.

1. State the principle of Avogadro, and show how it is applied to finding the atomic weights of the elements?
2. What change takes place in the vol. of 1,000 ccs. of O. at zero if the temperature rises through 20°C .
3. Define the terms—
Rational formula; empirical formula; graphic formula; hydrocarbon; alcohol; ether.
4. What is a salt? Give a classification of "salts."
5. What are the chemical analogies of the Halogens?

PRACTICAL CHEMISTRY.

Dr. Ninian Falkiner.

1. Box contains a salt.
2. Box contains a metal.
3. Box contains an organic substance.
4. Bottle contains a solution of H_2SO_4 ; calculate the weight of H_2SO_4 in each fluid ounce.

MATERIA MEDICA AND BOTANY.

R. J. Montgomery, M.A., F.R.O.S.

[Three of the *materia medica*, two of the *botany* questions to be answered.]

1. "A powder which consists of the minute glands and hairs obtained from the surface of the fruits of *Mallotus philippinensis*." Name the drug, and give characters, test, and dose.
2. Name and give the characters, tests, doses, and preparations of the official hydrochlorates of the alkaloids.
3. "Confectio aromatica." Name and describe the seeds contained in this preparation.
4. *Podophyllum rhizome*. Source, characters, and preparation, with dose.
5. Borax.—Synonyms, definition, characters, tests, and preparations.
1. Write out a full botanical description of *Rosa canina*.
2. Give the general character of the Spurge family, and mention the B.P. representatives.
3. Explain the following botanical terms which occur in

the B.P.:—Raceme, mericarp, vittae, capitula, rhizome, epicarp, dissepiments, stocks, stools, corm, panicles, napi-form, fusiform.

PRACTICAL PHARMACY.

Mr. T. W. Robinson.

1. Enumerate the dilute acids of the B.P., giving strength and dose of each.
2. What is nux vomica? State accurately how each official preparation of it is made.
3. Describe the mode of preparing—
(a) Unguentum cantharidis; (b) unguentum cetacei; and (c) unguentum hydrargyri nitratii.
4. Mention the official hypodermic injections, and state how the injection of morphia is made.
5. Supply the official synonyms for the following:—
Eserine, guaranina, ext. elaterii, myristicæ adeps, hepar sulphuris, liq. sarsæ.

MODERN PHARMACEUTICAL JOURNALISM.

In the New York *Druggists' Circular*, Mr. George J. Seabury reflecteth as follows:—

I have hesitated to express my opinion on the relative merits of advertising in pharmaceutical journals by drawing a comparison between those that have a *bonâ-fide* paid up subscription-list and send out a limited number of sample copies, and journals that have a small subscription-list and a very large sample-copy circulation, for the simple reason that nearly all of the pharmaceutical journals throughout the United States have, at various times, received support from our house.

In the front rank of modern pharmaceutical journalism we must place all long-established journals that have had for many years a paid working staff, and that have a local habitation and name. Such journals favour their subscribers with original editorials and contributions of a scientific, educational, and commercial nature, together with abstracts from foreign sources of value to their readers, and contain, in addition to all these necessary features, a variety of practical information.

The most valuable mediums to the advertiser in this class of journals are unquestionably those that have the largest number of subscribers. Even if we had in the United States a dozen pharmaceutical journals that could be classed as legitimate enterprises, or as the inanimate spokesmen of some of our colleges of pharmacy, the fact remains that each one of these would have a value, and that value should be determined on an actual paying circulation. Paying subscribers, as a rule, carefully read their journals.

As to sample copies, so far as I am concerned, I simply glance over the matter contained therein and pay no attention whatever to the advertising columns, for reasons which I need not explain. There are several very excellent pharmaceutical journals in this country. There are also a great many semi-pharmaceutical journals, whose existence is perpetuated through the glib and dishonest assurances of some romancing solicitor of advertisements, and whose representatives always tell the truth (?) as to the circulation of their journals. The advertiser usually receives for his investment nothing beyond a sample copy to show that his advertisement was printed in the journal by some enterprising printer.

Now a few words for the gay and festive house journal. These publications owe their existence to the survival of the rebate plan and a desire to issue a catalogue at someone else's expense. In the intense strife of modern competition between wholesale druggists throughout this country, manufacturers and owners of specialties are generally applied to "to pay the freight" on the publication. When successful, the solicitor for such journal ghosts over the fact that "he has just corralled the Smith & Jones Pharmaceutical Co.'s advertisement for \$200 per annum." In looking over their business transactions with the Smith & Jones Co. they find a record of purchases for the past year to the amount of \$400. Gently placing his index finger on his commercial

nose, he addresses his partner thus: "Seest thou? We've got 'em again. We have purchased a year's supply of their goods at 50 cents on the dollar."

The expert advertiser draws his own conclusions as to the value of such mediums. There is a small percentage of house journals that are valuable to advertisers and which are also welcomed by their customers, but there is a long line of them, like hundreds of medical journals, that are issued solely with a view to individual profit, which, in my judgment, are practically worthless, and published only for tribute and business for an enterprising publisher or printer. Alluding to this latter class of journals, it is not a pleasing thought for the well-established manufacturer to be quietly informed that if an advertisement for his commercial journal is not forthcoming, his goods will be discriminated against by the substitution of other makes for his. Such threats often come from apparently respectable houses, and advertisements solicited on such a basis represent pure and simple blackmail; no self-respecting concern will submit to such a contemptible "stand and deliver" transaction.

My advice to advertisers is to advertise in pharmaceutical journals of known circulation. In the selection of them, use your best judgment as to their value as a circulating medium. If they will show you their list of paying subscribers and their books with cash receipts from subscribers for several years back, then you have a foundation to operate upon. If I were to advise in which journal, pharmaceutical, medical or commercial, you ought to advertise, and gave you that advice honestly, I should probably be the most unpopular man in the United States among publishers. Moreover, I do not propose to offer gratuitously in a public letter twenty years' experience of what I know about advertising. Should a request be made of me to furnish such information, the price will come quite high; but, for all that, it will be mighty cheap.

Legal Reports.

INFRINGEMENT OF THE FACTORY ACTS.

At the Nottingham Police Court, on October 21, Messrs. Newball & Mason, manufacturing chemists, Hyson Green, were summoned at the instance of Captain Bevan, Inspector of Factories, for having failed to securely fence a horizontal shaft on their premises, by which a youth named George Edwin Clarke was killed. The accident has been already reported in this journal. There was a long table in front of the shafting, but the solicitor who appeared for the defendants admitted that this was not sufficient to fulfil the requirements of the Act. After evidence had been given of the accident, George Edwin Clarke, the father of the deceased boy, stated that the defendants had paid the funeral expenses, and had promised him something else. Mr. Green, the defendants' solicitor, said no sum had been mentioned. He had taken the responsibility of advising the defendants to wait until those proceedings were over. Witness said the defendants had behaved well to him over the matter. Mr. Green explained the precautions that had been taken, and urged that the penalty should not be of such an amount as would lead the outside world to think his clients were guilty of any really very culpable negligence in the matter. He called evidence, and in reply to the Magistrates said he would undertake to advise his clients, and there was no doubt the boy's father would get what he was entitled to under the Employers' Liability Act, in addition to whatever penalty was imposed. A penalty of 25*l.* and costs was thereupon imposed, and the Magistrates expressed the hope that the Home Secretary would pay this money to the lad's father. Captain Bevan undertook to lay the matter before the Home Secretary.

DEFERRED SALARY.

In the Manchester County Court, on October 25, before His Honour Judge Heywood, John Henry Metcalf, assistant chemist and dentist, sought to recover the sum of 16*l.* 16*s.* from his former employer, Mr. Richard Twemlow, chemist, druggist, and dentist, 91 Upper Brook Street, Manchester.

The plaintiff was represented by Mr. McKeand, barrister; and the defendant by Mr. Smith, solicitor. The case for the plaintiff, as stated by him in evidence, was that in January, 1889, he was engaged by the defendant as his assistant, at 25*s.* a week, with a commission on dental work, but as a matter of fact the defendant never gave him less than 30*s.* a week, and afterwards the amount was increased first to 35*s.* a week, and afterwards to 2*l.* After he had been at Upper Brook Street for some time he went to manage the defendant's shop in Ducie Street, Oxford Road. From May, 1891, to May, 1892, he received 2*l.* a week. In the latter month the business was as good as ever, and there was no reason to reduce his wages on that account, but the defendant came to him and told him that Messrs. Woolley were pressing him for an account he owed them, and in order that he might be able to pay them he would be glad if plaintiff would take 10*s.* a week less, which would be refunded to him when the defendant sold the business, as he was then trying to do. To oblige Mr. Twemlow, who was short of cash, he consented to do so. Of the amount he now claimed 8*l.* 10*s.* was for seventeen weeks' arrears of wages at 10*s.* per week, and 8*l.* for four weeks' wages at 2*l.* per week in lieu of notice. The remaining 6*s.* was for commission on dental work, but that he was prepared to forego. In cross-examination, he denied that his wages were reduced because the business had fallen off. Frank Fowler, who entered the defendant's employment in September, 1891, stated in evidence that the defendant offered the Ducie Street business to Mr. Gelston for 450*l.* or 500*l.*, but the business was afterwards sold to Mr. Pare for 350*l.* Mr. Twemlow, the defendant, gave evidence to the effect that he was compelled to reduce plaintiff's salary because of "bad trade all round." The profits of the Ducie Street shop steadily decreased from the time Metcalf undertook the management of it. In the end he simply kept Metcalf on sufferance from week to week. He ultimately told Metcalf that he would either have to submit to a reduction or have to go, and he gladly accepted the reduction, because, in addition to the money, he was provided with a house and coal and gas. He admitted that he promised to the plaintiff that, if Mr. Gelston purchased the business, he would endeavour to make it right with him as to the 10*s.*; but Mr. Gelston did not purchase the business. In other respects he was prepared to do what he could in the way of befriending Metcalf if this dispute had not arisen. Cross-examined: He owed Messrs. Woolley 200*l.*, but they were not at all pressing him for the money. He was afraid they were going to press, and he said so to Metcalf, although he was sorry he had done so. With some little difficulty he could have paid Messrs. Woolley without selling the business. It was only out of kindness that he promised to see about the 10*s.* in the event of Mr. Gelston purchasing the business. This was all the evidence. His Honour said there was an unfortunate discrepancy, such as often arose, between the evidence on the two sides. He could only consider which was the more reasonable or probable story. He thought it was quite clear that the defendant could not have wished to get rid of the plaintiff at a time when efforts were being made to sell the business. The plaintiff's story seemed an exceedingly reasonable one, and he decided in favour of the plaintiff for the full amount claimed, less a small sum which had been paid into Court. Judgment was given accordingly.

A CHEMIST'S MANAGER'S CLAIM.

In the Westminster County Court on Wednesday, before His Honour Judge Bayley, Mr. John S. Parker, a qualified chemist, sought to recover two weeks' wages for services rendered, and one week in lieu of notice from the defendant, Mr. Moore, who in June last was about to open a chemist's shop in Seymour Street, Bayswater. According to counsel's opening statement, the plaintiff was engaged by Mr. Rowe, manager to Messrs. Barclay & Co., wholesale chemists, who acted in this case as agent for the defendant. It was arranged by Mr. Rowe that plaintiff was to have a salary of 2*l.* per week and commission. He entered upon his duties in due course, but had only been there nine days when he was summarily dismissed by Mr. Moore, who stated that Rowe had no authority to engage him. He then asked for the wages due to him, but the defendant refused to pay him, and, consequently, this action was commenced. Mr. Parker,

in his evidence, said he was a qualified chemist. He first heard of this engagement through Mr. Rowe, who appointed him then and there to act as manager. In pursuance of the agreement he went to the shop at Seymour Street and admitted himself with the keys which Mr. Rowe gave to him. He at once set to work putting the shop in order for the purpose of starting the business, and engaged an assistant to help him. Altogether he was there for seven days at work, and did his utmost to put everything in order.

His Honour said it would be more regular to hear Mr. Rowe as to the agency.

Plaintiff, cross-examined, said he was dismissed by Moore at the end of nine days, and no reason whatever was given him. That happened on Tuesday, June 7. Rowe had known him for many years as having been in the employment of eminent chemists.

Mr. Alfred Rowe was then called, and said he was manager to Messrs. Barclay & Son, wholesale chemists, of Farringdon Street, and he had a conversation with Moore about the engagement in question. Moore asked him to engage an assistant for the business in question, and accordingly he engaged the plaintiff Parker for that purpose. The keys of the premises were handed by him to Parker. He (witness) could not say whether the plaintiff did any work in the shop or not. After the engagement witness saw the defendant on the subject, but could not say whether he told him on that occasion that he had engaged the plaintiff, but he saw him again at a later date, when he expressed great indignation at the engagement as he did not like the plaintiff's appearance.

Cross-examined: He admitted that a letter produced was in his handwriting, written to Moore, in which he praised the capabilities of the plaintiff as a manager. The defendant Moore then wrote back and expressed indignation at the plaintiff having been engaged without his having even seen a reference as to his capabilities as a chemist's manager. He (witness) was all along under the impression that Moore desired him to engage a manager, otherwise he would certainly not have done so. Moore might have only asked him to recommend a man, but his impression was that he was to engage one out and out.

The defendant's solicitor at this stage submitted that there was no case for him to answer; but his Honour said he thought there was.

The plaintiff was then recalled for further cross-examination, and said he formerly carried on business as a chemist on his own account at High Street, Camden Town; but he denied that a sixpenny dispensary which opened next door had crippled his trade. He did, however, give up his business, as trade was bad. He did not see the defendant Moore while he was at the shop, but he thought his engagement by Mr. Rowe on Moore's behalf was a thoroughly *bona-fide* one. He (plaintiff) left the premises at the expiration of nine days, and at the request of Moore, who said he did not want his services. Moore never told him that he would have nothing whatever to do with him, and that Rowe had no authority to engage him. He did not remember having answered advertisements in *THE CHEMIST AND DRUGGIST*, but he might have done so. He could not say whether he answered advertisements while he was at the shop in Seymour Street.

For the defence Mr. Moore was called and said he carried on business at Vigo Street, Regent Street. In June last he was engaged in promoting a chemist and druggist business in Seymour Street, Portman Square, and in the course of a conversation with Mr. Rowe he (defendant) said he should be wanting a manager to fill the position, but he must be a man of undoubted character and integrity, and must be a person of good appearance. Rowe then said he knew just such a man as would suit him, and that was as far as the matter went on that occasion. Subsequently he learned that the plaintiff was actually installed in the shop, but he (defendant) never gave any authority for the engagement, and told the plaintiff at once that he could not keep him, and even if he paid him 5*l.* a week to stay there.

Cross-examined: He was a builder by trade, but had had great experience of the chemistry trade. His authority to Rowe was to engage a first-class man with the highest qualifications and references, and also one who was a total abstainer. As soon as he saw the plaintiff he told him at once that it would be impossible for him to retain him in

his service as he was totally unsuited to his requirements. He could not say whether or not there was a written authority for Rowe to engage a manager on his (defendant's) behalf, but there might be such a letter in existence.

Mr. Henry Haydon, manager to the defendant, said that a letter was received from the plaintiff in answer to an advertisement which appeared in *THE CHEMIST AND DRUGGIST*, and the letter arrived during the interval in which the plaintiff alleged that he was employed at the shop in Seymour Street.

Counsel for the plaintiff submitted that the defendant had admitted that he gave Rowe an authority to engage a manager under certain conditions, and it had not been proved that the plaintiff did not answer the requirements referred to.

The defendant had allowed the plaintiff to remain in his service for nine days and never took any action to repudiate the engagement, therefore it was clear that the plaintiff was entitled to be paid for the work which he had done, and to receive a week's salary in lieu of notice.

His Honour said he thought it was clear that the defendant was entitled to a verdict, as the plaintiff's letter which had been put in in answer to the advertisement stated that he was disengaged and could go in at any time. Verdict for the defendant, but there would be no order as to costs.

WHAT IS "LIQUORICE"?

At the Southwark Police Court, before Mr. Marsham, October 26, E. J. Doidge, 78 Bermondsey New Road, wholesale confectioner, was charged, under the Sale of Food and Drugs Act, with having sold for liquorice a confection usually known as liquorice-pipe, the same not being of the nature and substance of the article asked for.

John Barker said that, at the instance of Inspector Thomas, he went to the shop of the defendant on September 16 last and asked for 1 lb. of liquorice. He was served by a girl. He paid for the article and gave it into the hands of the inspector, who came into the shop after the purchase. In answer to the defendant, he said he paid 6*d.*; he did not know what liquorice was.

Henry Thomas (inspector under the Sale of Food and Drugs Act) said he sent the last witness into the shop. He saw the girl and Mr. Doidge. He said he was an officer of the Vestry, and wanted the liquorice for analysis. He divided the purchase in the usual way, and sent one portion to the public analyst, who certified on the certificate produced that the article purchased contained 50 per cent. of liquorice extract and 50 per cent. of starch and other foreign matters.

Mr. Doidge said the previous witness asked for liquorice pipes. The girl who served the article was not in court. She was a new hand. She showed the purchaser a box of the liquorice pipes, and asked him, "Would that do?" and he said, "Yes."

The witness denied this.

Mr. Marsham: There is an article known as liquorice, is there not?

Mr. Doidge: They asked for liquorice, and the girl naturally thought the liquorice pipes were liquorice. People who bought "Solazzi" liquorice usually bought it in penny-worths or two-pennyworths.

Richard Bodner, public analyst to the Bermondsey Vestry, said he had examined the sample purchased, and gave the certificate produced.

Mr. Marsham: What is liquorice?

Mr. Bodner: There is the liquorice-root, and the more or less pure extract. He should have understood that the purchaser wanted the extract called "Solazzi" in the trade. An ordinary person going into a shop and asking for liquorice would mean that extract.

Mr. Doidge said the goods were invoiced to him as liquorice pipes, and his assistant told him that the purchaser when asked said they would do.

Mr. Marsham: But if I had gone into your shop and asked for liquorice, I should not have expected to get this.

Mr. Doidge: We should certainly have asked you what kind of liquorice you wanted.

Mr. Marsham: Why did not your assistant ask him?

Mr. Doidge: She wholly mistook him. He did not ask properly for what he wanted.

Mr. Marsham: I think he did. He certainly did not say "unadulterated," and you did not give him any label upon it to say it was half starch.—Fined 20*s.* and 12*s.* 6*d.* costs.

BANKRUPTCY REPORTS.

Re J. N. WISE, Claypath, Durham, Chemist and Druggist.

THE adjourned examination of this debtor was held recently. The Official Receiver stated that the amended deficiency account asked for at the last examination had been put in, while the debtor had answered other questions as to his father's will. Mr. A. M. Appleton, for the debtor, asked that a certificate as to Mr. Wise's health during the early part of 1891 be put in, and urged that in consequence of debtor's ill-health he had had to absent himself from his business and leave it to the care of assistants. In a great measure he attributed the debtor's state of affairs to the enforced neglect. The Registrar said that when the debtor made the application for his discharge before the judge would be the proper time to produce the certificate. Mr. Appleton said that was the reason he wanted the certificate formally put in. The Registrar ruled the application out of order, and the debtor was allowed to pass.

Re FRANK NORTHCOTT (trading as Northcott & Sons), 13 Rood Lane, E.C., Chemical-broker, &c.

THIS debtor attended a sitting of the London Bankruptcy Court on Friday, October 21, before Mr. Registrar Brougham, and applied to pass his public examination upon accounts showing total liabilities 2,925*l.* 6*s.* 8*d.* (unsecured, 2,620*l.* 17*s.* 7*d.*), and assets, 114*l.* 3*s.* 6*d.*

Questioned by Mr. G. W. Chapman, Assistant Official Receiver, the debtor stated that in 1875 his brother and he joined their father in the partnership of Northcott & Sons, chemical-brokers. Their father died about twelve years ago, leaving the business to them on the condition that they paid an annuity of 600*l.* to their mother from the profits. The capital due to their father was ascertained at that time to be about 1,700*l.*, and it was allowed to remain in the business under the above condition. The annuity was paid to Mrs. Northcott in full for about four years, but it then had to be reduced owing to the diminution of the profits, and latterly it was only 100*l.* per annum, which sum had been paid up to last January. In 1886 the firm was in difficulties, and made a private arrangement with the creditors, who accepted a composition of 1*s.* 9*d.* in the pound. The liabilities then amounted to 5,000*l.* or 6,000*l.*, exclusive of Mrs. Northcott's claim in respect of their late father's capital. The composition was paid with the assistance of 150*l.* borrowed money, and witness and his brother continued to trade as before. The brother left the business about three years ago (June, 1889), neither receiving nor paying anything upon retiring from the firm. No statement of affairs was then made out, and witness gave his brother no written release from the liabilities then outstanding. The dissolution, however, was duly gazetted, and witness subsequently continued the trading alone down to the receiving-order, which was made on September 7 upon his own petition. He attributed his failure to insufficient capital and lack of business during recent years. The books of account recorded the profits made on the trading, and the drawings for personal and household expenses. They showed that the profits on the last four years' trading amounted to 1,460*l.*, and that the drawings for the corresponding period were 1,612*l.* The liabilities had been reduced during the past few years by several hundreds of pounds. In 1887 witness made a loss of 500*l.* over a tin contract. He admitted that it was a speculation, and that tin was hardly in his proper business, but he entered into the transaction because he did other business with the man, and anticipated being able to sell again at a good profit.

There was no opposition on the part of creditors, and the examination was ordered to be concluded.

Re SAUNDERS & SAUNDERS, Cleckheaton, Chemical Manufacturers.

THE Official Receiver for the Bradford district (Mr. J. Arthur Binns) has issued a statement of affairs in regard to the case of Thomas Bealby Saunders, and Ashby Varley Saunders, lately carrying on business in partnership as chemical manufacturers, at Cleckheaton, under the style of

Saunders & Saunders. The debtors' statement of affairs shows liabilities expected to rank at 20,794*l.*, of which 11,026*l.* is owing to creditors unsecured, and 8,216*l.* to creditors partly secured. The debtors' property is estimated to produce 3,520*l.*, the book-debts 1,378*l.*, and the surplus from securities 3,611*l.*, leaving a deficiency of 12,133*l.* The debtors attribute their failure to want of capital to meet the rapidly-developing business, and to the heavy cost of the necessary extensions and alterations in connection with their premises and plant. The Official Receiver states that Thomas Bealby Saunders, who had made a practical study of chemistry, arranged in 1875 to join Mr. Hepworth, chemical manufacturer, at Westgate Works, Cleckheaton, as a partner. Mr. Hepworth was then in partnership with a Mr. Greenwood, and the value of the concern was estimated at 1,600*l.* Mr. Saunders, who had 1,000*l.* borrowed capital, paid 800*l.* to Mr. Greenwood, on taking his place, for his share in the concern, the remainder going into the business. The partnership was carried on under the style of Hepworth & Saunders until April 28, 1877, when Ashby Varley Saunders came in, bringing 1,500*l.* capital. Mr. Hepworth subsequently retired. The turnover of the business at the beginning was about 1,000*l.* a year, but it increased rapidly, till in 1891 it had reached over 31,000*l.* The working expenditure, which began at about 4*l.* per week, had increased to about 3,000*l.* a year. Considerable expenses had been incurred in plant and processes. The debtors have no offer to make to their creditors.

Re ROBERT SPENCER, Gooch Street, Birmingham, Chemist.

AT the Birmingham County Court, on October 20, before his Honour Sir Richard Harington, this bankrupt applied for his discharge on debts, 538*l.* 16*s.* 4½*d.*; assets, 38*l.* 12*s.* 6*d.* The Official Receiver reported that the bankrupt was entitled to a reversionary interest in his father's will, payable on the death of his mother. He anticipated receiving from the bankrupt 100*l.* to 120*l.* on that interest, but until that was received he could not state what dividend would be paid to the creditors. The bankrupt had omitted to keep proper books of accounts, and he attributed his insolvency to having left his name to be used by a firm named Nelson in Nottingham. The bankrupt commenced business as a chemist in West Bromwich, and afterwards took a shop in Nottingham, which he sold to a Mr. Nelson. At about the same time he entered into partnership in a coal business, by which he lost money. He had a fire at his shop at West Bromwich, and he was sued by Nelson's creditors, and lost the action in consequence of not being able to prove that the creditors had received notice of the transference of the business to Nelson. The case was reported in the trade journals, and claims amounting to about 250*l.* were made upon him. These he was unable to meet. His Honour said he should grant the discharge subject to a payment of 25*l.* The circumstances, he admitted, were peculiar, but he could not acquit the bankrupt of all blame. He must have been guilty of some neglect in allowing the business to be carried on as it was at Nottingham.

Re BOSS & PAER, 19 Mincing Lane, E.C., Colonial Brokers.

AN application for an order of discharge was made to Mr. Registrar Linklater, at the London Bankruptcy Court, last Tuesday, by Mr. Louis Scott Boss, a member of this firm.

The failure occurred in June, 1878, the accounts showing debts 3,686*l.* 18*s.* 11*d.* and assets 1,590*l.* 11*s.* 11*d.* The receiving-order was made upon the petition of Messrs. Stafford, Allen & Sons, drug-grinders and manufacturing chemists, of Cowper Street, Finsbury. Mr. Arthur Cooper was appointed as trustee, and, being unable to realise sufficient from the assets to declare a dividend, he convened a meeting of the creditors in May, 1881, and explained the reason why no dividend had been paid.

There was no opposition to the application, and the learned Registrar granted the usual order of discharge under the Bankruptcy (Discharge and Closure) Act of 1887.

WORTH A PICTURE.—Said the small boy to his father on returning from school, "I shan't use Pears' soap any more, papa." "Why, my boy?" "Because it makes the hands soft, and then the pambies are very, very sore."

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Editorial Comments.

PHARMACY AND POISON LAWS.

WE are publishing this week our new manual on the Pharmacy and Poison Laws of the United Kingdom. Judges, coroners, magistrates, members of Parliament, journalists, chemists, and unqualified vendors of poisonous articles may all benefit by the opportunity of getting in a succinct form the whole code of laws in force in this country which relate

to pharmacy, and especially to the sale of poisons. The keenness with which any laxity in regard to this dangerous business is regarded by Courts of Justice when this is demonstrated in cases of accidental or intentional poisoning is undoubtedly growing intenser, and is parallel with the modern development of interest in preventive medicine and sanitary protection for the public. Not now only, however, but always, the public has been peculiarly sensitive to the risks of poisoning, and very naturally so. The record of legislation as narrated in our treatise makes very clear the unanimity of members of Parliament in this respect. They, as representatives of the public, have manifested a very firm resolution not to be poisoned carelessly or criminally if Acts of Parliament will save them from such a fate. Some of them have at times brought forward quite impracticable proposals, but the purpose aimed at has always been unmistakable and definite.

There is a widely-spread error, and chemists themselves are not entirely free from it, that the Pharmacy Act of 1868 was a sort of private Act—that it was intended by the Legislature as a sort of reward to chemists, and especially that the exclusive right to the sale of poisons which the Act confers upon registered chemists and druggists is a *quid pro quo* consented to by Parliament in return for the examinations imposed. And when something has not gone quite satisfactorily, chemists burdened with the notion we have indicated have written to us advocating that as the Act has not fulfilled the anticipations of its promoters, it should be repealed. It is not uncommon, too, to hear criticisms on the Act implying that the pharmacists of a quarter of a century ago would have done better if they had inserted this or omitted that from the measure. Our new manual will, we hope, dispel views founded on this mistaken idea. On tracing the long-continued efforts of Parliament and Ministries to get some workable control over the poison-trade, and the eagerness with which the available points were seized upon in the Bills submitted by the Pharmaceutical Society and the United Society of Chemists and Druggists in 1866, it will be apparent that the Pharmacy Act, so far as any rate as it applies to the sale of poisons, is a statute of considerable public concern, and one which chemists could not get repealed at their own will.

Much more likely is it that the provisions of the Act will be rendered more stringent if any further enactment should be decided upon. And to a reasonable extent it would be, as we have often argued, the interest of chemists generally to facilitate such a policy. If legislative interference can do the trade any good, the way to get it is to work on the lines which Parliament has itself laid down. This is the path of least resistance. Governments do not care twopence about pharmaceutical curricula or researches. What they want is that patients shall get good medicines, and that poisons shall be restricted rigorously to their proper spheres.

Very properly, an acquaintance with the law governing the sale of poisons is now an essential to pharmaceutical qualification. This proviso has been adopted none too early. Nothing can be more unsatisfactory than to see chemists in courts of law or before coroners, ignorant of the requirements of the law in relation to the sale of poisons. And we have had to report such cases too frequently of late. There are special statutes hedging most classes nowadays more or less, and it is expected that those who practise any trade or profession will take care to become familiar with the requirements of the laws which specially concern them. We believe that our new book furnishes the means of getting as thorough and exact an acquaintance with the Pharmacy and Poison Laws of Great Britain and with those of Ireland as our other treatise, Alpe's "Handybook of Medicine-

stamp Duty," supplies in regard to the Inland Revenue statutes relating to proprietary medicines. These, with the information provided in our forthcoming DIARY, will serve as a complete legal outfit for the chemist and druggist, such as, so far as we know, cannot be obtained in so handy a form elsewhere.

Interesting additions to The Pharmacy and Poison Laws of the United Kingdom are: (1) the reprint of the reports from "Hansard's Debates" of the discussions in Parliament on the Bills which became the 1868 and 1869 Pharmacy Acts; and (2) the legally-recognised reports from the *Law Times* of the action between the Pharmaceutical Society and a limited company which was carried to the House of Lords, and in which judicial views of the Pharmacy Acts were more fully expressed than in any other case. The proprietors of the publications named very courteously gave us permission to reprint the reports referred to, which add greatly to the completeness and value of our record.

MR. MOND'S CHLORINE RESEARCHES.

THE *Times* has had the honour of making the fact known to the world that Mr. Ludwig Mond, F.R.S., of Brunner, Mond & Co. (Limited), has carried to complete success those experiments on the preparation of chlorine from Solvay alkali-waste which technical chemists have been closely watching for some years. The particularly notable fact announced by the *Times* last Friday is that "chloride of lime, made by Mr. Mond's new process, is actually upon the market; a large and efficient installation is at work, and the increase of the output to any required extent is a mere question of time and plant." This, of course, is a great triumph, or will be if the future justifies the statement. The *Times* describes Mr. Mond's process in general terms. It will be remembered that in the Solvay process sodium chloride, carbon dioxide, and ammonia are brought into contact under suitable conditions, the result being the formation of sodium bicarbonate and ammonium chloride. Hitherto it has been the custom to subject the latter to treatment with lime for the recovery of the ammonia, with, of course, complete fixation and waste of the chlorine as calcium chloride. Time after time these fifty years and more chemists have attacked calcium chloride with a view to saving the chlorine and have been beaten. Now the *Times* tells us Mr. Mond has succeeded, so far as ammonium chloride is concerned, and that his process is as follows:—

Mr. Mond crystallises out the ammonium chloride, dries it, and subjecting it to heat, it sublimes and probably suffers temporary decomposition. The hydrochloric acid and the ammonia are passed over magnesium oxide, which gives up its oxygen, combining with hydrogen to form water. In place of the oxygen the magnesium combines with the chlorine of the ammonium chloride, and free ammonia is obtained and collected in the usual way. Next the reaction which produced magnesium chloride is exactly reversed. Hot air is passed over the chloride as hot chlorine was passed over the oxide, and as the chlorine of the ammonium chloride drove out the oxygen of the oxide, so now the oxygen of the air drives out the chlorine of the chloride. The free chlorine is passed over the caustic lime from the kilns after it is slaked with water, producing bleaching-powder, and the magnesium oxide is left in its original condition ready to decompose a fresh batch of ammonium chloride.

This description is generally correct, but it wants precision, and the statement that the ammonium chloride is dissociated is purely imaginary. The writer is also in error in stating that hot chlorine is passed over the magnesium

oxide. It will be seen, however, that the process works on the old lines made so familiar to alkali-chemists by the Weldon-Pechiney process, of which so much was expected five years ago. It starts from the observations made by Sir Humphry Davy and Thomas Graham that when magnesium oxide, hydrochloric acid, and air are heated together, chlorine is set free. In the reaction the magnesium oxide plays a catalytic part: first, it seizes the chlorine of the hydrochloric acid, and its oxygen joins the hydrogen; second, hot air combines with the magnesium chloride, forming an oxychloride; and, third, as the temperature increases chlorine is driven off, thus leaving the magnesium oxide in its original state. For more than fifty years chemists have been endeavouring to carry out these reactions on a practical scale, but all attempts have failed hitherto, mainly for two reasons—viz., that the amount of fuel required to work the process is enormous, and the temperature at which the final reactions take place, at least $1,000^{\circ}\text{C}$., is frightfully destructive of plant. When Professor Dewar described the Weldon-Pechiney process to the London Section of the Society of Chemical Industry five years ago, success appeared to be achieved, and no experiments could have gone off more beautifully than those which he conducted. Sir Henry Roscoe said then that the process and apparatus were amongst the most skilful which he had ever seen; but most of the Leblanc alkali-makers present were confident that they had nothing to fear. It is now seen that they were right; the mechanical and pecuniary difficulties have been too much for the Weldon-Pechiney process. And the same tale might be told of many another.

We have said that only the future can tell whether Mr. Mond has secured success or not; but in the meantime let us examine his method a little more closely. In the first place, his apparatus consists of two vessels—one for volatilising the ammonium chloride, and the other, or magnesia-vessel, for decomposing that vapour. Two triple-necked Wolff bottles, suitably connected, would give a fair representation of the plant in outline. The volatilising-vessel has been Mr. Mond's great difficulty. Ammonium-chloride vapour readily attacks iron, nickel, and many other metals, but two years ago he found that antimony was not so attacked, therefore he lines the iron volatilising-vessel with antimony, or an antimony alloy, and to prevent fusion (as antimony melts at 425°C .) the vessel is filled with fused zinc chloride above the line of the fire outside the vessel. The ammonium chloride is then fed into the vessel, and is volatilised at a temperature of $350\text{--}400^{\circ}\text{C}$., the vapours being driven into the second or magnesia vessel. The arrangement of two Wolff's bottles will make that point clear. As ammonium chloride dissociates at $1,040^{\circ}\text{C}$., it is obvious that the vapour must be ammonium chloride, and not NH_3 and HCl ; nor while the vapour is exposed to the action of the magnesia is the dissociation temperature reached. The magnesia-vessel is partially filled with small balls of a mixture consisting of magnesia 100 parts, china clay 75 parts, and lime 6 parts, made into a paste with potassium-chloride solution. The object of the mixture, and of its being in balls, is to secure as large an acting-surface as possible. Mr. C. T. Kingzett suggested, in 1888, that a coating of magnesia upon pumice, or any other inert material, sufficed to maintain the Weldon-Pechiney reaction, and his idea was somewhat pooh-poohed at the time, but there was apparently something in it after all. At any rate, Mr. Mond finds it advantageous to work with a large surface, and the first effect is, as the *Times* states, that the ammonium chloride is decomposed, and ammonia is given off up to a certain point, when the stream of ammonium-chloride vapour is cut off. Apparently, the action so far is one simply of

double decomposition, ammonium hydrate and hydrated magnesium chloride being produced: there is, therefore, a limit to the reaction, hence the shutting-off of the volatilising-vessel. The next step is to heat the magnesia-vessel, when residual traces of ammonia and then hydrochloric acid are driven away; finally, dry air, heated to 800° to $1,000^{\circ}\text{C}$., is led into the vessel, and the effect of this, as in the Weldon-Pechiney process, is to drive out the chlorine from the oxychloride. The magnesia returns to its old condition, and is ready to do more work. It thus appears that we are dealing here with a process which, with the exception of the ammonia element—and that is practically immaterial—is similar to many which have failed. The decomposition and reactions of hydrated magnesium chloride and of magnesium oxychloride are matters of common knowledge, and the task that Mr. Mond has set himself is to overcome the mechanical difficulties which have hitherto baffled engineers: he has the same high temperatures to contend with, the same non-plastic materials to handle. He is a confident man, and a skilful; he has wealth behind him and a company which pays 50-per cent. dividends. These are the elements of success, and to these we have to add the extraordinary advances which Mr. Mond has made in economising fuel and the mechanical difficulties which were overcome to ensure that economy. These are levers in his hands ready now to turn on to his chlorine-recovery process that powerful stream of force the cost of which has ruined other similar processes. In the face of these facts there is at least some hope that the utilisation of Solvay waste chloride is within measurable distance; but as the expense of producing the bleaching-powder depends entirely upon the cost of the apparatus, fuel, and labour, none but Mr. Mond can say whether he can touch the production figure of the comparatively inexpensive process employed by the Leblanc makers. Meanwhile the report of his success has not affected the commercial position of bleaching powder, one way or the other, and Mond "bleach" is not known, nor has it been seen on the London market.

CONTINENTAL PATENT-MEDICINE REGULATIONS.

It has long been the excellent practice of the United States Government, on occasions when it appears desirable to obtain a comprehensive and accurate knowledge of the manner in which some trade is carried on, or of the action of laws upon a given subject in the various countries of the world, to instruct its consular representatives to gather the necessary information and to publish the replies as a whole for the benefit of persons specially interested in the question. The most recent instance of this practice has been the issue of a circular letter to the American consuls abroad, asking for information concerning the laws affecting the sale of proprietary medicines in their districts. The answers received present an interesting epitome of the way in which this important branch of industry is regulated in the chief countries of Europe.

In Austria-Hungary patent medicines in the strict sense of the term do not exist, for the law affords no protection to any medicines or medicinal compounds the formulæ of which are not kept at the pharmacist's shop for the inspection of qualified medical men. Unless that condition is complied with, the article may not even be offered for sale, even by a pharmacist. Dietetic and cosmetic preparations (including dentifrices), mineral waters (natural or artificial) and spring products, and surgical dressings of all kinds are exempt from this regulation.

In Belgium the trade in patent medicines is regulated by a Royal decree of March 1, 1888, which provides that such medicines shall be sold or exposed for sale only by pharmacists or other persons authorised to deliver compounded medicines. The seller must affix his seal either as a substitute for or in contiguity to that of the manufacturer. Pharmacists assume the responsibility of the product delivered on these conditions. The bottle must bear a label mentioning the substances contained in the composition of the patent, but if the remedy is inscribed in an official Pharmacopœia (Belgian or foreign) it is only necessary that the label should show the official denomination. This label must bear the name and address of the pharmacist in printed characters.

In Denmark not only the sale, but also the importation of patent medicines is restricted to qualified pharmacists. An old law enacted in 1779 still remains in force in that kingdom, under which the advertising of patent medicines in public journals is absolutely prohibited; but at the present time that Act has partly fallen into desuetude, and advertisements are allowed to appear provided that they do not name any persons other than qualified pharmacists as sellers of the article. As there are only 160 such chemists in business in the country, the patent-medicine trade is a lucrative accessory to the business of these favoured few. It is, therefore, not likely that—in Denmark, at least—pharmacists will give much support to the resolution adopted at the recent meeting in Copenhagen by the pharmaceutical section of the Congress of Scandinavian Scientists, expressing regret that there are no legislative restrictions in Denmark and Norway on the importation of patent and secret remedies, and urging pharmacists to co-operate in the most earnest manner in putting down the trade in such preparations.

France has always maintained a reputation for the Draconic severity (on paper) of its laws on the subject of patent medicines, yet there is no country where the "spécialité" industry has assumed such immense proportions. The principal Act relating to the sale of these goods is the famous pharmacy law of 1810, though various modifications have since been grafted upon it. It originally prohibited the sale of any medicine of which the formula had not been inserted in the "Codex," but in 1850 a concession was made to the spirit of the time by the admission for sale of medicines recognised as new and useful by the National Academy of Medicine and of which the formula has been approved by the Ministers of Agriculture and of Commerce. This official sanction does not appear to be difficult to obtain, for it is rare to find a French pharmacien who has not invented from one to a dozen medicinal compounds, while the English community experience little difficulty in obtaining their favourite proprietary pill or potion unless they insist on more prices.

The Frankfort-on-Maine Consul reports that in Germany patent medicines may be imported duty-free unless they contain ether, alcohol, sugar, or some other ingredient which is subject to duty. In such case the mixture is assessed for duty at the rate which is applicable to its ingredient which bears the highest rate of duty. They may only be sold, however, by qualified pharmacists, who are held responsible by law for their effects upon the patient. The consul therefore recommends exporters of such goods to Germany to label them, "for the information of the apotheker," with a slip designating the ingredients which they contain—a piece of advice not likely to be widely followed. An old Prussian law (now applicable to the whole of the Empire, but rigorously enforced in Prussia and Baden only) forbids the advertising of patent medicines in public journals. This law is circumvented by many foreign dealers. Thus the proprietor

of a well-known American remedy for diabetes and kindred diseases, who has maintained for years an agency at Frankfort, has obtained a concession which permits him to advertise his goods in Wurtemberg; for the remainder of Germany he has adopted the plan of making his medicines in this city for sale through authorised apothekers, but sends out his advertisements from London as circulars or pamphlets, to be folded in the German newspapers where this is permitted.

In Italy, since 1887, no patent medicines (in fact, no medicinal drugs or compounded medicines of any kind) are allowed to be imported unless approved by the Central Board of Health (*Consiglio Superiore di Sanità*), to which a statement of their composition must be furnished by the petitioner along with his request for approval of the remedy. The punishment for the infringement of this law is cumulative, beginning with a minimum fine of 200f., and increasing to fifteen days' imprisonment for each offence. The Central Board of Health is composed of five doctors of medicine, two sanitary engineers, two naturalists, two chemists, one veterinary surgeon, one pharmacist, one lawyer, and two business experts.

Russia has recently distinguished itself by the enactment of one of the most stringent laws ever drafted against the import of patent medicines. Simple drugs are still admitted freely upon payment of the duty, but no patent medicine is allowed entry without obtaining each time special permission from the Medical Department of the Ministry of the Interior. Before such permission is granted it must be proved to the satisfaction of the Department that the production of the medicine requires elaborate work and expensive apparatus, that it is beneficial in its action, and that it can be transported long distances without injury to its efficacy. The applicant, in his request for admission, must state the composition of his article "in minute detail."

Cosmetics are examined only in case their labels or the accompanying descriptions indicate that they can be used for medical purposes. Cosmetics of which the labels and descriptions show that they are harmless in their effects on the skin, hair, and gums are exempt from this formality.

This new Russian law appears to answer the object of its promulgators, for we are told that "the published list of medicines excluded from entry includes nearly every known pharmaceutical preparation."

The Swedish patent-medicine laws are over two centuries old (they date from 1688), and it is therefore not surprising to hear that they are now not generally enforced. None but qualified pharmacists may advertise medicines of any kind in the public press or import them. The importation of articles not considered exclusively as drugs—such as gums, liquorice, &c.—is free.

In Turkey there is no restriction upon the importation of patent or other medicines, with the exception of the payment of Customs duty, and quite recently the Turkish Government has prepared a law establishing a band or stamp tax of 10 paras ($\frac{1}{3}$ d.) for every bottle, box, or package of medicine. This law is intended to be put into force as soon as certain pending negotiations between the Porte and several European Powers are brought to an end. In some instances, however, the stamps have already been affixed, and the $\frac{1}{3}$ d. tax is collected on all sulphate of quinine, which can only be imported at a few Turkish ports—viz., Constantinople, Salonica, Smyrna, Beirut, &c. The importation of chlorodyne, collodion, nitro-glycerine, chlorate of potash, and cannabis indica cigarettes is altogether prohibited, but the fact that these drugs are sold at some shops shows that the prohibition is not very strictly enforced.

NEWSPAPERS ON THE SALE OF POISONS.

REFERRING to the chemist's evidence in the Neill trial, several of the papers, misled by the Judge's questions, have commented on what they evidently believe to have been some illegality in the sale of the tincture of nux vomica to Neill by the chemist's assistant. The assumption seems to have been that the sale ought to have been entered, or not made at all unless the vendor ascertained that the purchaser was a *bona-fide* medical man. It is not necessary to say here that there is nothing in the Acts requiring these conditions. The *Daily Telegraph* says:—

"It is certainly extraordinary that this one trial should have revealed striking irregularities on the part both of a doctor and a chemist—the doctor who certified the cause of death of one of the victims, and the chemist who sold the murderer his poisons."

And again—

"The chemist was culpably careless in failing to take down at the time when he sold Neill some of his poison all the particulars required by law; and the selling of poisons at all to a person who was practically a stranger to him was a most improper proceeding."

The man who wrote that article evidently had not taken the smallest trouble to ascertain what the requirements of the law were before he pronounced judgment; one more illustration of the necessity for caution before accepting as facts the authoritative-looking assertions in a leading article. The *Pall Mall Gazette* sent a couple of representatives to West-end chemists. One brought back a copy of the Poisons Schedule, which was printed in the paper, and the "well-known West end chemist" was reported to have said:—

"Chemists are protected if a prescription is given. I should keep the prescription if I sold a poison on the strength of it. As a matter of fact, I think I should have no difficulty in detecting a bogus prescription. It is true that prescriptions are signed with the initials of practitioners, but the amateur's hand is pretty certain to be betrayed."

The other chemist told his interviewer a plaintive story of the difficulties in the way of chemists in consequence of the carelessness and illegible writing of physicians. Both remarked on the extent to which grocers and oilmen sell poisons, but both agreed that the Act was being more efficiently enforced now.

The *Sunday Times* has a long article dealing with the sale of poisons to anybody with a respectable appearance and a glib tongue, urges that the present restrictions are no safeguard at all, and trusts

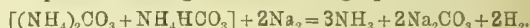
"that one result of the unravelling of this unspeakably cold-blooded series of murders will be that the sale of poisons by dispensing chemists will be entirely prohibited."

The youth who wrote that article should be the next Home Secretary.

COMMENTARY.

LIQUID AMMONIA.—At one of the recent meetings of the Franklin Institute (Chemical Section) a paper was read, by Dr. Hans von Strombeck, on "The Composition of the Liquid Ammonia of the Trade, and how to Manufacture Liquid Ammonia of really 99.995 per cent." In the course of this some interesting particulars were given. For example, the so-called anhydrous ammonia was found to yield, on evaporation, crystals of ammonia sesquicarbonate—not much, certainly, but it was there; and more noteworthy

still was the presence of from 0.004 to 0.035 per cent. of mineral oil, to which the faint yellow colour of anhydrous ammonia is due. There was present also from 0.117 to 2.88 per cent. of a colourless fluid, having a specific gravity of 0.7948 at 60° F. This, on fractionation, was found to consist of methyl, ethyl, and isopropyl alcohols, acetone, and methyl-ethyl-ketone, besides traces of ethers. In the process which the author has devised for making the almost absolute ammonia (it contains 0.005 per cent. of mineral oil, but nothing else than NH_4HO), the author removes these alcohols and ketones by passing the ammonia-gas through a vessel containing fused sodium, the result being that sodium derivatives of the organic bodies are formed with the elimination of hydrogen, and the ammonia sesquicarbonate is decomposed according to the following equation:—



The hydrogen is absorbed on passing the mixture of it and ammonia gas through palladium. It looks costly to speak of sodium and palladium in connection with a commercial process but, as a matter of fact, the increased cost is less than 1c. per lb.

EVERY LADY HER OWN DISTILLER.—The London correspondent of the Belfast *Northern Whig* has been turning his (or her) attention to the question of utilising herbs. The subject is large, not to say vast. It ranges from the munching of thistles along the roadside to the subtle craft of the pharmacist. There is plenty of room in it for everybody, and it is therefore regrettable that the correspondent, instead of confining herself to that branch which treats of culinary economy, has meandered out of her element into the department which teacheth of the distillation of herbs, and occasionally overlaps the domain of chemistry. The unfortunate victim has been thus lured out of her depth by a Mrs. Douglas, who is a Scotch woman, and confesses to a weakness for peppermint drops at church. This latter-day Loreley, instead of combing her locks and warbling on a rock projecting from the stream, lectured recently on "Distillation" at the Agricultural Hall. She is, in vulgar phrase, nuts on pharmacists, and advises ladies to distil their own preparations, "instead of buying expensive, and too often injurious preparations from chemists." Nothing is easier for the average housewife, it would seem, than to make her own scents, flavouring essences and medicines, from the humble dill-water, "so largely diluted by chemists that those who cannot make it themselves would do well to buy oil of dill, and mix it with sugar and water," to "rosemary hair-washes and soup flavourings." The still is to be of "the finest Bohemian glass, with measuring-glasses to correspond, and supplemented by a balance of polished wood, with shining brass scales and fairy-like weights." If, as the lecturer anticipates, a "home-distilling craze" should set in, the sale of these "fairy-like" appliances would certainly yield the badgered pharmacist a far better profit than he is likely to derive from the retailing of pennyworths of dill-water and the like. We, therefore, heartily wish that Mrs. Douglas may be able to inoculate society effectually with her distilling-virus, and our pleasure is tempered only by the reflection that by the time the drawing-room carpet has been thoroughly spoilt, the baby treated to a stiff dose of "Mamma's own" rosemary hair-wash, and the home-distilled dill-water been incorporated into the soup as a flavouring-ingredient, the master of the house may lift the "still small voice of reason," put his foot down, and stop the fun.

THERE are no bigger words in the English language than Metadiazotetralkyldiamidotriphenylmethanchloride, Metaethoxydiethyldibenzildiamidotriphenylmethane, and Methylberzomethoxyethyltetrahydropyridinecarboxylate.

TINCTURE OF GREEN HELLEBORE.

BEING A CONTINUATION OF THE CONTRIBUTIONS ON THE SOLVENT ACTION OF ALCOHOL OF DIFFERENT DEGREES OF STRENGTH ON SOME OF THE DRUGS USED IN MAKING PHARMACEUTICAL TINCTURES.

By E. H. Farr and R. Wright, Pharmaceutical Chemists.

GREEN HELLEBORE is a member of a group of plants which are characterised by the presence of active principles possessing very powerful and poisonous properties. Owing to the striking similarity in the physiological effects produced by the different members of the group, it is scarcely to be wondered that when Meissner, in 1819, had established the presence in cavadilla seeds of the alkaloid sabadilline or veratrine, it was generally assumed that the closely-related plants, white and green hellebore, owed their activity to the same substance.

The presence of veratrine in the rhizome of *Veratrum viride* was definitely asserted in 1838 by Worthington, and subsequently by Richardson, Scattergood, and Percy. In 1865 Bullock claimed to have shown that *Veratrum viride* contained two alkaloids, neither of them identical with veratria, and one of which was soluble in ether, and the other insoluble. For these alkaloids the names "viridine" and "veratroidine" were suggested by Dr. G. B. Wood.

As far back as 1837 Simon had established the presence in *Veratrum album* of an alkaloid remarkable for the insolubility of its sulphate, which he named "jervine," and in 1872

jervine. Veratrine and veratralbine were only present in infinitesimal proportion.

In addition to the alkaloidal constituents, the rhizome of *Veratrum viride* also contains a considerable amount of resinous matter, and Worthington has pointed out the presence of sugar and gallic acid.

The percentage yield of alkaloids, as recorded by different observers, varies very considerably.

Mitchell (*Trans. Amer. Pharm. Assoc.*, 1875) obtained the following amounts from three specimens of the root:—

	Jervine	Veratroidine	Jervine	Veratroidine	Total
	Grains	Grains per lb.	Per cent.	Per cent.	Alkaloids
No. 1	16	18.3	23	26	49
No. 2	18.2	24.5	26	35	61
No. 3	20.5	28.6	29	40	69

Wright and Luff (*Journ. Chem. Soc.*, 1879) only obtained .080 per cent. total alkaloids. Bullock (*Amer. Journ. Pharm.*, July, 1879) reported a yield of 6.6 grammes per kilo., or .66 per cent., from a specimen of rhizome examined by him. These records show an alkaloidal yield of from .080 to .69 per cent., and if the drug were perfectly exhausted the resulting tincture might be expected to show a yield of from .016 to .15 per cent. total alkaloids. Fletcher (*CHEMIST AND DRUGGIST*, January, 1889) fixes the alkaloidal strength of the tincture at .076 per cent., and in some experiments the results of which were communicated to the Leeds meeting of the Pharmaceutical Conference, we reported a percentage of .076 and .129 respectively.

For the purpose of the present investigation twelve speci-

TABLE I.

Showing Quantitative Results of Estimation of Samples of Tincture of *Veratrum viride*.

No.	Amount of Alkaloid in Grammes from 100 c.c. Tincture.					Amount of Extractive in Grammes from 100 c.c. Tincture.				
	90-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	90-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture
1	.103	.132	.124	.127	.104	2.83	3.56	4.10	4.20	4.23
2	.104	.109	.131	.104	.108	1.80	2.22	2.00	2.90	3.18
3	.126	.132	.140	.126	.103	2.20	2.88	3.36	3.70	3.70
4	.140	.141	.158	.152	.134	1.03	1.42	1.48	1.70	1.90
5	.089	.109	.118	.108	.088	1.52	2.03	2.33	2.55	2.32
6	.102	.108	.106	.093	.088	2.40	2.84	3.26	3.30	3.54
7	.155	.144	.144	.144	.140	1.70	1.34	1.62	1.58	2.18
8	.032	.028	.032	.028	.028	1.20	1.34	1.64	1.60	1.62
9	.183	.203	.212	.220	.216	1.20	1.38	1.76	2.00	2.12
10	.164	.172	.184	.186	.180	2.02	2.66	3.28	3.34	3.34
11	.168	.180	.192	.216	.220	1.94	2.43	2.76	2.96	3.32
12	.110	.118	.130	.123	.121	1.80	2.14	2.38	2.56	2.63
Average	.122	.132	.138	.137	.128	1.75	2.22	2.57	2.69	2.83

Peugnet showed that the same alkaloid was present in the rhizome of *Veratrum viride*; and further claimed that the viridine of Bullock was a mixture of veratroidine and jervine.

In 1875 an elaborate thesis on the active principles of the official veratrum was published by C. L. Mitchell. As the result of a prolonged and careful investigation into the subject, he confirmed the statement of Peugnet with regard to Bullock's viridine, proving conclusively that it must have been a compound substance, and further maintained that veratroidine and jervine were the sole alkaloidal constituents of the drug.

In 1876 Wormley claimed to have obtained from the drug an alkaloid possessing all the characters of veratrine, and, to make the subject still more confused, in the same year Bullock published a paper in which he stated his belief that so-called veratroidine was simply a mixture of jervine and resin, and that jervine itself was the only alkaloid present in *Veratrum viride*.

In 1879 the drug was submitted to a very thorough examination by Wright and Luff. These chemists succeeded in isolating and characterising no fewer than six alkaloids from the rhizome—viz., jervine, pseudojervine, rubijervine, cevadine, veratrine, and veratralbine. Of the alkaloids obtained, about 50 per cent. consisted of cevadine, with 25 per cent. of jervine, and about 20 per cent. of pseudo-

jervine. The drug were obtained, and, after being reduced to No. 40 powder, a series of tinctures were made from each, with alcohol of 90, 80, 70, 60, and 50 per cent. strength by volume. The B.P. process was followed, percolation being continued until the requisite volume of tincture had been obtained. Preliminary experiments with a view of ascertaining the process best adapted for the extraction of the alkaloids showed that chloroform took out a larger proportion than ether. The following process was therefore employed for the alkaloidal estimations:—50 c.c. of the tincture was introduced into a porcelain dish and evaporated over a water-bath, with addition of water, until all spirit had been removed. The residual liquor was acidified with dilute hydrochloric acid, and was filtered through cotton-wool into a glass separator. The deposited resin was found to retain a portion of the alkaloid, and it was therefore re-dissolved in a little 90-per-cent. alcohol, the solution treated with acidulated water and again evaporated to drive off the spirit, and the liquid filtered into the separator. The mixed liquids were then rendered alkaline by the addition of ammonia in distinct excess, and the alkaloid extracted by agitation, first with 10 c.c. and then with two successive 5 c.c. chloroform. The chloroformic alkaloidal solutions were drawn off in turn and mixed, and the alkaloids taken out by shaking with successive small quantities of 1-per-cent.

hydrochloric acid. The mixed acid alkaloidal solutions were then made alkaline with ammonia, and the alkaloids shaken out with 15 c.c. chloroform, used in three portions. Finally, the mixed chloroformic solutions were evaporated in a platinum dish over a water-bath, the residue dried at 100°, and the dish transferred to a desiccator and the weight taken on cooling.

The process presents no great difficulty in working, but great care is needed in order to secure perfect extraction of the alkaloids from the chloroformic solution by means of acidulated water. This appears to arise from the tenacity with which the resinous matter present adheres to the alkaloid, but may also be due in part to the sparing solubility of the alkaloidal salts produced. In some instances it was found necessary to employ fourteen or fifteen successive portions of acidulated water for the shaking-out process before it came away free from alkaloid; it is therefore very important that the process should be repeated until the final washings give no reaction with Mayer's reagent. The process may be considerably shortened by taking the first chloroformic alkaloidal solution, adding 1 c.c. normal HCl and 10 c.c. water, evaporating over a water-bath with constant stirring until all chloroform has been removed; filtering from particles of resinous matter, washing the latter with acidulated water until the washings come away free from alkaloid; mixing the liquids, making the solution alkaline with ammonia, shaking out the alkaloids with 15 c.c. chloroform added in three portions, drawing off the latter into a dish, and evaporating, drying, and weighing.

This modification gives slightly higher results, but the final residue is more highly coloured than that obtained by the original process.

The alkaloidal residues were in a partly amorphous, partly crystalline condition. They were, for the most part, entirely soluble in 2-per-cent. acetic acid; but in some cases a slightly turbid and coloured solution was yielded, owing, doubtless, to the presence of traces of resinous matter. In consequence of their composite nature it was not thought advisable to test their reactions with alkaloidal reagents.

In addition to the estimation of the total alkaloids it was thought desirable to estimate the relative amounts of jervine

The jervine in the precipitated nitrate was estimated by shaking with ammoniated water and chloroform, the latter being employed in two or three portions in order to remove the last traces of alkaloid. After the weights had been taken a correction was made in each case for the solubility of jervine nitrate. This was taken as 1 in 1,200, or 0.05 gramme for each 6 c.c. solution, which was added to the weight of the jervine indicated, and subtracted from that of the veratroidine. The results are shown in Table II., and indicate the proportions of jervine and veratroidine in the mixed alkaloids obtained from 100 c.c. of tincture in each series, and also the percentages (1) of mixed alkaloids, and (2) of jervine, and (3) of veratroidine indicated in the rhizome from which each series of tinctures had been prepared.

The amount of extractive in the tinctures was ascertained by evaporating 10 c.c. of each sample over a water-bath, drying the residue at 100°, weighing, and multiplying the result by 10.

The effect produced on mixing the tinctures with water, and also with 90-per-cent. alcohol, was noted, but the results were so much alike that it is not thought necessary to insert them in tabular form. Admixture with water gave a milky emulsion, from which, on standing, much resinous matter separated out. In the 60 and 50-per-cent. tinctures a little mucilaginous matter was present, but the quantity was very small, addition of 90-per-cent. alcohol only producing faint opalescence.

It will be seen on reference to Table I. that the most perfect exhaustion of the drug is effected by the employment of a 70-per-cent. menstruum. The yield of alkaloid by the tinctures prepared from different specimens of the drug varies between the extreme limits of .032 and .220, and proves most conclusively the urgent need there is for the adoption of such a process for the preparation of the tincture, and the application of such tests to the finished product as shall ensure constancy in the strength of so potent a medicinal agent. The drug from which No. 8 series of tinctures were prepared was in all respects a remarkable specimen. The tinctures prepared from it had a distinct green tint, and the alkaloidal yield came out very low; but when tested with the usual reagents the alkaloids behaved exactly like those from the other tinctures. In estimating some of the 50-per-cent. tinctures an emulsion was produced when the alkaline residual liquor was shaken with chloroform. This difficulty was overcome by running off the chloroform magma, and liberating the chloroform by agitation with a little 90 per-cent. alcohol. In order to ascertain

TABLE II.
Showing Percentage of Jervine and Veratroidine in the Tinctures, and also (by Calculation) in the Drug.

Series	Mixed Alkaloids from 100 cc. Tincture (Highest Yield)	Percentage of Jervine in Tincture	Percentage of Veratroidine in Tincture	Percentage of Alkaloids Indicated in Rhizome		
				Total Alkaloids	Jervine	Veratroidine
1	.132	.028	.104	.660	.140	.520
2	.131	.043	.088	.655	.215	.440
3	.132	.057	.075	.660	.285	.375
4	.158	.035	.123	.790	.175	.515
5	.118	.030	.088	.590	.150	.440
6	.108	.027	.081	.540	.135	.405
7	.144	.044	.095	.720	.245	.475
8	.032	.013	.019	.160	.065	.095
9	.220	.070	.150	1.20	.350	.750
10	.196	.078	.118	.980	.390	.590
11	.220	.072	.153	1.20	.310	.790
12	.130	.039	.091	.650	.195	.455
Average	.143	.041	.099	.734	.221	.49

and veratroidine (veratroidine = alkaloids other than jervine) present in the alkaloidal residue from each series of tinctures, by Dragendorff's nitrate separation method. In order to accomplish this the residues from each series of tinctures were dissolved in 2-per-cent. acetic acid; and the estimation made as follows:—

A measured quantity of the acetic solution was treated with a few grains of potassium nitrate, and the mixture shaken and allowed to stand for some time. The clear liquid was removed with a pipette, the crystals washed with a little water, and the latter drawn off when clear. The mixed liquids were measured, made alkaline with ammonia, the alkaloid shaken out with chloroform, the latter solution drawn off and evaporated, and the residue dried and weighed.

TABLE III.
Showing Results of Process Experiments.

No.	Alkaloid per Cent.				Extractive per Cent.			
	By Simple Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation	By Simple Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation
1	.104	.114	.124	.150	2.00	2.04	2.46	2.80
2	.170	.200	.210	.220	1.24	1.30	1.44	1.52

what process was best adapted for securing perfect exhaustion of the drug two good specimens were selected, and a series of tinctures made from each, with a 70-per-cent. menstruum, by the following processes:—

1. *Simple Maceration*.—Two ounces of the drug in No. 40 powder was macerated for seven days in 10 fl. oz. menstruum, with occasional agitation. The fluid portion was then strained off and the marc submitted to pressure, the liquids mixed and made up to 10 fl. oz., and the whole filtered.

2. *Double Maceration*.—Two ounces of the drug in No. 40 powder was macerated with 5 fl. oz. of menstruum for forty-eight hours, with occasional agitation. The fluid portion was strained off and the marc submitted to pressure, the pressings being added to the strained liquid. The marc was then macerated with the remainder of the menstruum for twenty-four hours, the fluid portion strained off, the

marc again expressed, the liquids mixed, and a sufficiency of menstruum poured over the marc to make the volume of the tincture, after the final expression, up to 10 fl. oz.

3. *Macero-percolation*—The process of the B.P., the final portion of the tincture being displaced.

4. *Continuous Percolation*—Two ounces of the drug in No. 40 powder was moistened with 3 fl. drachme menstruum and packed in a conical percolator, more menstruum was then added, and percolation allowed to proceed, slowly and continuously, until 10 fl. oz. of percolate had been obtained.

The tinctures prepared as above were estimated by the process already given, with the results stated in Table III. It is evident from those results that the most perfect exhaustion of the rhizome of *Veratrum viride* may be effected by the process of continuous percolation.

SOLUTIONS OF MEDICINAL RESINS.

By HAROLD WYATT, JUNR. Read before the Liverpool Pharmaceutical Students' Society on October 27, 1892.

EARLY in the year my interest was excited by a question asked at one of the meetings of the Liverpool Pharmaceutical Students' Society as to the best method of making a solution of jalap resin in glycerine for use as a rectal injection. The usual mode of dealing with similar bodies, by dissolving them in alcohol and making the resulting solution into an emulsion, could not be followed owing to the manner in which the preparation was to be administered, and as jalapin is practically insoluble in glycerine, a simple solution was out of the question. On using the *sapo jalapæ* of the German Pharmacopœia—made by dissolving 4 parts each of Castile soap and jalap resin in 8 parts of alcohol and evaporating to 9 parts—not more than an equivalent of 2 grains of jalap resin could be got into a fluid dram of glycerine without increasing the viscosity of the liquid to such an extent that it did not run easily from the syringe. Bearing in mind a paper on the use of resin soap as an emulsifying agent read by Mr. Collier, of Guy's Hospital, at an evening meeting of the Pharmaceutical Society in March, 1890, it struck me that, as most resins dissolve in alkaline solutions, forming soaps, jalap resin would, when similarly operated on, behave in like manner and moreover the soap formed would act as an emulsifier to any of the constituents of the resin not saponifiable. Reference to "Pharmacographia" elicited the fact that jalap resin was soluble in alkaline solutions. I put the idea into practice, but had to abandon the use of potassic or sodic hydrate for the purpose in consequence of the difficulty there was in obtaining a neutral soap solution. Finally, by using solution of ammonia as the saponifying agent, and evaporating the resulting liquid after the addition of a little glycerine, I obtained a solution which was quite neutral, containing 6 grains of jalapine to the fluid dram and capable of dilution with water in any proportion without precipitation of the resin. The manner of working was as follows:—

Three hundred and eighty-four grains of jalapin (insoluble in ether) were mixed with 3 oz. of strong solution of ammonia and allowed to stand, with occasional shaking, for two days. The resulting solution was placed in a water-bath, 2 oz. of glycerine were added, and the whole evaporated, with constant stirring, until ammoniacal fumes were no longer given off, the liquid being made up when cold to 3 fluid oz. with glycerine. On trial in the Liverpool Royal Infirmary this preparation was found to be both active and reliable. Subsequently I made in a similar way a series of solutions containing respectively resin of scammony, podophyllin, and aloin, all of which turned out satisfactorily. Guaiacum resin gave a solution which deposited a good deal on standing; the supernatant liquid, doubtless ammonium guaiacate, was found useful as an addition to gargles and gelatine throat-pastilles. In publishing this note I wish to draw attention to a method which I believe is capable of extended application in making liquid preparations of drugs which owe their activity wholly or in part to resins or resinoid bodies—such, for instance, as *cascara sagrada* and *podophyllum*.

Trade Notes

DAN RYLANDS (LIMITED) have been awarded a diploma of honour with gold medal at the Isle of Man International Exhibition for soda-water machinery.

MR. EUGEN DIETERICH, the proprietor of the paper and chemical works at Helfenberg, near Dresden, has given his son Hans the right to sign for the firm by procuration.

THE German Institute for the Chemical Treatment of Gold and Silver (Gold- und Silber-Scheide Anstalt), in Frankfurt-on-Main, has made a net profit for the year ending June 30 of 1,613,770m., out of which 15 per cent. dividend will be paid to the shareholders.

In our report of the exhibits at Kimberley the fine show of Messrs. Evans, Sons & Co., of Liverpool was not mentioned, but we hear that the firm's lime-juice stand, where free tasting samples of the Montserrat products are given away, is quite a feature of the exhibition.

MESSRS. POTTER & CLARKE, of Raven Row, Artillery Lane, send us a copy of a "Universal Herbal Annual" published by them for sale at one penny. It is exceedingly well compiled from a herbalists' point of view, as it shows the herb-treatment of all ordinary complaints, and contains many interesting articles. Chemists and druggists who make the herb-trade a speciality will do well to sell this little book.

THE *New England Grocer* states that Messrs. Morse Brothers, proprietors of the "Rising Sun" stove-polish, which is advertised in this journal by their London agents, Messrs. C. Chancellor & Co., of Charterhouse Buildings, sent out recently to two customers in the West no less than twenty-three car-loads of their stove-polish. Each car contained 400 gross of 10-cent packages, or 15 tons; the whole of the two consignments totalling 9,200 gross, or 345 tons.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

HOBBS—MARSHALL.—On October 24, at St. Mary's, Beverley, by the Rev. C. J. Barry, Harry Hobbs, chemist, of Hyde Park Corner, Leeds, to Rose Emily, daughter of Councilor Marshall, chemist, of Beverley and Market Weighton. No cards.

DEATHS.

ATMORE.—On October 11, George Atmore, pharmaceutical chemist, Lynn. Aged 70.

BARKER.—On October 19, William Robert Barker, pharmaceutical chemist. Aged 72. Mr. Barker had been a member of the firm of Savory & Moore for the past forty-five years.

BISHOP.—On October 16, Robert Bishop, pharmaceutical chemist, Eye. Aged 83. Mr. Bishop was one of the founders of the Pharmaceutical Society.

KENDALL.—On October 12, Robert D. Kendall, chemist and druggist, Sowerby Bridge. Aged 56.

KENRICK.—Mr. Fredrick Wm. Kenrick, for many years a chemist and druggist, of High Street, Horncastle, died a few days since. Mr. Kenrick was the oldest Freemason in the county, his age being 81.

MORTON.—Mr. Samuel Edward Morton, chemist and druggist, Broadway, Roath, Cardiff, died very suddenly on Wednesday morning. Deceased went to bed on Tuesday night in apparently his usual health, but at 2 o'clock in the morning he was taken seriously ill, and his wife, becoming alarmed, went for Dr. Griffiths, but before that gentleman arrived Mr. Morton had ceased to breathe.

PREVETT.—On October 12, John Prevett, pharmaceutical chemist, Sheffield. Aged 70.

NEW COMPANIES

ANGLO-AMERICAN HORSE AND CATTLE FOOD AND MEDICINE COMPANY (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on business as dealers in all kinds of chemical, vegetable, natural, and other substances used in certain condiments and food for cattle, poultry, and dogs. The first subscribers (who take one share each) are: T. Hock, 8 Pancras Lane, E.C., solicitor; E. W. Benwell, 5 Grayhurst Road, Dalston, N., clerk; R. K. George, 1 Great Tower Street, E.C., clerk; C. Oldie, 18 Forburg Road, Stoke Newington, clerk; W. E. Swan, Neasdon, clerk; G. L. Harnesford, 37 Wellington Street, Woolwich, clerk; and H. E. Smyth, 116 Peckham Rye, traveller. Registered without articles of association.

C. F. MARSDEN & Co. (LIMITED).—Capital 1,000*l.*, in 1,000 *l.* shares. Objects: To purchase or otherwise acquire and carry on the business of dispensing chemists, patent-medicine vendors, drug merchants, and general storekeepers, now or lately carried on under the name or style of W. Pickles, at the top of Neanwood Street, Camp Road, Leeds. The first subscribers (who take one share each) are:—Charles Frederick Marsden, 3 Leopold Terrace, Leeds, general merchant; Annie Marsden, 3 Leopold Terrace, Leeds, wife of C. F. Marsden; J. William Carley, Woodhouse Lane, Leeds, boot manufacturer; Ralph Dunn, Headingley, Leeds, draper; Edward Teal, 5 Louis Street, Leeds, draper; T. W. Jackson, 49 Louis Street, Leeds, oil and colour merchant; Walter Pickles, Batley Carr, Dewsbury, chemist. The business of the company shall be carried on by C. F. Marsden, as managing director, so long as he chooses to hold that office. Qualification and remuneration not stated. Registered office: Neanwood Street, Camp Road, Leeds.

BERKEFELD FILTER COMPANY (LIMITED).—Capital 20,000*l.*, in 1*l.* shares. Objects: To acquire the goodwill of the business carried on by A. Haacke, at 121 Oxford Street, London, under the style of the Berkefeld Filter Company, and to carry on business as manufacturers and sellers of filters and filtering apparatus and appliances. The first subscribers are:—R. Baelz, 14 St. Mary Axe, E.C., merchant, 250 shares; C. T. Kingzett, Amhurst Park, N., consulting chemist, 250 shares; A. Haacke, 121 Oxford Street, London, 250 shares; O. Lauer, Kieselguhr Wharf, Homerton, N.E., 250 shares; E. Wollake, Royal Exchange Buildings, underwriter, 250 shares; K. Hebbeler, 149 Houndsditch, E.C., chemist, 60 shares; and M. Frake, 83 Westbourne Park Villas, W., clerk, 1 share. There shall not be more than five nor less than two directors, and the first are: R. Baelz, C. T. Kingzett, and A. Haacke. Qualification, 250*l.*. Remuneration, 50*l.* per annum each, and, in addition, 10 per cent. of the net profits after payment of a dividend of 5 per cent., such additional remuneration to be divided amongst them as they determine.

SCIENTIFIC MYSTERIES.

CHEMISTS are advised to stock and show this book in anticipation of the winter evenings. It contains particulars of 200 chemical and other experiments, is freely illustrated, and is the cheapest, most comprehensive, and most clearly described collection of experiments and illusions ever offered to the public.

It sells at 1*s.*, and we supply it in one-dozen parcels with show card for 8*s.* 6*d.* It may be obtained at the same price from the following firms—

Ayrton & Saunders, 149 Duke Street, Liverpool
Barclay & Sons (Limited), 95 Farringdon Street, E.C.
Bleasdale, Wm., & Co., York
Edwards, Wm., & Son, 157 Queen Victoria Street, E.C.
Evans, Lescher & Webb, 69 Bartholomew Close, E.C.
Evans, Sons & Co., 53 Hanover Street, Liverpool
Imray, John, & Sons, Newcastle-on-Tyne
Maw, S., Son & Thompson, Aldersgate Street, E.C.
May, Roberts & Co., 9 Clerkenwell Road, E.C.
Newbury, F., & Sons, King Edward Street, E.C.
Thompson, John, Hanover Street, Liverpool
Wootley, James, Sons & Co., Manchester
Wyleys & Co. (Limited), Coventry

The advantage of stocking and selling this book is that it encourages and develops a new and profitable business in chemicals and chemical apparatus.

Business Changes.

MR. PHILIP HOLMES has acquired the business lately carried on by Mr. McCreath at 39 High Street, Margate.

MR. F. W. WILBY has removed his business from 164 Belgrave Gate, Leicester, to 83 Upper Conduit Street, Leicester.

MR. J. WALKER, of Upper Brighton and West Kirby, Cheshire, has opened a branch at Wallasey, in the same county.

MR. HERBERT RAY, chemist and druggist, 12 Cecil Square, Margate, has removed his dental surgery to that address.

THE business carried on for many years by the late Mr. Gabriel French, chemist, at High Street, Chatham, has been purchased by Mr. George Venables, son-in-law of the former proprietor.

MR. DAWSON, late of the Tollcross branch of the Scottish Drug Depot (Limited), has been appointed general manager in succession to Mr. Mackie. Mr. Dudgeon has undertaken the management of the Tollcross branch.

MR MITCHELL PARKER, from Messrs. Cooper & Co.'s, Kensington, is fitting up a pharmacy at Crouch End Hill, N. The shop is in a new block of buildings close to the Broadway, and nearer to Crouch End Station than Mr. Bird and Mr. Clark, the other chemists of the district.

THE partnership existing between John Martin and Wm. Charles Glover, druggists and drysalters, Caves Road, St. Leonards, and trading under the title of Martin, Glover & Co., has been dissolved by mutual consent. The business will in the future be carried on by John Martin.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Luck, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From The "Trade Marks Journal," October 19, 1892.)

Device of jumping clown; for chemical substances used in medicine and pharmacy. By M. A. Lilly, trading as Mayfield, Lilly & Co., 35 Colston Street, Bristol. 165,915.

Device of ancient vase, showing figures thereon; for mineral and aerated waters. By Copeland & Wilson, Portland Works, Jasper Street, Hanley. 165,967.

Device of country maid carrying clothes, and words "BETTER STILL"; for perfumed soap. By J. Watson & Sons, Whitehall Soap-works, Leeds. The essential particular is the device.

(From the "Trade Marks Journal," October 26, 1892.)

Signature of applicant; for ointments or dressings for veterinary purposes. By R. C. B. Cave, Barton Court, Colwall, near Malvern. 166,679.

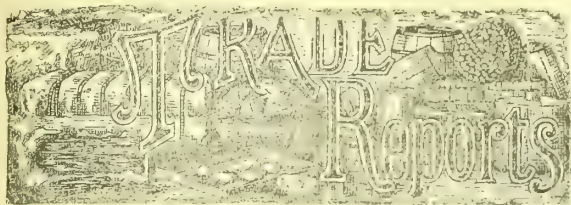
"HIRE'S ROOT-BEER," and signature of applicants; for a medicated beverage. By the Charles E. Hire's Company, 117 Arch Street, Philadelphia, U.S.A. The essential particular is the fac-simile signature. 164,517.

Device of rocks and waterfall, and wording; for seedlitz powders. By H. and J. Sharp, trading as H. Sharp & Son, Bourn Works, Barley Road, Leeds. The essential particular is the device. 165,634.

"PERSONAL"; for a medicine for human use. By L. T. Ashwell, Natal House, Hadlow, Kent. 166,974.

Device of cherub sitting on foliage and corn-ears, and "DR. THEINHARDT'S INFANTS' FOOD"; for food for infants. By Peter Reuss, care of Sorenson & Co., 33 Great Tower Street, E.C. The essential particular is the device. 166,614.

"PYRROLIN"; for a toilet preparation. By H. Foster & Co., 34 Clements' Lane, London. 165,942.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

The London Markets.

42 CANNON STREET, E.C., October 26.

The Ash Percentage of Kamala.

Mr. Theodore Waage contributes to the *Pharmaceutische Centralhalle* a paper on the purity of kamala, which the last edition of the German Pharmacopœia allows a maximum of 6 per cent. of ash after incineration. Mr. Waage has investigated a large number of samples of commercial kamala, and has found that kamala as imported always contains over 6 p. c. of ash, but that by means of sifting it a drug can be obtained which will yield from 5 to 6 per cent. of ash, but only in very rare cases. According to Flückiger, a sample of kamala which was taken from the capsules sent to him from Java gave 1.287 per cent. of ash—a statement which to some extent supports the assertion of Mr. Waage that pure kamala should not yield more than $1\frac{1}{2}$ per cent. of ash. Mr. Waage calls attention to the large proportion of chaff and pieces of broken capsule which are usually found in commercial kamala, and which average fully 25 per cent. of this total rate. Besides this there is always a considerable admixture of sand obtained in the drug as it is imported. Mr. Waage thinks that the reason why the commercial kamala does not come up to the ash standard prescribed for it is that it is subjected to a certain treatment in India, where the drug is used for dyeing, and where, therefore, the intensity of its colour rather than its medicinal efficacy determines its value.

The Tokmari seed.

In the *Indian Agriculturist*, Assistant-Surgeon Asutosh Ghose writes a paper on Tokmari-seed, which he thinks would probably become an article of some commercial importance if its medicinal value were better known. Tokmari-seeds are used in the form of a poultice as a remedy in cases of ulcers and inflammations, and are said to have given excellent results at the Campbell Medical Hospital in Calcutta, and other similar institutions. The Tokmari plant (*Lollemantia* Royleana, vel *Breviocephalum* Royle Beath) is a small annual, of the N.O. *Labiata*. It grows wild in the Punjab and is said to be cultivated in Behar. The word "Tokmari" is a corruption of "Tukhm-balanga," the Persian name of the seed. It does not appear that it ever received a Sanskrit name, or that it ever found a place in the Sanskrit Pharmacopœia. It has, however, been favourably mentioned in "Taliq Sharif" and other Hakimi works, from which it is to be inferred that it was first introduced in the palmy days of the Mahomedan emperors. When soaked in water the Tokmari-seeds swell up into a jelly, in which form they are used in making sherbets. The jelly is also sometimes strained through a piece of muslin, and the mucilaginous portion thus separated is mixed with water. Taken internally, the mixture acts as a sedative on the mucous membranes of the respiratory passages, intestines, and bladder, and as a diuretic. It is slightly astringent, and is sometimes prescribed by native physicians in bronchitis, catarrh, diarrhoea, and dysentery, as also in the diseases of the urethra.

The seeds are also considered useful in palpitation of the heart, and it relieves the after-pains of parturition. There is at present no regular trade in this article, only a small quantity being annually brought to Calcutta, and sold at 5r. or 6r. per maund. Arrangements have been made, however, for sending samples to Europe for experimental trial.

The German Export Drug Trade.

The Secretary of the Frankfort-on-Main Chamber of Commerce has sent out circulars of inquiry to the merchants and manufacturers of his district, asking their opinion upon points affecting their particular branches in connection with the renewal of the commercial treaties between Germany and Russia, Roumania, Spain, Portugal, and the South American Republics. Among the replies received are a large number from druggists and chemical-manufacturers. The suggestions have been submitted to General von Caprivi.

Suggested Monopolisation of the Bergamot-oil Trade.

The British Consul at Naples is responsible for the statement that "Reggio is the only place in the world where the bergamot-tree can be cultivated with profit, and as the essential oil is absolutely necessary for the manufacture of numerous perfumes, medicinal preparations, &c.," he is of opinion that it "offers a good chance to enterprising English firms to make a highly-paying business of it by getting the monopoly of the same. This can be easily done by simply buying up from the producers themselves all the quantity they extract. A work of this kind would, undoubtedly, give back to this product its former price, which, before it passed into the hands of thousands of small traders, who now make a shameful use of it by mixing it with 10 parts of foreign matter, was sold at 1*l*. per every 12 oz. The same might be practised with regard to lemon-juice, which is also, to a great extent, a speciality of this district. The infection of the blight, which last year damaged a considerable number of bergamot-trees, having greatly diminished, the crop has been more abundant than the preceding year, and better results are anticipated for the coming season." So far as we can discern the sense of this rather unclassical English, the consul advises a British firm to come to Reggio and corner the bergamot-oil trade. Apart from the question whether instigation to such doubtful tricks of trade is not beyond the province of a consular report, we question whether any single foreign house which, relying merely upon its capital strength, plunged into a buying-up contest with the "thousands of small traders" would not come out at the little end of the horn. And what proof has the consul for asserting that Reggio is the only place in the world where the bergamot-tree can be cultivated?

BALSAM (TOLU).—There has been a fair demand for this drug, and it is not possible now to obtain fair quality below 1*s*. 2*d*. per lb.

BLEACHING POWDER.—Dull of sale and easier. The spot quotation is now 8*l*. 10*s*. Liverpool offers at 7*l*. 15*s*. f.o.b., for prompt, or at 7*l*. 2*s*. 6*d*. on rail for 1893. The price on Tyneside is 7*l*. 10*s*. f.o.b.

BROMINE SALTS.—As foreshadowed in our last issue, the English manufacturers of bromides fixed their new scale of prices on Monday morning, when they announced the following quotations: *Bromide of potassium*, from 1*s*. 6 $\frac{1}{2}$ *d*. to 1*s*. 7 $\frac{1}{2}$ *d*. per lb.; *Bromides of sodium and ammonium*, at 1*s*. 10 $\frac{1}{2}$ *d*. to 1*s*. 11 $\frac{1}{2}$ *d*. per lb., according to quantity. This is a further advance of 4 $\frac{1}{2}$ *d*. per lb. all round. The American bromine producers are now, under the terms of the new agreement, quite cut off from the European market, and the general opinion among druggists here appears to be that we have seen the last of the low prices for the present.

CUTCH.—The market is firm. Privately 30*s*. per cwt. has been paid for "Star B," and now holders ask 31*s*. per cwt. At the auctions on Tuesday 232 boxes were partly disposed of at 25*s*. 6*d*. per cwt. for soft common tablets.

GALLS (CHINA).—At auction on Tuesday 10 cases of ordinary China galls sold at 51*s*. 6*d*. per cwt.

GUINEA-GRAINS.—Sales are reported from Liverpool at 22*s*. 6*d*. per cwt.

LIME-JUICE.—As a result of the accumulating stocks importers have accepted lower prices and a large business has been done this week, it is said, at from 10d. down to 8d. per gallon for fair Jamaica. Prices then rose again to 11d. per gallon, at which figure the last transactions were put through. The total sales from first hands amount to about 500 casks.

OIL (OLIVE).—Holders in London are firm, 38s. being asked for *Spanish* oil and 36s. for *Levantine* and *Mogadore*, but there is not much business passing. In Liverpool the market is also firm but quiet, with sales at the rates of 37s. for fine *Spanish*, 35s. 6d. for *Messina*, 35s. 6d. to 36s. for *Candia*, and 34s. 6d. to 35s. per cwt. for *Syrian* oils. In Spain the crop estimates are being reduced as the season advances, and the total output from that country is not now expected to exceed two-thirds of a good crop. In the Seville district, however, the prospects are very good. The olive yield in the Levant and the Grecian Isles is likely to be a very poor one in many quarters; indeed, it is almost an entire failure. In the Ionian Islands the crop is also poor, and in Italy the harvest is progressing very badly.

OILS (ESSENTIAL).—Sales of *Oil of anise* have been made on the spot at as high a price as 6s. 3d. per lb., and for arrival up to 5s. 7d. per lb. c.i.f. terms.

OPIMUM.—Our mail advices from Smyrna (dated October 15) are as follows:—Since October 12 nothing has been done in opium, partly on account of the Jewish holidays and partly because of the tenacity with which the holders stick to their demand of a penny a pound above the present market prices. They base their firmness on the reports from the interior announcing continued absence of rain, whereby the sowing of the autumn seed is retarded. The arrivals here since the beginning of the season are 3,025 cases, against 2,400 cases in 1891. There is, however, nothing alarming in these reports up to the present time. The purchases for the Dutch Colonial Department still continue; up to 7s. 6d. per lb. has been paid for opium suitable for this purpose, but the Dutch tests are becoming so stringent that hardly fifty cases have been approved of during the first half of October.

POTASH SALTS.—*Chlorate* has advanced and is now firmly held at 7½d. f.o.b. Liverpool for prompt delivery. Second-hand holders have done business at 6½d. per lb. f.o.b. for January 1893 delivery. *Pernanganate* fairly steady, with business at the convention prices. *Bichromate* may be had at 4½d. per lb. British refined *Saltpetre* is quoted at 20s. 9d. to 21s. 9d. per cwt. according to packing; German at 20s. 6d. to 21s. 3d. per cwt.

QUICKSILVER remains unaltered at 6l. 10s. from the importers, or 6l. 8s. 6d. per bottle from the second-hand.

QUININE.—In the latter part of last week small sales were made at 10d. per oz. for second-hand German bulk on the spot, and at 10½d. per oz. for March delivery. The Pelletier Company write us from Paris that the present price of their brand is 1s. 4½d. per oz.

SHELLAC.—Last week the market closed quietly with small sales of TN orange lac for November delivery at 86s. per cwt. On Monday, however, a better demand showed itself, and prices rose (with sales of about 1,000 cases) to 88s. 6d. for November TN, and 88s. for December, ditto. At the weekly auctions only 502 cases of all kinds were offered. Holders showed much firmness, and only about 243 cases were disposed of at an advance of 1s. on orange and button, and of 2s. on garnet lac. The following prices were realised: *Second orange*—Curly reddish and cakey to fair bright flat, 84s. to 86s.; *Garnet*—fair free but curly to good AO unworked, 75s. to 77s.; *Button*—good but cakey unworked firsts, 96s. to 97s.; fine seconds, 90s.; dark to good thirds, 76s. to 80s. per cwt. Since the auctions the market has been quiet, with very little business.

SODA SALTS.—*Soda crystals* are dull of sale, at 66s. from the London makers, or 67s. 6d. landed from the Tyne. The Newcastle price is 57s. 6d. f.o.b., or 65s. ex ship London. *Caustic soda* steady at 10l. 5s. for 70-per-cent., here or in Liverpool; 9l. 2s. 6d. for 60 per-cent., or 11l. 10s. for 76 to 77-per-cent., on the Tyne. For 1893 delivery a reduction of 20s. per ton is made. *Bichromate* is quoted at 3½d. per lb. *Nitrate* firm at 8s. 7½d. to 9s., according to quality. A considerable business has lately been done in cargoes off the coast.

SPICES.—At the weekly auctions on Wednesday all spices were firm, with the exception of white Singapore pepper and arrowroot, for both of which lower prices were taken. *Black pepper* was somewhat dull of sale, at 3½d. to 3¾d. per lb. for grey to good fair Singapore. Four hundred bags Singapore *White pepper* sold at 4½d. to 5d. per lb., for dull to fair, and of Penang pepper a parcel realised 4½d. per lb. *Pimento* remains firm, with sales of ordinary to fair at 3d. to 3½d. per lb. *Cochin Ginger* is very firmly held, and sells at full prices—good native cut at 68s., and bold cut at 89s. per cwt. *Nutmegs* are firm, and slightly higher for bold kinds, while *Mace* remains dull of sale. *Zanzibar Cloves* are dull of sale, only a few lots of dark description finding buyers at 2½d. per lb. Fair to good picked Penang cloves are selling at 7d. to 9d. per lb. There has been a strong demand for *Cinnamon*, and privately prices have been paid which show an advance of fully 1d. per lb. upon the last public auction rates.

TURMERIC.—The demand has been better, with sales of *Bengal* root at 22s.; and ordinary bulby to fair bright mixed China finger at 16s. to 18s. 6d. per cwt. At auction 73 bags split *Cochin* bulbs sold at from 7s. 3d. to 8s. 9d. per cwt. for rough to fair bright. A parcel of 300 bales bright bulby *China* finger was bought in at 21s. per cwt.

Thursday's Market News.

42 CANNON STREET, E.C., October 27.

London. The drug and chemical markets of this city continue to be fairly active, and prices generally are continuing their upward course. At to-day's drug-sales a very considerable proportion of the goods offered sold at improved rates. The following are the principal alterations:—Higher: *Socotrine* and *Curaçao* aloes, *buchu*, *chamomiles*, *Canada balsam*, *jalap*, *lime-joice*, *star-anise* oil, *Siam* and *Sumatra benzoin*, *musk*, *cassia fistula*, *Japanese peppermint* oil, *menthol*, *oils of lemon* and *bergamot*, *fine guaiacum* gum, *Jamaica beeswax*, *vanilla*, *squills*, and *Jamaica sarsaparilla*. Lower: *Peru balsam*, *fine Tinevelly senna*, *ipecacuanha*, and *gum myrrh*. In fine chemicals the chief feature of the week has been a heavy advance in bromine salts. Quinine is a shade easier. In other articles we may mention that *Japan wax*, *cutch*, *chlorate of potash*, *linseed oil*, and *antimony* are higher; while *gambier*, *petroleum*, and *white Singapore pepper* are offering at easier rates. *Bleaching-powder* is also cheaper. *Shellac* is irregular, but closes lower. The Bank rate is unchanged, at 3 per cent. Bar silver is worth 39½d. per oz. The Calcutta exchange is 1s. 3¾d., Bombay 1s. 3½d.

New York. Our correspondent, writing under date of October 19, states that the festivities attendant upon the Columbian Quarcentenary Celebration in that city had the effect of restricting business to a certain extent for the previous week. Notwithstanding this, however, the tone of the market remained firm, and there was a general upward tendency noticeable, which increased during the latter part of the week and the first part of the current week. The most interesting news of the week is the announcement of an agreement between the conflicting bromine interests. The details of the agreement are not yet made public, but it is reported that the stocks of foreign bromides held here unsold will be reshipped, and the market here left to the control of the domestic manufacturers. As a consequence *Potassium bromide* has been advanced to 27c. to 28c. per lb. in bulk, *Sodium bromide* to 32c., and *Ammonium bromide* to 34c. Western holders are very firm on *Senega*, and ask the equivalent of 61c. laid down; on the spot, however, 57½c. will buy in a small way, but the stiff figures have shut off the export demand, and no business is doing. *Mexican sarsaparilla* continues to decline, and is jobbing at 8½c. to 9c. spot, while forward deliveries are offering, in round lots, at 8c. Forty-six bales arrived last week from Vera Cruz, and it is reported that further liberal supplies are in sight. *Jalap*, too, is in full supply, 83 packages having come to hand last week. The jobbing demand is fair at 30c. to 35c., and no large

business has come to light. Mexican *Vanilla beans* are very firm at a marked advance, with large sales at the advanced prices, which range from 325c. for cuts up to \$10 for prime frosted beans. Sales of 4,500 lbs. of *Angostura Tonquin beans* are reported at \$2.75 for strictly prime quality. *Jaborandi leaves* are scarce at the moment, and 40c. is asked in some quarters. *Damiana leaves* are also higher, with sales at 18c. and 22c. to 25c. wanted for further supply of good leaves. Sales of *Kava kava* root are reported at 20c., and 22c. is now asked. California yellow *Mustard seed* has advanced to 6½c. to 7c., after sales of 300 bags at 6½c. *Citric acid* has been advanced by the manufacturers to 1c. to 45c. in barrels, and 45½c. in kegs, and the citrates have been marked up in sympathy. *Peppermint oil* is quiet and neglected, at \$2.65 asked, which is too high for export trade. *Nitrate of silver* has advanced to 54c. to 55½c. *Curaçao aloes* are stiffer, with sales of 100 boxes at 3c. *Opium* is rather weak, but not quotably changed. One holder shaded his price on German *Quinine* the latter part of last week, but on the strength of the bark sales prices stiffened up again, with sales of 150,000 ozs. of B & S at 19c. The consumptive demand is only fair. *Gums benzoin* and *kino* are both stiffer. *Ipecacuanha* advanced to \$2.20. *Clove oil* is stiffer, in sympathy with the parent article. *Cumin seed* very scarce and higher.

ACID [(CITRIC).—The market is not very lively this week, but quotations remain practically unchanged, 1s. 6½d. being asked by the makers for B.P. quality, while second-hand holders offer (without guarantee of standard) at 1s. 6d. per lb. Juice quiet at 21l. to 21l. 10s. f.o.b.

ALOES.—Of *Curaçao aloes* two parcels were offered, and the best lots sold at higher prices, 75s. per cwt. for fine bright orange, 31s. for fair, and from 15s. down to 10s. for dark coarse liver. Of *Cape aloes* a parcel of 52 cases sold rather cheaply as compared with the prices that have been paid privately recently—viz., at 23s. to 23s. 6d. per cwt. for good to fine bright hard, 22s. 6d. to 21s. per cwt. for fair to rather drossy, mixed, 18s. for ordinary, and 6s. 6d. per cwt. for a lot consisting of the most part of stones. *Socotrine aloes* are scarce in fine qualities and in small supply. Higher prices were paid to-day—viz., 85s. per cwt. for 3 cases fair dry in skins. One keg of ordinary settlings brought 35s. per cwt.

AMBERGRIS.—Two lots, together 16 oz., of rather ordinary dark quality sold to-day at from 43s. to 60s., subject to approval.

ANISE.—Prices remain high. For 23 bags fair pale *East Indian* 19s. 6d. per cwt. was paid to-day. *Stony Russian* seed was withdrawn without mention of price.

ANISE (STAR).—The quotation we now hear for arrival is 89s. per cwt. c.i.f. terms, which is a fresh advance since last week.

ANNATTO.—About ¼d. per lb. dearer, 52 bags good bright Ceylon selling at 2½d. to 3d. for good, and 1½d. for dull dark quality.

ANTIMONY.—Twenty cases crude Japanese sold to-day at 25l. 10s. per ton.

ARECA.—Ten bags of fair quality were bought in to-day at 33s. per cwt. nominally.

BALSAM (CANADA).—Three barrels of good thick pale balsam were bought in at 1s. 6d. per lb. A bid of 1s. 3d. per lb. was refused.

BALSAM (COPAIBA).—Of seventy-three tins *Bahia copaiba* eight sold at 1s. 5d. per lb. (subject to approval, the limit being 1s. 6d. per lb.) for fair yellow, and at 1s. 4d. per lb. for thick dark grey. Eight casks fair thick *Maranhão* were bought in at 1s. 10d. per lb.

BALSAM (PERU).—At to-day's auctions 4s. 5d. per lb. would have been accepted for fair quality, but no bids were made. Business has been done at reduced prices, holders, it is said, having accepted down to 4s. 5d. per lb. on the spot.

BUCHU.—There were only three packages at auction to-day, and those sold at very high prices—viz., 9½d. to 9¾d. per lb. for round mixed rather yellowish leaves of good flavour. This marks a fresh advance of 2d. per lb. We hear

that a consignment is due in about a fortnight, and that part of it has been sold for arrival at low prices compared with those now ruling.

CALUMBA.—Steady of sale, with business at to-day's auctions at the rate of 26s. 6d. to 27s. 6d. per cwt. for grey and yellow mixed sorts.

CAMPOR (CRUDE).—The market remains firm, and business in *Japan camphor* on the spot is reported at 150s. to 155s. per cwt., and of *China* at 140s., c.i.f., for near at hand. For October–November shipment, however, *China camphor* offers lower—viz., at 130s., c.i.f. terms. At to-day's sales 140s. per cwt. was paid for one tub of good crude Japanese.

CAMPOR (REFINED).—There is no alteration in the English or German quotations. Eleven cases refined Japanese in cakes were bought in to-day at 1s. 7½d. per lb.

CANARY-SEED.—The market is steady for all kinds except *Barbary seed*, of which there have been fairly heavy arrivals, and which may now be had at 78s. on the spot. *Turkish seed* is still quoted at 80s., and *Spanish* at 82s. 6d.

CANNABIS INDICA.—Of 23 robbins, fair greenish tops, 15 sold to-day at 3½d. per lb.

CANTHARIDES.—A parcel of 4 cases *Chinese flies*, small to very bold mixed, but rather dark in colour, was brought in to-day at 1s. 8d. per lb. We believe that 1s. 5½d. per lb. would be accepted.

CARDAMOMS.—Slow of sale; 139 cases were offered to-day, of which 64 sold as follows:—*Ceylon-Mysore*: Medium long yellow, 1s. 8d.; small to medium brownish, 1s. 5d.; small and rather brown round, 1s. 4d.; small yellow, partly split, 1s. 3d.; common brown split, mixed sizes, from 1s. 1d. down to 5d. *Ceylon-Malabar*: Medium to bold fair brown, 1s. 6d.; smaller sizes, 1s. 3d. per lb. Grey seeds realised 1s. 5d. per lb.

CASCARA SAGRADA.—The market is dull, and no business is reported. Only 2 bags offered to-day, which showed a very woody quality; 45s. per cwt. is asked for them.

CASSIA FISTULA.—Eight bags from *Dominica*, good quality, were offered to-day, and with excellent competition brought the very high price of 26s. 6d. per cwt.

CHAMOMILES.—*Belgian flowers* are much dearer this week, and several of the agents have received instructions to stop selling. The advance is chiefly in the ordinary and medium qualities, which are from 5s. to 7s. 6d. per cwt. higher. Nothing is now offered below 47s. 6d. per cwt., and prices run from that point up to 72s. 6d. per cwt. for finest flowers.

CINCHONA.—The supply of good qualities of flat *Calisaya* bark is becoming very small, and there are a fair number of inquiries. At auction to-day 87 packages were offered, all of very ordinary grey quality. Most of this sold at from 6d. to 10d. per lb. for medium to fair, and down to 2d. per lb. for very dark and damaged. Of *Crown bark* 38 bales partly silvery mixed grey quill were bought in at 1s. 4d. per lb. for fine bright quill 1s. 7d. per lb. was refused, and some good lots sold at 1s. 6d. per lb.

COCCULUS INDICUS is in plentiful supply, but holders are asking somewhat higher prices, 8s. 9d. being mentioned for fair quality.

COLOCYNTH.—For fair pale partly seedy *Turkey apple* a bid of 11d. per lb. was refused to-day, the price being 1s. per lb. Two cases broken and very seedy *Spanish* sold at 9d. per lb.

CONDURANGO.—The 18-bale lot to which we referred last week, was offered to-day, but it was hardly so briskly competed for as the owners had expected. The price asked is 8d. per lb., and five bales sold at that figure, an offer of 7½d. per lb. being refused for another lot.

CUBEBS.—Sixteen bags from *Batavia*, brown and grey mixed berries of somewhat mace-like odour, were bought in at 6l. per cwt. to-day. Of another parcel of 15 bags black and blue mixed berries, free from stalk, three sold at 6l.; for the remainder 5l. 17s. 6d. was refused.

CUTTLE-FISH.—Thirty packages fair, pale, partly broken bone from *Bombay* sold cheaply at 2¼d. per lb. to-day.

DILL-SEED.—Of 50 bags from Bombay, eight sold at 13s. per cwt.

DRAGON'S BLOOD.—Several parcels were placed in sale to-day: one of 7 cases, low, pale brick, irregularly-shaped slabs, sold without reserve at 32s. to 33s. per cwt. A parcel of 13 cases fair sticks in reed brought from 5l. up to 5l. 17s. 6d., and some dark East Indian drop realised 46s. per cwt.

EPSOM SALTS.—During the last few weeks sulphate of magnesia (said to be free from chloride and showing very fine dry crystals) has been imported from Germany, in competition with the English article. It is sold at lower prices—viz., at the rate of 58s. per cwt., c.i.f. terms in bags, with an increase of 10s. for 5-cwt. casks, and 20s. for cases and kegs.

ERGOT OF RYE.—Of 3 bags ordinary wormy mixed German, 2 sold at 2s. 1d. per lb. For 4 bags *Belgian*, of medium quality, a bid of 2s. 2d. per lb. was refused. For good sound *Spanish* 2s. 6d. per lb. would now be taken, which is a few pence less than was wanted for the same parcel a few weeks ago.

GAMBOGE.—Thirty-three cases were offered to-day, and of these 13 sold at 11l. 10s. for broken Saigon pipe and cake of good fracture, but very small; 10l. 17s. 6d. for pickings; and 10l. 10s. for very common rice pieces.

GENTIAN.—A parcel of 10 bales was advertised for sale to-day, but not offered. It is said to have been sold privately.

GLYCERINE.—The market is very firm, at 43s. to 43s. 6d. per cwt. for double-distilled, s.g. 1.260. Business is reported at both these quotations.

GUINEA-GRAINS.—Ten bags fair and slightly stony, as usual, sold at 25s. per cwt. to-day.

GUM ACACIA.—In the face of these resumed shipments from the Soudan buyers stand off rigorously, and most of them will probably not come into the market for large purchases until the price shall again have fallen to 50s. or thereabouts. At to-day's auctions several parcels of acacia gum were offered, but the bulk was bought in. Five casks of greyish picked *Mogadore* drop sold at 84s. per cwt. A parcel of *Red Sea* gums was disposed of at 10l. 7s. 6d. to 13l. 12s. 6d. for good to fine pale picked; 6l. to 8l. 5s. for yellow ditto; and 6l. to 6l. 2s. 6d. for small grey. Yellow sorts from Suez brought 70s. to 75s., and clean small siftings, 45s. per cwt. A parcel of fine *Cape* gum sold well, with good competition at full prices; fine pale soft dusty sorts, at 92s.; fair ditto, rather yellowish, at 61s. 6d. to 62s. 6d.; clean white siftings, at 57s.; and dusty amber mixed, at 33s. 6d. per cwt. Large quantities of Soudan gum continue to arrive from Suez.

GUM AMMONIACUM.—Of 22 cases offered to-day, 4 sold without reserve at 36s. to 37s. for fair almondy block, which shows rather a lower price.

GUM BENZOIN.—Of *Siam* gum 20 cases were offered at to-day's sales, and these were all sold, with exceptionally brisk competition, at an advance of from 3l. to 5l. per cwt., bringing the prices up to a figure which has not been reached for many years. Very fine medium to bold clean, of somewhat pale almonds, brought 28l.; medium ditto, 22l.; fair small to medium almonds, free from dust, 12l.; fair native picked clean small almonds and grains, 10l. 10s. to 11l.; good orange bright block of small to medium almonds and siftings, 8l. 12s. 6d.; pale coarse siftings, rather dusty, 5l. 7s. 6d. to 5l. 10s.; dull grey dusty garblings, 65s. per cwt. Of *Sumatra* gum a few cases only sold at an advance of fully 5s. per cwt.; very fine seconds, bright pale centres, slightly dull at borders, 7l. 17s. 6d.; lower ditto, 6l. 15s. to 6l. 17s. 6d. The stock of this variety is now becoming very much reduced. There was a large arrival of new *Palembang* gum, of which a few boxes of good gummy quality sold at 40s. per cwt.

GUM GALBANUM.—Nine packages of the spurious drug usually so called at our drug-sales, imported from Aden in blocky grains, sold at 18s. per cwt.

GUM GUAIACUM.—Fine qualities are in demand and considerably dearer, 3s. 2d. per lb. being paid for a lot of extra

fine almondy block; and 2s. 6d. per lb. for a very good lot. The remainder of the 66 boxes offered consisted of very common quality, which could hardly be called by the name of guaiac, as most of it was bark, stones, and earth. All of this sold at from 2½d. to 10d. per lb.

GUM KINO.—An offer of 105s. per cwt. was refused for a case of good East Indian shown at to-day's auctions.

GUM MYRRH is decidedly lower. Of 55 packages offered to-day 11 sold at from 70s. to 80s. for dark to good bright sorts, 80s. for fine clean siftings, and 38s. for dark pickings.

HONEY.—Good *Jamaica* honey is getting scarce, and everything offered to-day sold at 27s. 6d. to 29s. for brown to orange thick. Several parcels of *Australian* honey were partly disposed of.

IPECACUANHA.—Three hundred and five bales of ipecacuanha arrived from Monte Video in one consignment on Friday last, and in addition to this heavy arrival another lot of 200 bales is reported to be on the way and due in the first week of November. Under these circumstances it is not surprising that there was scarcely any bidding whatever at to-day's sales. The brokers bought in their supply at from 9s. to 9s. 6d. per lb. for *Rio root*, and refused an offer of 8s. per lb. for a rather lean and somewhat damaged seron, for which 8s. 5d. per lb. is a bid. After the sales a bid of 8s. made by an American buyer for a large quantity, was refused. The holders are not disposed, it seems, to accept a greater reduction than about 6d. per lb. on the last sale prices. A bale of so called "Brazil ipecac." (*Psychotria emetica*) was offered to-day and bought in. The broker stated that he had sold a similar one at 6s. per lb. at the auctions on a previous occasion, but no bid was made now. The root is useless as a substitute for ipecacuanha. We believe that a parcel of 73 bales of this root has recently arrived.

JALAP.—From 1d. to 1½d. dearer to-day. For two bags good pale quality a bid of 1s. 6d. was refused; while out of another of 9 bales imported twenty-one years ago, and consisting of rather small pale pieces and partly of chips, 4 bales sold at from 1s. 5d. to 1s. 6d. per lb.

KAMALA.—Three cases rather dull unsifted, from Bombay, were bought in at 7d. per lb.

LIME-JUICE.—To-day a good demand was manifested, and 15 hogsheads of West Indian were all sold at a slight advance on the prices paid privately this week—namely, 11d. for dull and dirty, and 1s. 1d. per gallon for good pale Jamaica.

MUSK.—In better demand to-day, but also in considerable supply, most of which, however, was sold at an advance of about 5s. per oz. on fine first pile, and about 3s. on third-pile *Tonguin* musk. Of 13 packages first pile 4 sold at 67s. 6d. per oz. for small to bold fine thin skin, blue and brown underskin, well-trimmed but somewhat damp, and 60s. for old-fashioned small to bold dry and fairly trimmed. Fourteen tins of third-pile pods were all sold at 43s. 6d. for good small to bold blue skin pods, 30s. to 31s. for fair old-fashioned somewhat damp, and down to 7s. 6d. (subject) for very common. Of *China cabardine* musk 7 tins were offered, but there were no bids at 13s. per oz. For somewhat dry and unsightly *Yunan* pods a bid of 27s. was refused.

OILS (ESSENTIAL).—A parcel of newly-imported essential oils, distilled in Spain, sold at to-day's auctions without reserve at 2s. to 1s. 9d. per lb. for *rosemary* and 1s. 8d. to 2s. 1d. per lb. for *red thyme*. A case of *pennyroyal* oil was bought in at 5s. 6d. per lb. nominally. *Eucalyptus* oil is very firmly held and in good demand. At to-day's sales several parcels of *Australian* were bought in at 3s. per lb. Of *ylang-ylang* a few bottles appeared to be sold at 12s. per oz. Oil of *lemon* and *bergamot* are reported dearer from Italy, but no definite prices are yet given for new crop oils. For *citronella* oil offered to-day (35 cases) 1d. per oz. is asked. A few cases of unworked oil of *cassia* sold at 3s. 3d. per lb. Japanese oil of *peppermint* is dearer, with sales on the spot at 6s. 6d. per lb., while holders now ask 6s. 9d. For shipment 6s. 3d. c.i.f. has been paid, and 6s. 6d. c.i.f. is now asked. *Menthol* crystals are quoted at 10s. 6d. to 10s. 9d. per lb. to-day. American peppermint oil (HGH) is at 12s. per lb. at present.

OPIUM SALTS.—At to-day's auctions 14 tins, each 400 oz. of *Hydrochlorate of morphia*, manufactured in India, were offered on behalf of the Indian Government: they sold very cheaply at 2s. to 2s. 1d. per oz. Two tins, each of 480 oz. *Cocaine*, of the same manufacture, also sold at the low price of 4s. 10d. to 4s. 11d. per oz.

QUININE.—Seven cases, of 10 100-oz. tins each, *B&S* quinine sold to-day at 9½d. (one lot at 9¼d.) per oz., which is about ¼d. per oz. below the price quoted in the market. The market closes very quiet, without either speculative or trade buying to any considerable extent.

RHUBARB is slow of sale and generally easier for all kinds except high dried, which realised fairly good prices. Eighty-three cases were offered at to-day's auctions, of which 32 sold as follows:—*Shensi*, flat medium to bold fine rough bright coat, and nearly pinky in fracture, 2s 4d., medium to bold fair coat, round pinky-grey fracture, 1s. 11d.; small to medium coat of good fracture, flat, 1s. 10d.; ditto flat, rather rough coat and grey fracture, 1s. 5d.; round small to medium partly rough coat, three-fourths pinky, one-fourth dark fracture, 1s. 4d. to 1s. 5d., and good pickings, 1s. 1d. per lb. *Canton* medium to bold, fair coat three-fourths pinky, one-fourth dark fracture, slightly wormy round 1s. 4d.; ditto round and flat mixed, of all sizes, 1s. 2d. to 1s. 4d.; medium round, three-fourths pale pinky, one-fourth dark, 1s. 3d. per lb. *High dried*, small to medium fair pinky fracture, 1s. 4d.; smaller ditto, 1s. 3d.; ordinary small, 9½d. per lb. We have heard it stated that the *Bokhara*, which was recently lost on the Chinese coast, had about 200 cases of rhubarb on board.

SARSAPARILLA.—Of a parcel of 29 bales *Lima Jamaica* root, 14 sold at from 1s. 1d. to 1s. 2½d. per lb. for first-class, and at 10d. to 11d. per lb. for badly-damaged root. *Grey Jamaica* sold at 1s. 7d. per lb., which is dearer.

SENEGA.—Bids of 2s. 6d. per lb. were refused to-day for good bright root. The owners would take 2s. 9d. per lb.

SENNA.—Of *Tinnevely* senna 389 packages were offered to-day, which were mostly in first hands. With few exceptions, the whole of this was sold at prices hardly up to those of last sale. Fine qualities were decidedly easier, and for medium and ordinary grades there was a tendency towards lower rates. The prices realised were, for very low dark and stalky to small yellow, 1½d. to 2½d.; ordinary to medium yellow and grey, 3d. to 4d.; fair small to medium greenish, 4½d. to 6½d.; good bold green mixed to fine, from 7d. to 1s. 2d. per lb. *Pods* are neglected, and sell cheaply at from ¾d. to 2½d. per lb. Of *Alexandrian* senna some fine pale pods brought 2½d.; small to medium green leaf 8d.; and broken greyish siftings, 4½d. per lb.

SQUILLS.—Higher at to-day's sales. For good pale quality 5d. per lb. is wanted (4½d. being refused), while fair sold at 3½d. per lb.

SUGAR OF MILK.—Good quality is offering at 62s. 6d. to 65s. per cwt.

TEA.—The market for Congous is very firm this week, and nothing but the merest rubbish can be bought under 6d., though there is no further definite advance to be noted. On the other hand, there has been a further move upward on the part of Indians and Ceylons, the heavy Indian sales of the week going off very briskly with strong competition and at full rates, for teas under 10d. especially. The terminal market is dearer again, and future months are up to 3½d. per lb.; spot a little lower. Ceylons show a greater advance than Indians, and practically nothing can be bought under 7d. per lb. This is, of course, not a very high price for leaf Ceylon, except in comparison with recent low rates, and the small quantity on the water to arrive warrants the opinion that Ceylons will not be cheaper yet.

TORQUIN BEANS.—Foxy Pará beans sold at 1s. 4d. per lb. to-day, which shows rather an improvement in value.

VANILLA.—A fairly large supply of *Mauritius* and *Seychelles* beans sold to-day at an advance of 6d. to 9d. per lb.; fine crystallised, 7½ to 8 inch, 16s. to 19s.; slightly crystallised, 6½ to 8 inch, 11s. to 14s. 6d.; fair to good chocolate, 4 to 8 inch, 7s. to 13s. 6d.; ordinary to fair brown, from 4s. 6d. to 8s. 6d. per lb.

WAX (BEES').—Of Jamaica only a few packages were offered, which sold, with very good competition, at an advance of about 5s. per cwt.—fine yellow, 7l. 12s. 6d.; grey mixed to good red, from 7l. to 7l. 5s. For Zanzibar wax, dark and grey mixed, 5l. 2s. 6d. to 5l. 5s. was paid; bright orange coat realised 6l. 15s.; and a fair quantity of Madagascar sold at from 100s. to 107s. 6d. for brown to good yellow, which shows a steady price.

WAX (JAPAN) is higher. On the spot 39s. per cwt. has been paid for good pale squares, and 35s., c.i.f., for shipment.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

OUR market is firm, and prices are well sustained. The sales this week amount to 40 cases of manufacturing opium, of usual quality, at the parity of 6s. 3d. to 6s. 5d. per lb., f.o.b. here, and of 50 cases of *Karahissar*, at the parity of 7s. 4d. per lb., f.o.b.

THE LIVERPOOL MARKET.

BALSAM COPAIBA.—The market has been cleared of cloudy and bright Maranham, and only second-hand parcels are now to be had, at 1s 8½d. for cloudy and 1s. 9d. to 1s. 9½d. for bright. There are indications of even higher prices being asked.

HEMPSEED is advancing, and higher prices are likely in the near future.

HONEY.—Sales of *Chilian* in quantity continue to be made, and the market has been cleared of low grades—third pile fetching 23s. Tenth-pile has been selling at 35s. 6d. to 37s. 6d.

IPECACUANHA.—Seventy-three bales of so-called ipecacuanha have arrived, but they are not the true variety, and are not likely to affect the market.

OIL (CASTOR).—The steady advance has been maintained on the spot and to arrive. In the former position 2½d. to 2¾d. is now asked. First-pressure *French* is now held for 2½d., and second-pressure 2½d.

QUILLAIA is in a much firmer position, and the value on the spot has advanced to 17l.

SPERMACETI.—Fifty-three boxes of *Chilian* sold on private terms; and 50 boxes of American, offered at auction, were withdrawn at 1s. 4½d.

WAX (BEES').—In *Chilian* there has been considerable movement, and the market has been practically cleared of all lots offering—6l. 10s. grey, 7l. yellow, and 7l. 10s. to 7l. 15s. for pale.

TO DETECT ALCOHOL IN VARNISHES AND PHARMACEUTICAL PREPARATIONS.—Mr. Ad. Tschepp suggests that we should put into a test-tube 70 per cent. nitric acid and pour above it the liquid to be tested. In the presence of alcohol there appears a greenish colour, which in a few minutes passes into a brilliant deep emerald. Gradually there takes place a faint evolution of gas, and the characteristic odour of ethyl nitrite is recognised.

THE WESTERN CHEMISTS' ASSOCIATION (OF LONDON).—The officers for the ensuing year are:—President, Mr. W. Martindale; Vice-Presidents, Mr. Henry Long and Mr. R. H. Parker; Hon. Treasurer, Mr. J. H. Mathews; Hon. Secretary, Mr. F. Andrews. Other members of the committee: Messrs. Arkinstall, Cracknell, Horsley, Knight, H. Mathews, Phillips, Taplin, Tennant, Worsley, Gulliver, Hyslop, and the divisional secretaries of the Pharmaceutical Society, who are members of the Association. At the last committee meeting of the Association a cordial vote of thanks was passed to Mr. H. Long for his courteous and able conduct as President of the Association from its foundation to the present time. The annual dinner will take place at the Holborn Restaurant on Wednesday, November 16; tickets, 5s.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

"Veterinary Counter Practice."

SIR,—I observed a correspondent say, in your last week's issue, I believe, that if the subscription to your excellent journal were doubled, yet chemists would not do without it. Personally, I re-echo that statement. But I write to inform you how useful I find the "Veterinary Counter Practice," issued from your office.

I have often had occasion to make up preparations for farmers, using the above publication as my guide, and I find they have given entire satisfaction; they seem to go "straight to the mark."

I had previously very little knowledge of animal-treatment, but with the help of this book and a measure of common sense, I have been able to do business which was satisfactory alike to the farmer and myself.

Yours truly,

Fraserburgh, N.B.

JAMES A. ROBERTSON.

The October Examinations.

SIR,—In your correspondence the week before last I noticed a letter complaining about the date fixed for the Major examination held in London last month. I quite agree with the writer of that letter. It seems to me that it was arranged in such a manner that unless the candidate had been a student at Bloomsbury it would be impossible for him to get through the full course at the different schools. I have not the slightest doubt about the illegality of the proceedings. I am sure it is far more immoral to "diddle" a poor student out of his three guineas than the "diddling" that the President suspects every candidate (outside of Bloomsbury) of doing at the examination-rooms. How can the Society conscientiously hold money that was paid in as entrance fee for an October examination when no examination was held during that month? How long is it since October was in September?

Yours, &c.,

SMALLIWI. (152/49.)

Examiners' Latin.

On October 15 we mentioned that we had observed four errors in the Latin paper set for the Irish Preliminary. We asked correspondents to point them out to us. Mr. J. P. Ellerington, 1 Cranbourne Street, W.C., and Mr. E. M. Anderson, 38 Prince's, Dundee, pick out those which we had noticed, viz.—*Jactatim* should be *jactatam*; *Temples* should be *templis*; *Ex* should be *eo*; *Cæsaram* should be *Cæsarem*; and an error of punctuation (which none of our correspondents noticed). The comma at *Cæsarem* should be removed to *fuervant*. Also inverted commas should have been at the beginning of the first line of the quotation from Virgil, and again (closing Dido's address) at the end of the fourth.

Among other corrections sent to us by other correspondents (none of whom select all our four) are several which are not, we think, justified. "A. F." says, "*Eo concilio dimisso*" (abl. abs.) should be "*Eo concilio dimissi*"; "C. E. A." thinks the last word should have been *viderunt* instead of *viderent*; and "J. A. W." proposes *divom* for *divum*.

Viderent is the subjunctive of the *Obliqua oratis*. "They did not wish what they said to be divulged . . . for this reason, that they saw, if it were published, they would get into the gravest trouble." *Viderunt* is inadmissible; it is the chiefs who assign the reason for silence, not the reporter. The suggested change of *divum* to *divom* is not good. Some editions have it one way and some the other. The change of *dimisso* to *dimissi* for the sake of keeping the *eo* is not necessary, and would be no improvement. *Dimisso concilio* occurs again in Book ii. chap. 32 of the *Bellum Civile*.

The Complaint of Mr Jones, Umbrella mender, Concerning Methylated Spirit.

It's the victim I've bin of a crooll hontrage, and my 'art and my bowls is sore,

And the wust of it is that there ain't no blamed chaust of me gettin' no 'elp from the lor;

And the willian wot done it he cocks a big snook and he larfs at the bloomin' consarn;

And you says there is justice in Hingland, you does! But I ups and I says to you, "Garn!"

W're's the 'arm if I does take a swig now and then of the finish I buys at a shop?

It's my stummick, not yourn, wot I puts it into, and mine takes werry kind to a drop.

Two penn'orth I buys three or four times a day, and the 'prentice he looks like a kid

W'en I says it's for warnishin' handles of sticks. Could you guess wot the young sarpiant did?

I can't tell wot he put in the lush the larst time—it were jollop or some-thin k like thot,

Or croton; a screw-belly wengeance it were—lor', I thought I'd 'ave dyde on the spot;

And it 'aun't no taste—leastways, nothink more than the methsperrit itself might 'ave 'ad,

But it gev me the cholera mawbus, no end—it did, and it gev me it ba-ad!

If I speaks to the beaks 'twould be me they'd run in for a-breakin' the revenoo lor,

I can't pay him out no way unless I lays for him and gives him one-two on the jor:

Then I'd get a month's 'ard and a turn on the mill—oakum-pickin' aint easy to larn—

And you says there is justice in Hingland, says you; and I ups and I says to you, "Garn!"

W. MCE.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Acid. Glycer. Pepsin and Solution of Bismuth.

144/47. *Capsici* has had the following prescription to dispense. When first sent out, a dense thick precipitate was thrown down on the mixture being shaken. When dispensed by himself it was a clear brown mixture, without any precipitate being formed:—

Ac. glycer. pepsin.	..	3j.
Liq. bismuth. et am. cit.	..	3vj.
Æther. chlor.	..	3vj.
Tinct. capsici	..	℥vj.
Inf. gent. co. ad	..	3xij.

We should certainly consider the mixture first dispensed the correct one. The addition of a very small quantity of acid to the B.P. solution of bismuth throws down an insoluble oxy-salt, which may to some extent be retarded, until well shaken, by the presence of the glycerine. When dispensed the second time, either the acid-glycerine of pepsine was not acid, or the solution of bismuth contained excess of free ammonia, or might be the old B.P. solution.

The Long Direction.

We have received about a dozen more examples of how the long directions can be written on a sma'l label. For

these we have to thank the writers, but it is unnecessary to publish more facsimiles.

An Australian Prescription.

This is a facsimile of a prescription which an Australian subscriber sends us to show his pharmaceutical colleagues at home what they have to face out there. Who can give the best rendering on a post-card?—

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 151-9.

139/44. *Strychnia*.—We have not heard of any chemist who is registering the sales of proprietary medicines containing small doses of poisons in the first part of the schedule.

183/26. *Alpha* asks: "Can an individual obtain judgment against a registered company for a slander made by their solicitor to an employé of the individual?"

[The individual must be able to satisfy a jury that the slander was directed against himself, and that the solicitor was authorised by the company to utter it. Even then it is doubtful whether he would get a verdict.]

144/29. *Bert*.—You can only protect a title by registering it as a trade-mark. "Vaseline" is a registered trade-mark.

139/33. *W. G. W.*—It costs 1*l.* to get provisional protection for a patent. You can get an application-form through any money-order office. In applying for provisional protection you are not required to give details of your invention, but you must give a clear indication of your object, and you may be called upon to supply drawings, &c.

148/60. *R. H.*—You are liable to the manufacturers for the syphons, bottles, &c., unless they have expressly accepted your successor's responsibility. But if you can satisfy a Court of the circumstances which you state in your letter, your successor is liable to you.

152/42. *J. W.*—You would not be justified in making the cleanser for which formula was given on October 15 with methylated spirit, without consent of the Board of Inland Revenue.

151/37. *P. S. I.*—We have often stated that we cannot undertake to make trade-mark researches for correspondents. These have to be made at the Trade Marks Office, Southampton Buildings, Holborn, and a fee of 1*s.* per quarter-hour is charged.

151/73. *Carboy*.—There is no available list of the proprietary medicines which require a poison-label. We have named the best-known of these to which such a label is attached by the makers.

152/53. *Semper Idem*.—We should think it doubtful if Messrs. Blondeau et Cie. could stop you from using the title "Lanolia Cream," unless you rather closely imitated their style of putting up as well, but we should think the proprietors of lanoline could certainly get an injunction against you for infringement of trade-mark.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulæ, &c., occasionally referred to in answers, can be obtained from the Publisher at 4*d.* each.

130/67. *S. Hamilton*.—Such oils as Castor Oil and Cotton-Seed Oil are now very commonly decolorised by treating them with strong sulphuric acid, an ounce or two to the gallon, and afterwards washing with cold water. An acidified permanganate-of-potash solution is also used for olive oil, linseed oil, and the like. The solution may consist of 1 drachm of the permanganate, and 1 oz. of sulphuric acid to 1 pint of water. In each case the oil must be well agitated with the decoloriser, the mixture allowed to settle, and the oil then washed and dried.

128/46. *Polish* is sometimes asked for "True-lover's balls." He gives the girl customers glob. prunella. Is he right or not; and what is generally supplied in the circumstances?

132/37. *C. H.* (Tasmania) has a bet on with an English friend out there. The latter emphatically declares that the Majority of Doctors in England Dispense their own Medicines; "C. H." (whose experience is taken from Bournemouth mainly) is of a contrary opinion. We think he is wrong. Bournemouth and such other health-resorts are not criteria, as there the doctors are more of the consulting than the family-doctor type, and these, with few exceptions, do not dispense. But in general practice throughout the country, it is, unfortunately, the case that few doctors write prescriptions. In Ireland and Scotland dispensing by doctors is the exception. "C. H." is the poorer by a hat.

133/52. *Autolytus*.—(1) The cream of tartar will be perfectly sound after keeping in tins for eighteen months. (2) You can get a copy of the DIARY for 3*s.* 6*d.* on application to the publisher.

133/21. *W. F. S.*—Sulphur Tablets—The troch. sulphur co. of Sir A. B. Garrod—viz., 5 grains of precipitated sulphur and 1 grain of cream of tartar, with a sufficiency of the B.P. lozenge-paste, and tincture of orange to flavour.

148/65. *C. B. S.*—Your oak-bark extract appears to contain a certain amount of tannic acid, but if, as you say, it is of no use for tanning purposes we fear it will be found of no commercial value. You might try if you can dispose of it as a colouring agent in Leeds or Manchester.

133/58. *C. D.* (Belfast).—(1) There is little use in combining *nux vomica* with *cascara sagrada* for an *Aperient Tonic*. The *cascara* itself has a similar action to *nux vomica* upon the bowel. Then your prescription lacks a carminative. We should amend it as follows:—

Ext. <i>cascara sag.</i> liq.	3i.
Tr. <i>jalap.</i>	5ij.
Tr. <i>zingib. fort.</i>	3ss.
Spt. <i>chloroform.</i>	5j.
Glycerini ad	5ij.

M.

Dose: 5ss. to 5j.

(2) We must ask you to refer to recent numbers.

134/67. *C. Crook*.—A. B. C. Liniment is a mixture of equal parts of *aconite*, *belladonna*, and *chloroform* liniments.

134/38. *Tragacanth* asks us to improve upon the following formula for *Motner's Friend*. The colour changes from bright reddish brown to fawn colour in the course of a few weeks, and the mixture is not thick enough:—

Mag. carb. levis	3vij.
Pulv. rhei	3ij.
Tr. opii	mlxx.
Sp. am. arom.	3ij.
Sp. vini rect.	5ij.
Ol. carui	xxiv.
Ol. anisi	xxiv.
Sacch. alb.	3iv.
Aque	3xxj.

M. Sec. art.

[The change in colour is due to the rhubarb and the magnesia. The two cannot go together without change. Bicarbonate of soda 3ss. may take the place of the magnesia with advantage, and use double the quantity of sugar. The opium is a mistake: better use potass. brom. 5ij. instead. The following is as nice a *Mother's Friend* as can be wished for:—

Potass. brom.	gr. xxiv.
Liq. bismuthi.	5ss.
Tr. aurantii	3ss.
Syrupi	5vi.
Aque al	3ij.

M.

Dose: A teaspoonful at bed-time when restless. Half the dose for children under a year.

Restless children have generally something the matter with their digestive organs. When that is known, a few drops of vin. pepsin should be added to each dose of the above.]

180/33. *A Veterinary Query*.—*Spes* asks for a reliable formula for inflammation of the kidneys, which, he adds, is rather common in his district (Midlands). It must be remembered that there is no specific for such a serious illness as inflammation of the kidneys, and we do not believe it to be "common" in "*Spes's*" district or any other. It is an unfortunate tradition with horse-keepers to say, whenever a horse shows abdominal pain, "It's in his water." The oracular manner in which this remark is delivered by every stableman would lead the veterinary surgeon in attendance to think it were something new and original, if he had not heard it so often. Injury is done daily to thousands of valuable horses by the unnecessary and harmful practice of giving diuretics, and where a case of inflammation of the kidneys does occur it has its origin in the excessive use of these agents in nine cases out of ten. We should say that such a case was too serious for the veterinary counter prescriber, and should be treated by a qualified veterinary surgeon. If such assistance cannot be got, and the owner is convinced that inflammation of the kidneys is really what the animal is suffering from, he will do well to keep up an abundant supply of hot water to renew large bran or linseed poultices (half and half is best) along the loins, and to inject warm water per rectum from time to time. For medicines give an aqueous solution of opium equal to 10 grains for injection

with each clyster per rectum. For internal use as a drink—or draught, as it should be called—

Ext. <i>belladonnae</i>	5j.
Pot. bicarb.	5iv.

This dose should be given three times in twenty-four hours, in a pint of linseed-tea or other demulcent fluid. If the animal can be induced to drink linseed-tea or milk, so much the better. Carrots and bran as food unless he refuses. Beans and other highly nitrogenous food should be avoided. A uriferous sweat is often a prelude to recovery, as such vicarious function on the part of the skin gives the kidneys time for function to be restored. If diuretics are needed at all, they should be given with warm washes on Saturday night or at a time when the animal will not be exposed to chills the next day.

151/6. *Alpha*.—In valuing stock and fixtures for a balance sheet it is usual to price good stock according to a whole sale list. An annual deduction of, say, 10 per cent. on the cost price of fixtures is a fair allowance for depreciation, but these are not generally taken. In valuing for a sale an allowance of at least 10 per cent. off wholesale list prices would have to be made to allow for bad stock and fixtures taken at what they might be worth. Goodwill is a very variable commodity. Of course the seller gets something for it if he can, but in these days of store competition the snug connections of old times are scarcely reckonable. Goodwill is appreciable in a business where the profits can be assumed to be pretty sure.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

123/33.—A Croydon correspondent has a horsey customer whose *Pharmacopœia* contains some queer things. He is a Lewes man, and his medicines are the following:—

The names	What they mean
Oil of astick	?
" aaron	?
" spike	Linseed oil, turpentine, and oil of origanum
" man	Ol. animalis
" vidgen	" origani
" sent	?
" aspes	?
" acklen	?
" ackham	?
" orleys	?
" ackerworm	Oil of earthworms
" blue astick	?
" beed	?
" clarrence	?
" renelt	?
" coatesmint	Oil of horsemint (ol. monardæ)
" dragan	(?) Linseed oil coloured with dragon's blood
" dappies	Dippel's oil
" sweet duty	(?) Sperm oil (ol. cetacei)
" dragema	Ol. origani
" hounslow	?
" scagden	?
" may	?
Sulphur of fly	Sulphur vivum
Tincture gladmar	(?) Laudanum
Red whin	(?) Ruddle or Venetian red
Jander rosam	Amber rosin

The names appear to be fearfully phonetic. We should be pleased if subscribers would assist us in filling up the blanks. A few "happy thoughts" jotted down on postcards addressed to us should do it.

136/62. *Yorkshireman* says he will be glad to hear what chemists generally have found to be the cheapest (in consumption of gas) and best way of shop-lighting; also the best and cheapest kind of stove for shop-heating, either oil, or gas, or coke.

151/41. Who is the maker of Hyaline?



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Summary.

WE print the results of the examinations in Edinburgh, and of the Preliminary examination.

DR. SYMES, at Liverpool, last week, spoke of pharmacy and patent-medicine laws in a critical manner.

THE Dundee public analyst has been criticising Sir George Buchanan's and Dr. Thresh's opinions regarding water-analysis.

"THE Conditions of Labour in Pharmacy" was the topic of a lengthy discussion at the Assistants' Association (London) last week.

MIDLAND dentists find that there is a scarcity of qualified assistants, and would have us believe that dentistry is not an overcrowded profession.

A HERBALIST in the East-end of London who sold paregoric *sine opio* has been let off, apparently on account of the erroneous notion that "paregoric" is not a B.P. synonym for tr. camph. co.

A DECISION has been given in the High Court of Justice ruling that no fraud is committed when a grocer weighs paper with sugar. A conviction under the Weights and Measures Act has been quashed.

IN an appeal to the High Court the important question has been raised whether under the Apothecaries Act an unqualified person against whom several transactions occurring on one day is liable to as many penalties, or whether the series constitutes only one offence.

IN the course of a paper on "Mercuric chloride Solution in Alcohol," read before the Liverpool Pharmaceutical Students' Society, Mr. J. R. Johnson gave a letter from Sir Joseph Lister, in which that surgeon stated he has abandoned the use of bichloride of mercury as an antiseptic in surgery, finding carbolic acid preferable.

THE Pharmaceutical Council were a little short of money on Wednesday. They resolved to make Mr. T. H. Hills' bequest of 1,000l the basis of a fund, distinct from the Benevolent Fund, for the orphans of members and associates of the Society only. Mr. Carteighe pertinently commented upon the heavy failures in the examinations last month.

POST-CARD COMPETITIONS.

WE propose to initiate a new series of post-card competitions, which will be open to subscribers and their employés and members of their families. The first of the series will be open during the present month, and its object is to secure ideas, plans, sketches, or suggestions for

A CHRISTMAS DISPLAY

of goods of any kind generally sold by chemists and druggists. The display may take the form of an effective window-dressing, counter-arrangement, or any other scheme which will give prominence to the goods, which will be consistent with the season, and encourage trade or draw custom. We shall give a guinea to the person who sends in the best idea, plan, sketch, or suggestion on a post-card, reserving the right to bestow a suitable recognition upon three or more next in order of merit. Post-cards will be received from November 7 to November 30, but we ask those who compete to begin early in the month. We do not exclude from the competition any ideas which have been carried out by chemists in past Christmas seasons. These will be treated on their merits. Nor do we place any limit upon the number of post-cards which a person may send in, but the rule is strict as regards "one idea on one post-card."

Competitors will please use white post-cards if they send any sketch.

THE AUSTRALASIAN EDITION

of the CHEMISTS' AND DRUGGISTS' DIARY for 1893 was shipped on the Orient s.s. *Oratava*, leaving London on Friday, November 4, and expected to arrive at Melbourne on December 19. Our proportion of subscribers (as compared with the entire trade) is very large indeed in all the Australasian colonies. These gentlemen naturally expect to receive their DIARIES for next year before January 1, and with a fair voyage this will be accomplished. In order to catch this steamer several advertisements which reached us after the date fixed for closing had to be omitted.

SCIENTIFIC MYSTERIES.

CHEMISTS are advised to stock and show this book in anticipation of the winter evenings. It contains particulars of 200 chemical and other experiments, is freely illustrated, and is the cheapest, most comprehensive, and most clearly described collection of experiments and illusions ever offered to the public.

It sells at 1s., and we supply it in one-dozen parcels with show card for 8s. 6d. It may be obtained at the same price from the following firms—

Ayrton & Saunders, 149 Duke Street, Liverpool
Barclay & Sons (Limited), 95 Farringdon Street, E.C.
Bleasdale, Wm., & Co., York
Edwards, Wm., & Son, 157 Queen Victoria Street, E.C.
Evans, Lescher & Webb, 60 Bartholomew Close, E.C.
Evans, Sons & Co., 55 Hanover Street, Liverpool
Glasgow Apothecaries' Company, Glasgow
Ismay, John, & Sons, Newcastle-on-Tyne
Maw, S., Son & Thompson, Aldersgate Street, E.C.
May, Roberts & Co., 9 Clerkenwell Road, E.C.
Newbery, F., & Sons, King Edward Street, E.C.
Smith, T. & H., & Co., 21 Duke Street, Edinburgh
Thompson, John, Hanover Street, Liverpool
Woolley, James, Sons & Co., Manchester
Wyleys & Co. (Limited), Coventry

The advantage of stocking and selling this book is that it encourages and develops a new and profitable business in chemicals and chemical apparatus.

English News.

The Fuller's Earth Union (Limited).

Mr. A. D. G. Moger presided at an extraordinary general meeting of the shareholders in this company at Cannon Street Hotel on Monday afternoon. The meeting was held in accordance with a resolution passed at the ordinary meeting in June last, when the shareholders demanded that the directors should present a balance-sheet and profit-and-loss account for the six months ending September 30, in order to show how the business was going on. The report presented on Monday showed that a sum of 380% had been expended in providing winding gear and other improvements; but as this sum was properly applicable to capital account, it must be included in the profits of the six months, which were 821%, thereby giving a net profit of 1,201%. The report and accounts were taken as read.

The Chairman said he was happy to say that he was able to meet them with a more satisfactory—(a laugh)—or, at all events, a less unsatisfactory, statement than he had to make to them in June last. At that time they were a little too sanguine as to the time in which the volume of trade could be won back. When trade had deteriorated by sending out an inferior article it could not easily be regained. (A Voice: "Why was the company so mismanaged before?") The directors were now taking every step to provide a remedy for any deficiency, and were in touch with their agents all over England, Scotland, and Wales, while the greatest care had been taken to keep in personal touch with consumers as well as with agents. Their trade for the past six months was about 300% better than the six months previous—this, too, notwithstanding that the woollen trade, on which they greatly depended, had been severely depressed.

Mr. Keevil, the manager, read a statement to the effect that, owing to the bad impression created by the last report and balance, consumers had refused to place contracts with the company in the fear that they would not be carried out. He was, however, now receiving better support, and he was certain that if the shareholders stuck to the ship they would have 5 per cent. next time.

Mr. Hallett seconded the motion for the adoption of the report and accounts.

A Shareholder gave notice of motion for the directors to make a call of 7s. 6d. per share, in order to buy up the debentures to the amount of 23,000%, on which the company was paying interest at the rate of 8½ per cent.

Mr. Bell declared that the company had been rotten at its inception, and had been over-capitalised. He moved for a committee of investigation.

Mr. Harlow seconded this proposal, and asked where was Mr. Blewitt, of the London General Bank (one of the directors), that day.

The Chairman said Mr. Blewitt was still on the Board, but under the circumstances he had been given the opportunity of absenting himself from the Board meetings until he should disqualify himself.

Mr. Girdlestone thought a large fancy trade might be worked up amongst chemists and grocers, if they appointed sub-agents all over the country. Small boxes of fuller's earth, neatly packed and nicely decorated, especially for the purposes of shaving, would meet with a very large sale. He also thought they ought to advertise more.

The Chairman said the suggestion was a valuable one; but as they dealt largely with wholesale chemists, the attempt to supply the retail trade might lose them their wholesale connection.

After some further discussion, the motion for a committee of investigation was put to the meeting, but only three hands were held up in favour of it. The report of the directors was then carried.

Mr. Josiah Thomas, land surveyor, of Bristol, and Mr. John L. Matthews, barrister, of Maidenhead, were appointed to the board of directors.

Sport.

The Allenbury's Athletic Club (Allen & Hanburys') met the Wigmore Harriers (Benham & Sons, Wigmore Street) for

an inter-club race on Saturday, October 29. Allenbury's won by six points. The Wigmore won the Second-class Junior Championship in 1891. After the race, the A.A.C. entertained their visitors to a tea and smoking-concert at their headquarters, Clapton Common.

More Dentists Wanted.

The autumnal Council of the Midland Branch of the British Dental Association was held on October 29, at the Medical School, Sheffield. Among the papers read was one by Mr. J. C. Storey, of Hull, who complained of the greatly increasing dearth of qualified mechanical dental assistants. He urged the special training of assistants in purely mechanical work. Every dentist, he said, should be trained to execute his own prosthetic work. At present dentists were becoming very accomplished operators, but were apparently neglecting the mechanical department. Mr. Storey observed that ere long the call for trained dentists would be so urgent that there would of necessity be an immense influx of students who in time would become trained dentists. For dental pupils the profession required bright, intelligent young men, who, while not wanting in intellectual ability, also take a delight in using their hands. As apprentices they might, with advantage, get recruits from the class which was overcrowding into the sphere of working engineers or better-class artisans.

Mr. Frank Harrison, of Sheffield, read a paper on "Dentistry in Sheffield," in which he advocated the establishment of a dental hospital in the town, or else the addition of a dental department to one of the local hospitals. He sought to show that little is being done to meet the growing demands of the population for dental treatment. With a population of 320,000, Sheffield contained only nine dental surgeons qualified by examination, in addition to twenty-four dentists who were practising when the Act was passed. Although for those in favourable financial circumstances good dentistry was easily available, the poor were practically excluded from the benefits accessible to the rich. There was no dental hospital or other institution where the modern treatment of teeth was extended in a charitable fashion. To three children's charitable institutions there were dental appointments, but at the general hospital the reports showed that a very large number of dental cases were treated therein, although no qualified dentist was attached to the institution.

The following resolution was unanimously carried:—

That in view of the urgent need of more effective treatment of the teeth of the poorer classes it is desirable that provision for such treatment should be made in all large centres of population. And that this meeting of the Midland Branch of the British Dental Association hears with the utmost satisfaction the suggested formation of a Dental School in connection with the Sheffield Medical School and general hospitals, inasmuch as this would necessarily supply such treatment in this locality.

The Pharmaceutical Evidence in the Neill Case.

Mr. J. G. Kirkby, the assistant to Mr. Priest, chemist, Parliament Street, and witness in the recent Neill case, has called upon us to ask us to correct a statement in the report of his evidence which we quoted. Mr. Justice Hawkins asked him, "Suppose an ordinary stranger came to you and said he was a medical man, would you refuse to supply him?" To which Mr. Kirkby is reported to have replied, "No; not if what he required was in the first schedule, and he gave his name and address." What he said was "not if what he required was *not* in the first part of the schedule." This is confirmed by the addition which some of the reports added:—"The Judge: Yes, but medicines in the second schedule would kill a person?—Oh, yes."

We quoted last week the unfair comments made by the *Daily Telegraph* on what it ignorantly described as the culpable carelessness of the chemist who sold the poison. Mr. Kirkby showed us a paragraph in a subsequent issue of that paper containing an apology, extracted from them by a lawyer's letter. Mr. Kirkby says that the editor of the *Telegraph* took no notice of his own letter written previously.

The Lom-Bards.

The Lom-Bards are clerks and assistants in the employ of Messrs. Allen & Hanburys who have formed a social community among themselves. They held their annual smoking-

concert on Thursday, November 3, at the Daniel Lambert Tavern, Ludgate Hill, with Mr. A. H. Solomon in the chair.

A Chemists' Exhibition.

We understand that an exhibition in connection with the drug-trade is being organised, and will be held at the Agricultural Hall in April next. Mr. J. Black, of 2 Newcastle Street, London, W.C., who has successfully promoted a number of trade exhibitions in the same locality, is the secretary of this one.

A Dispenser in Trouble.

At the Clerkenwell sitting of the London County Sessions, before Mr. Warry, Q.C., Edward Featherston, 29, described as a dispenser, was found guilty of having stolen a bag and the sum of 10*l.* from John Owen, a newsagent, 4 College Place, Chelsea. Prisoner was a customer of Owen's, and the theft was stated to have been committed while he was in the back shop. For the defence, a witness was called who stated prisoner had acted as a dispenser to various surgeons, and had always borne a good character. The jury found him guilty. Mr. Warry said it might be possible for the prisoner to return some of the money, and therefore he would postpone sentence until next session.

The Penny-pill Trade

On October 28, at Chelmsford Petty Sessions, Arthur J. Westrup, described as a herbalist, of Ipswich, was summoned on a charge of having obtained by false pretences and with intent to defraud, 3*l.* 15*s.*, from Charles Richard Stannard, grocer, Danbury, on September 8. Defendant did not appear. Police-sergeant Hurrell said he served a copy of the summons personally upon the defendant at his residence on October 15. After he had read the summons, defendant asked, "When do you say I am to appear?" Witness told him, and he replied, "Ugh! All right. Right you are!" The Bench directed a warrant to issue for defendant's arrest forthwith. It is alleged that the accused induced the prosecutor to accept the sole agency for the sale of certain pills for a "radiance" of ten miles, on the distinct understanding that no other nearer person was to be appointed. Prosecutor purchased and paid for pills amounting to the sum named in the charge. Samples were produced in court. The pills are in boxes affixed to cards by means of gum, and the printed matter is as under:—"Is life worth living? That depends upon the liver!!" (Here follows the trade-mark, an engine and two goods trucks, labelled "Herbal Medicines.") "Do you take the golden pill of health? A pure herbal head, stomach, and liver pill: 1*l.* per box. Prepared by the Herbal Company, Ipswich and Lynn." On the boxes is the inscription, "Golden pill of health. Stomach and liver pill. Dose—1 or 2 at bed-time." A doubt was unofficially expressed whether criminal proceedings will really lie.

The Sale of Poisons. A More Stringent Law Demanded.

In the course of comments on the Neill case several other papers besides those we have previously quoted express the opinion that the regulations affecting the sale of poisons are not sufficiently stringent.

Piccadilly says:—"The revelations made in the trial of the murderer Neill proved something more than the guilt of the wretched criminal. They showed that, notwithstanding all the safeguards with which the law is supposed to surround the sale of poisons, it is perfectly easy for anyone who is acquainted with a few technicalities to obtain freely the deadliest drugs in considerable quantities. . . . The curious part of the business is that, whilst the sale of poisons is supposed to be surrounded with all manner of formalities and safeguards, once the poison figures in the guise of a patent medicine bearing the Government stamp, there is absolute free trade in the drug. Walk into a chemist's and ask for opium, and there will be a lot of questions to answer, and, after all, a refusal to supply the stuff at all, or, at most, a consent to sell the smallest quantity of it, and this only after a book has been signed and some proof of identity given. But the same chemist will sell across the counter, without a moment's hesitation or a word of inquiry, any one of half a dozen preparations which contain opium in considerable quantities. Nay, more, there are

several deadly poisons on sale at the grocer's or the oilman's, or in certain departments of any of the big co-operative stores. There is, most certainly, room for reform in this matter, both in the way of a further tightening of the law as it stands, and a better administration of the existing regulations."

The *Liverpool Echo* says:—"Notwithstanding the many chances which make for detection, the conditions under which poisons are sold in this country are far from satisfactory, and it is probably to the fact that crimes of violence are usually committed under great exasperation, inciting to hasty action, and rarely with the cruel deliberation of a Lamson, a Maybrick, or a Neill, that the infrequent use of poison as the homicidal agent is due."

The *Yorkshire Evening Post* says:—"After making all due allowances for petty trade jealousies, it seems only fair to the chemist that if a man has to qualify himself to vend a certain article only qualified persons should sell that article. The sale of poisons is not so much a question of no law to meet the case, as under the Act of 1868 it is illegal for anyone save a qualified person to sell poisons, but it is more a matter of the law being allowed to remain a dead letter. The responsibility for this state of affairs the Pharmaceutical Society, the qualified vendors of poisons, and the police authorities must share between them in what proportion they please."

A "Country Mayor," writing from Canterbury to the *St. James's Gazette*, says:—"I hope you will allow me to inform the public that, through an omission in the last Pharmacy Act of 1868 (amended 1869), any grocer, tinman, or others, outside the legitimate chemist business, can sell nitric, sulphuric, hydrochloric, and carbolic acids without let or hindrance! I know of a grocer who daily sells (for cleaning certain earthenware utensils) one of these acids to anyone (child or adult), in teacups or bottles, without any caution or indication of the dangerous nature of the preparation!"

An Alleged Trick.

On October 28, at Bamber Bridge Police Court (Lancashire), a tramp, named Richard Williams, said to belong to Glasgow, was charged with fraud. It was alleged that the prisoner went into the shop of Mr. Lewis Naylor, chemist and druggist, and asked to be supplied with a piece of soap. He received the soap, and presented a two-shilling piece in payment. After the change had been handed to him, he stated that he had the requisite amount in coppers in his pocket, and asked for the silver back. Mrs. Naylor, who served the prisoner, complied with his request, while he gave her the change he had received. After prisoner had left the shop Mrs. Lewis found that prisoner had returned only a portion of the change. Other tradespeople had complained of being similarly treated by a man answering the prisoner's description. The prisoner was remanded.

The County Council's Chemist.

At the usual weekly meeting of the London County Council, on Tuesday, the General Purposes Committee reported that they had had before them a request from the chemist to be allowed to advise the Corporation of Sheffield on a question connected with gas. The chemist, they found, made a similar request in the year 1889, and the standing committee of that date resolved that it was not expedient to comply with it. They now were of the same opinion. The view of the Council had, if they were not mistaken, always been that its officials should be solely and entirely at the Council's service, and, indeed, it would seem that the work of London was quite sufficient to require all their attention. The late Metropolitan Board of Works departed in some cases from this sound rule, with the result that grave inconvenience to the public service followed. So particular had the Council been in the matter, that in all appointments of leading officials it was made a condition that they be required to give their whole time to the duties of their office, and be not allowed to take any private business, and that any fees received by them, either as witnesses or in any other capacity, be paid to the Council. They thought it most important that this rule should not be departed from, and they had, therefore, come unanimously to the conclusion that the request of Mr. Dibdin to be allowed to advise the Corporation of Sheffield should not be acceded to. The recommendation was agreed to.

Carbolic Acid the Popular Poison.

Reports of the following deaths by means of carbolic acid have been published during the week. John Earight (50), Warrington, an army pensioner and labourer, complained of pains in the head and took carbolic acid. "Temporarily insane," said the jury.—Mary Louisa Warwick, widow of the late Dr. R. A. Warwick, of Richmond, Surrey, 50 years of age, was discovered in bed at York Asylum in an unconscious state, with a bottle labelled "carbolic acid" on a dressing-table close by. Despite attempts to restore her she died shortly afterwards. It was stated in the evidence that being a voluntary boarder and not a patient deceased was allowed to go out alone. Temporarily insane.

Condensed Skim-milk.

At the last meeting of the St. Saviour District Board of Works the public analyst presented his quarterly report, in which he stated that a great deal of adulteration was being carried on in the parish. Parents were especially warned against a class of tinned condensed milk which was being placed upon the market, and which, if used for the purposes of feeding young children, could not fail to be detrimental to their health. The labels on the tins described the contents as "skimmed" milk, and so protected the vendors from prosecution, but the article was one which should be carefully avoided by all persons who had the charge of young children.

A Public Analyst on Milk of Sulphur.

The Staffordshire county analyst (Mr. E. W. T. Jones), in the course of his report to the County Council, says:—"Drugs have had due attention, with the result that, except in the case of precipitated sulphur, they have all passed the 'proof-house.' Precipitated sulphur has been found wrong in five cases out of sixteen, which seems serious at first sight. But let me mention there was an old Pharmacopœia article (London Pharmacopœia, 1721) which by reason of its mode of preparation contained sulphate of lime, and became popular with a class who used it as a simple medicine; but when, under the 'lights of the medical profession,' the British Pharmacopœia was compiled, and this preparation was changed to contain only pure sulphur, the users found that, unlike their old acquaintance, it would not without some skill and patience mix with water or milk, so they returned to the shop and grumbled. The new preparation being pure, the wholesale price was naturally higher, and as the retail price remained practically the same the profit in retailing the old preparation was more, and the grumbling was avoided. Thus the pocket and general convenience of the shopkeeper inclined to the old preparation. But in these days of education we must hold it is the duty of the druggist, even at some self-denial, to educate his customers to the requirements of the times, and to show that a little inconvenience or difficulty in mixing is not to be considered against taking or giving children half sulphate of lime when sulphur is the remedy."

Municipal Honours.

Mr. John Eunson, chemist, Biggar, has been unanimously elected a member of the local Council.

Bailie James Bremner, chemist, has been returned unopposed to the Buckie Town Council.

Mr. Harry Pibworth Foster, chemist, of Queen Street, Portsmouth, has been returned unopposed to represent St. John's Ward in the Portsmouth Town Council.

Mr. J. M. Furness, chemist and druggist, Westbar, Sheffield, was on Tuesday re-elected at the top of the poll as a representative for St. Philip's Ward in the Town Council.

Mr. H. W. Carter, of Carter & Wright, manufacturing chemists, Bristol, has been elected without opposition as a councillor for Clifton Ward.

At the Newcastle-under-Lyme election, Mr. E. H. Croydon, chemist, who has already served on the Council for nine years, was re-elected for another term of three years, while Mr. D. H. Oxen, chemist, was an unsuccessful candidate.

At Mansfield Mr. J. A. Pegg, chemist, was returned at the top of the poll for his ward.

Mr. George Claridge Druce, chemist, 118 High Street,

Oxford, has been returned unopposed to represent the South Ward on the Town Council.

Mr. William Clarke, chemist, Stockton, who has represented the Victoria Ward on the Town Council, has retired from municipal work.

Mr. Brown, chemist, Dover, was unsuccessful at the municipal election at that town on Tuesday.

Embezzlement by a Warehouseman.

At the Nottingham Guildhall, on Tuesday last, George Vines, of 14 Park Road, Lenton, was charged with having embezzled the sum of 10s. 6d., the money of his employer, Mr. J. H. Haywood, surgical-appliance manufacturer, of Castle Gate, Nottingham, on September 7 last. The prisoner was originally summoned, but failed to appear. He had been warehouseman to Mr. Haywood, and it was found that he had received certain money for goods supplied, and had not paid in the money to the cashier. Prisoner admitted that the charge was correct. As this was his first offence, the Bench gave him the option of paying a fine of 20s. and costs, or in default fourteen days' imprisonment. The money was paid.

Irish News.

Personal.

Dr. Ninian Falkiner, examiner in chemistry to the Pharmaceutical Society of Ireland, has been elected a member of the Council of the Royal Academy of Medicine in Ireland.

Messrs. Robert J. Johnstone, Queen's College, Belfast, and William White, Queen's College, Cork, have been awarded second-class exhibitions in chemistry, value 15*l.* each. No first-class exhibitions were granted.

Mr. W. S. Duggan, pharmaceutical chemist, assistant to Mr. Grindley, Westland Row, Dublin, has purchased the chemist's business carried on by Mr. Griffin at Great Britain Street, Dublin.

The American "Doctors."

The police authorities in Dublin have been busy tracing up the antecedents of these visitors, and find that the brother of one of the "doctors" is at present "doing" eight years' imprisonment for burglary in Dublin, and the brother of the other is at present "doing" two years in America for selling noxious drugs for the procuring of abortion. The "doctors'" previous avocations were blacksmith and bootmaker.

A Magistrate's View of the Illegal Sale of Poisons. One Shilling Fine.

On Wednesday, October 26, before the local Magistrate at Templemore, co. Tipperary, Samuel Judd, grocer, of Templemore was prosecuted by the Constabulary for selling sheep-dip containing arsenic, he not being qualified or registered to sell poisons. No defence was offered, and the Magistrate imposed a fine of 1*s.*

On Wednesday, November 2, at Templemore, an application on behalf of the Pharmaceutical Society was made to the presiding Magistrate to have the fine increased to 5*l.*, in accordance with the provisions of the Pharmacy Act. The Magistrate refused to increase the fine, and the Pharmaceutical Society gave notice of appeal.

The Pharmaceutical Council.

The November meeting of the Council of the Pharmaceutical Society of Ireland was held on Wednesday, November 2, at 67 Lower Mount Street, Dublin. There were ten members present. The question of allowing the country members their travelling expenses was discussed, and it was agreed that a sum of money (calculated on the basis of the expenses incurred by country members last year) be allocated for the expenses of travelling or country members during the coming year. (The sum was 22*l.*)

A Cheque Transaction.

A curious action in respect to the payment of a cheque was heard last week at Dublin. Messrs. Hugh Moore & Co., wholesale druggists, sued Mr. John Delahunt, a local trader,

to recover 18*l.*, the value of a cheque cashed improperly, it was alleged, by the defendant. It appeared that an imposter presented to Messrs. Moore & Co. an account from Messrs. Marlow, twine-makers, and having received a cheque for the amount, he induced the defendant to cash it, after deducting 13*s.* which he said he owed the house. The Recorder confessed he was puzzled to decide in the case, as two innocent firms were concerned—namely, the plaintiffs and defendants—and accordingly reserved his decision.

Evening Meeting of the Pharmaceutical Society.

On Tuesday evening, November 1, the Pharmaceutical Society of Ireland opened their session of evening meetings at their house in Lower Mount Street. Mr. Wm. Hayes, President, occupied the chair. The lecture was by Professor Tichborne on "Carbonic-acid Gas," and was illustrated by experiments on an extensive scale. Having treated his subject from a theoretical and scientific point of view, the Professor explained the commercial uses of carbonic acid, and exhibited the iron bottles in which carbonic acid in a liquid state was stored at a pressure of 900 lbs. These bottles are filled from the fermenting-vats in Guinness's brewery, which yield from 30 to 40 tons daily. Professor Tichborne has patented a process for collecting and purifying this carbonic acid, which was hitherto allowed to waste, and has sold it to a company known as the "CO₂ Company," who supply the article in a liquid state suitable for making aerated water and bread. It is now also in use for lowering the temperature in the large cylinders in which fresh meat is carried on steamers from Australia and elsewhere.

A vote of thanks to the lecturer was passed, on the motion of Dr. Burnes, seconded by Mr. Evans.

The next lecture will be on Tuesday, December 6, at the Society's house, commencing at 8 P.M., and will be open to all licentiates, associates, and their friends.

Scotch News.

Druggist's Wine-licence.

The application of Messrs. J. F. Macfarlan & Co. for a grocer's licence came before the Edinburgh Licensing Confirmation Court on Saturday, and was unanimously confirmed. Mr. A. J. Young, advocate, representing the Edinburgh and Leith Licensed Grocers' Association, appeared in opposition, and argued that the statutes had clearly before them the distinct trades of the hotel keeper, innkeeper, dealer in excisable liquors, and grocer, and did not give power to confer a certificate outside those trades.

Edinburgh Educational Items.

Mr. Claude F. Henry has been granted recognition by the Edinburgh University Court as a teacher of practical materia medica for purposes of graduation in medicine.

The Edinburgh School Board has taken the first step in introducing scientific and technical instruction into the Board schools in the city. In the Science School a room containing twenty-four benches has been fitted up for the teaching of practical chemistry; there are also tables for physical experiments and a complete laboratory, and in an adjoining room, capable of accommodating 100 pupils, practical demonstrations will be given. Technical instruction is also provided for. This is now one of the best-equipped public educational institutions in the kingdom.

Edinburgh Chemists' Ball.

It has been decided to hold the next ball in Freemasons' Hall on January 26 next. The arrangements are much the same as in former years.

Sequel to a Food-and-Drugs Prosecution.

Sheriff Balfour, Glasgow, has just given his decision in a case first brought before him a year ago this month, and already referred to in THE CHEMIST AND DRUGGIST. The pursuer was John Cooper, grocer, 159 Main Street, Gorbals, Glasgow, and the defenders Messrs. W. & D. Baird, wholesale grocers, 29 Robertson Street, Glasgow. The learned Sheriff, in his interlocutor, states that on Septem-

ber 24, 1890, the defenders, through their traveller Cowan, sold to pursuer 7 lbs. of alum and one keg of tartaric acid containing 126 lbs. net. Cowan agreed to give the pursuer a written warranty of the purity of the acid, but the warranty was never delivered. On July 23, 1891, the sanitary inspectors purchased some tartaric acid at the pursuer's shop. The pursuer was subsequently prosecuted for the sale of tartaric acid alleged to have been mixed with alum. At the trial Cooper pleaded guilty and was fined 20*s.* In the present action the pursuer claims damages for the loss said to be sustained by him in respect of such conviction, alleging that the acid was sold to him by the defenders in its adulterated condition. The pursuer did not lead any proof with reference to the actual adulteration of the acid with alum, and, further, he did not lead satisfactory proof to establish that the acid sold to the sanitary inspectors was taken from the keg supplied by the defenders, or that it was in the same condition as when supplied by them. His Lordship therefore absolves the defenders, and finds the pursuer liable in expenses.

In a note Sheriff Balfour refers to evidence that the pursuer had intimated to certain persons that he was going to mix the alum with the acid because he found himself being undersold in his trade by the ice cream dealers. Defenders, said the Sheriff, would have been liable to the pursuer for selling an adulterated article which landed him in a conviction if he himself did not meddle with the article, even although there had been no warranty. But it is pointed out at some length that the pursuer's actions were such as to lend colour to the theory that he had himself adulterated the acid.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

LAMPLIGHT and eight members welcomed our reporter on Wednesday morning at 11.20. It was a dull and foggy morning, such as frequently puts London business back by hours, but before noon all who attended the Council meeting had taken their seats. They were Messrs. Allen, Atkins, Bottle, Carteghe, Cross, Greenish, Grose, Harrison, Hills, Leigh, Richardson, Schacht, Southall, and Warren. Minutes were read, a few members, &c., elected, and Ph.C. diplomas granted. Then came

FINANCE.

The details will occupy but a few lines. During October, on account of the Society itself, the following sums were received, viz.:—Penalties for infringement of the Pharmacy Act, 16*l.* 3*s.* 2*d.*; subscriptions, 37*l.* 17*s.* 6*d.*; examination fees, 59*l.* 17*s.*; and some ground-rents (amount not stated). Altogether, after paying off October charges, the Treasurer found himself with a balance of 61*l.* 4*s.* 2*d.*, and fresh demands of 1,371*l.* 3*s.* 9*d.* were made upon him. The Benevolent Fund had received 167*l.* in subscriptions, leaving 674*l.* 5*s.* 9*d.* in hand, and 60*l.* 15*s.* 6*d.* on the donation account. A statement of the accounts now desired to be settled was submitted; these included 10*l.* for the Benevolent Fund.

Mr. SOUTHALL asked what that was for.

The PRESIDENT replied: For stamps. It is an old standing arrangement that the Society should pay for all expenses in connection with the Benevolent Fund except postage.

The PRESIDENT, continuing, moved the adoption of the report, and called attention to the few special features in it—another large sum for penalties and costs, and 51*l.* odd to be paid to Mr. Peter Morison, the Society's solicitor in Scotland, in connection with the Glasgow cases. That was a figure account, he explained, as they had already received money from the other side.

Mr. BOTTLE, referring again to the 10*l.*, asked why the Society should not pay that also.

THE PRESIDENT: It is part of the custom.

Mr. BOTTLE: But we might pay it. We have power to vote any portion of the general fund for benevolent purposes.

The PRESIDENT: That is a question for the consideration of the Finance Committee. Leave it to them.

The report was then agreed to.

BENEVOLENT FUND.

In committee it was reported that there had been eight applications, of which two were not entertained, two deferred, and grants of 15%, 10%, 10s., 10%, and 5% were made to the others. The committee recommended in regard to the

HILLS REQUEST

"That the legacy to the Benevolent Fund, bequeathed by the late Thomas Hyde Hills, be regarded as a nucleus of a fund to be known as the 'Orphan Fund of the Pharmaceutical Society (founded by Thomas Hyde Hills, 1891).'"

"That donations and subscriptions be invited, and that donations be invested.

"That the income derived from the invested capital and such portion of the subscriptions as the Council may deem desirable be applied in the discretion of the President and Council of the Pharmaceutical Society of Great Britain for the purpose of assisting or purchasing the election of orphans of members and associates of the Society (who have been subscribers to the Benevolent Fund for three years and upwards) to orphan schools or asylums.

"That every application for assistance from the fund be made in the manner directed by clause 7 of the Benevolent Fund Regulations at present in force, and be submitted to the Benevolent Fund Committee, who will, in due course, report to the Council.

"That the right of selecting a child for admission into an orphan school or asylum be vested solely in the Council."

The VICE-PRESIDENT (Mr. W. G. Cross), in moving the adoption of the report, thought it right to explain that when people were already receiving Poor-law relief the committee could not give assistance from their fund. In regard to the orphan scheme, he said it was a very important foundation, and it was particularly gratifying that the founder was one of their oldest supporters, and one who had put his hand to the wheel in the early days of the charity. According to the terms of Mr. Hills' will the income derived from the 1,000% was to be limited to the benefit of the orphans of members and associates of the Society who had been subscribers to the Benevolent Fund for three years. He thought that the members of the Society thoroughly deserved this. Mr. Walter Hills had given the committee valuable assistance, as he knew what his uncle's views in the matter had been. He hoped that support from the country would be forthcoming, so that they might at once proceed to the election of orphans by purchasing admission for them.

Mr. BOTTLE, in a sympathetic sentence, seconded the motion.

Mr. ATKINS said that this was a matter worthy of comment, as the bequest was so noble and generous, and in the right direction too. He hoped that the fund would not increase so much by subscriptions as by legacies and large donations, and he was particularly delighted with the fact that the Council took upon itself the election of candidates.

Mr. C. B. ALLEN heartily supported the recommendations, because he thought the scheme of an orphan fund was one of the most important things which had been before them for some time. It would add to and materially strengthen the freemasonry of pharmacy. Now they would have two funds—one a purely catholic fund, administered without restraint in any way as to whether the applicant did or did not belong to the Society, and the other for the orphans of members and associates of the Society. He thought it was proper that they should continue the catholicity, as there were many who would not receive any benefit from the fund who had contributed to it liberally. But there was often an outcry amongst their own members that they were too catholic. This new fund would meet the views of such persons, and he hoped that it would act for the good of the Society—indeed, he thought a great many would join the Society for the sake of securing for their children the benefit of this fund.

Mr. JOHN HARRISON thought the committee had acted wisely in formulating the scheme, and he hoped that when local secretaries called for subscriptions they would be able to get subscriptions for this fund. He thought they would, as "the children" always produced a certain amount of sympathy.

Mr. SOUTHALL hoped there would be a larger future for

the fund, and that they would have many small subscriptions as well as donations and legacies.

Mr. WALTER HILLS said he appreciated the kind words that had been said in regard to the legacy. He felt sure that his uncle had given a great deal of thought to the matter, but he also felt sure that his uncle had never contemplated that his name would be associated with a larger fund. There were three salient features about the scheme—first, that it was for orphans of (second) members and associates of the Society; and, third, the Council alone would appoint the orphans. In the last they got rid of the difficulty of contested elections, which their treasurer was so strongly opposed to. He hoped that they would not have too much touting for the orphan fund, and that it would not interfere with the general fund.

The PRESIDENT, in putting the motion, said he had learnt when in Edinburgh lately that the reason why some there did not support the Benevolent Fund was because they did not like to encourage people to be careless. (Laughter.) After this they would have a chance of showing their benevolence. He thought an orphan fund could very well be floated; that there would be a certain number in favour of the one or the other, and that this might work to the mutual advantage of both.

The report was then adopted.

New regulations in regard to annuities were approved, and it was agreed to remit to the committee the drafting of regulations for the orphan fund.

Mr. RICHARDSON at this stage asked what income the legacy would yield, and at Mr. Hills' request the Council went into committee. After an interesting conversation the Council resumed, and it was agreed that the 1,000% should be invested at an early date.

THE LIBRARY, &C., COMMITTEE

reported on the work of the departments under their charge during July, August, and September.

LOCAL SECRETARIES.

The PRESIDENT, in submitting the following list of local secretaries for the ensuing year, said that the interest in the election had been maintained, and the new arrangement worked satisfactorily. It brought the members together, and they evinced greater interest in the affairs of the Society. He also mentioned that there had been received from Mr. James Robinson, of Orford Hill, Norwich, a petition against the election of Mr. Francis Sutton as local secretary for Norwich on the ground that Mr. Sutton was not a "member or associate in business." Mr. Robinson, explained the President, thought the regulation required a "member in business." Mr. Sutton was a member of the Society, but he was not in business as a pharmaceutical chemist. He now devoted himself to analytical work. Apart from that, Mr. Sutton had been elected by a majority of the local members.

Mr. ATKINS: That is the point—elected by a majority of his constituents.

Mr. BOTTLE: Under the charter it is not necessary that local secretaries should be members of the Society.

The PRESIDENT: No; but according to the regulations of the Council they should be members or associates in business.

Local secretaries are appointed in all towns in Great Britain (except London and Edinburgh) which return a member or members to Parliament, and in such other towns as contain not less than three members of the Pharmaceutical Society or associates in business.

Aberdeen.—Strachan, Alexander	Aylesbury.—Turner, John
Aberystwith.—Wynne, Edward P.	Banbury.—Bartlett, Hubert
Abingdon.—Smith, William F.	Banff.—Alexander, William
Altrincham.—Foden, Joel	Bangor.—Jones, Owen
Andover.—Bienvenu, John	Barking.—Ridley, Charles H.
Arbroath.—Robertson, John	Barnet.—Young, R. Fisher
Ashbourne.—Bradley, Edwin S.	Barnsley.—Eastwood, Lewis
Ashford.—Ingall, Joseph	Barnstable.—Goss, Samuel
Ashton-under-Lyne.—Bostock, John W.	Barrow-in-Farness.—Chapman, Leonard P.

Bath.—Appleby, Edward J.
 Bedford.—Taylor, James B.
 Belper.—Calvert, James
 Berwick.—Lyle, William
 Beverley.—Fields, Tom William
 Biggleswade.—Spong, Douglas M.
 Birkenhead.—Brookes, Alfred F.
 Birmingham.—Thompson, Charles
 Bishop Auckland.—Dobinson, T.
 Blackburn.—Garland, Alfred P.
 Blackpool.—Laurie, John
 Blandford.—Groves, Richard H.
 Bodmin.—Cardell, Richard T.
 Bolton.—Mason, William B.
 Bradford (Yorkshire).—Rimington, George
 Brecon.—Meredith, John
 Brentford.—Wood, Alexander
 Bridgnorth.—Deighton, Thomas M.
 Bridgewater.—Baker, John A.
 Bridlington.—Purvis, John B.
 Brighton.—Gwatkin, James Ross
 Bristol.—Stroud, John
 Broughty Ferry.—Park, William
 Burnley.—Cowgill, Bryan H.
 Burslem.—Blackshaw, Thomas
 Burt-on-Trent.—Wright, George
 Bury.—Heywood, William
 Bury St. Edmunds.—Summers, F.
 Buxton.—Wright, Robert
 Cambrone.—Allan, Charles J.
 Cambridge.—Deck, Arthur
 Canterbury.—Bing, Edwin
 Cardiff.—Munday, John
 Carlisle.—Hallaway, John
 Carmarthen.—Lloyd, Walter
 Carnarvon.—Jones, John
 Chatham.—Morgan, Alfred William
 Chelmsford.—Metcalf, Wilson
 Cheltenham.—Barron, William
 Chester.—Baxter, George
 Chesterfield.—Windle, John T.
 Chichester.—Long, William Elliott
 Chippenham.—Coles, John Coles
 Chislebury.—Hill, William
 Cockermouth.—Cooper, F. Ashley
 Colchester.—Cordley, William B.
 Coventry.—Hinds, James
 Crewe.—Booth, E.
 Cromer.—Hoare, William Parker
 Croydon.—Clarke, Josiah
 Darlington.—Robinson, James
 Dartford.—Botwood, Charles W.
 Darwin.—Shorrock, Ralph
 Deal.—Green, John
 Derby.—Cope, John A.
 Devizes.—Edwards, Thos. Roberts
 Devonport.—Rendle, Richard H.
 Dolgelly.—Williams, Richard W.
 Doncaster.—Howorth, James
 Dorking.—Clift, Joseph
 Douglas (Isle of Man).—Radcliffe, John C.
 Dover.—Bottle, Alexander
 Droitwich.—Harris, Stephen
 Dudley.—Gare, Charles Hazard
 Dumfries.—Allan, William
 Dundee.—Hardie, James
 Dunfermline.—Seath, Alexander
 Durham.—Sarsfield, William
 Ealing.—Curtis, Frederick G.
 Eastbourne.—Crook, Herbert
 East Grinstead.—Tully, John
 Eccles.—Howie, William Lamond
 Egreymont (Cumberland).—Ireland, Edward J.
 Elgin.—Robertson, William
 Enfield.—Gange, George
 Epping.—Rowland, Thomas W.
 Evesham.—Pumphrey, John Henry
 Exeter.—Lake, John Hinton
 Falkirk.—Murdoch, David
 Falmouth.—Newman, Walter F.

Fareham.—Batchelor, Charles
 Faversham.—Laxon, Matthew
 Finchley.—Freeman, Frederick W.
 Flint.—Jones, Owen Williams
 Folkestone.—Lea, Frederick J.
 Forfar.—Fowler, George R.
 Frome.—Green, Edmund C. F.
 Gainsborough.—Surfleet, Arthur G.
 Galashiels.—Walker, James
 Glasgow.—Kinnimont, Alexander
 Gloucester.—Sadleir, John
 Grantham.—Whysall, William
 Gravesend.—Clarke, R. Weaver
 Greenock.—McNaught, Archibald
 Grimsby.—Great, Cook, Robert
 Guernsey.—Nickolls, John B.
 Guildford.—Long, Alexander J. T.
 Haddington.—Watt, James
 Halifax.—Seeley, Herbert W.
 Hanley.—Cornwell, Thomas C.
 Harrogate.—Davis, R. Hayton
 Harrow.—Gunn, Samuel John
 Harwich.—Worts, Augustine
 Hastings and St. Leonards.—Tharle, Charles A.
 Hawick.—Maben, Thomas
 Helensburgh.—Harvie, George
 Hendon.—Goldfinch, George
 Henley-on-Thames.—Batchelor, Charles J. H.
 Hereford.—Williams, Walter
 Hertford.—Lines, George
 Hexham.—Gibson, John Pattison
 Hitchin.—Ransom, William
 Honiton.—Dyer, Edward H.
 Horncastle.—Kemp, Herbert W.
 Hornsea.—Morrow, Charles
 Houghton-le-Spring.—Rowell, Robert H.
 Huddersfield.—King, William
 Hull.—Bell, Charles Bains
 Huntingdon.—Baxter, Robert
 Huntly.—Chalmers, George
 Hythe.—Lemmon, Robert Alce
 Ilfracombe.—Crang, Walter
 Ilkley.—Worfolk, George W.
 Inverness.—Ogston, William
 Ipswich.—Anness, Samuel Richard
 Jersey.—Cole, George
 Keith.—Pirie, James
 Kendal.—Severs, Joseph
 Kilmarnock.—Borland, John
 Kings Lynn.—Palmer, W. J.
 Kingston-on-Thames.—Walmsley, Samuel
 Kirkcaldy.—Storrar, David
 Kirkwall (Orkney).—Stewart, Duncan
 Knaresborough.—Lawrence, W. P.
 Knutsford.—Silvester, Henry T.
 Lancaster.—Vince, James
 Leamington.—Barrett, Josephus T.
 Leeds.—Reynolds, Richard
 Leicester.—Clark, Walter Beales
 Leigh (Lancs).—Bennett, John W.
 Leighton Buzzard.—Richmond, Robert
 Leith.—Finlayson, Thomas
 Leominster.—Sandiland, R. B.
 Lewes.—Saxby, Henry
 Leytonstone.—Bennett, Cornelius
 Lichfield.—Perkins, John Jaquest
 Lincoln.—Birkbeck, John Thomas
 Liverpool.—Parkinson, Richard
 Llandudno.—Winter, Joseph
 Llanrwst.—Jones, Owen
 Longton.—Pruce, Roland
 Loughborough.—Charles, Wm. F.
 Louth.—Dennis, Fred Woodrow
 Lowestoft.—Clarke, George Ernest
 Ludlow.—Woodhouse, George
 Luton.—Duberley, George S.
 Macclesfield.—Wright, John
 Maidenhead.—Walton, Ralph
 Maidstone.—Stonham, W. B.
 Maldon.—Elsay, Charles

Malton.—Buckle, James
 Malvern.—Coldwell, David B.
 Manchester, &c.—Benger, F. Baden
 Mansfield.—Patterson, Douglas J.
 March.—Davies, Peter Hughes
 Margate.—Harvey, William Sutton
 Market Harborough.—Maynard, Henry R.
 Melton Mowbray.—Wing, Geo. N.
 Merthyr Tydfil.—Smyth, Walter
 Middlesbrough.—Robson, J. C.
 Middleton (Lancs).—Parker, J. H.
 Milton, South.—Swingburn, R. H.
 Montrose.—Davidson, Alfred
 Morecambe.—Fell, John James
 Morpeth.—Schofield, Fredk. E.
 Newark.—Cherrington, Geo. W.
 Newcastle-on-Tyne.—Proctor, B. S.
 Newcastle-under-Lyme.—Poole, W.
 Newmarket.—Barrow, Frank A.
 Newport (Mon.).—Garrett, T. P.
 Newport (Salop).—Barlow, John
 Newton Abbot.—Bibbings, J. H.
 Newtown.—Owen, Edward
 Northampton.—Bingley, John
 Northwich.—Hampshires, Griffith
 Norwich.—Sutton, Francis
 Norwood.—Birch, Henry C.
 Nottingham.—Parker, William H.
 Nuneaton.—Iliffe, George
 Oban.—Robertson, Alexander
 Oldham.—Bates, Henry
 Oswestry.—Evans, John
 Oxford.—Prior, George Thomas
 Paisley.—MacCowan, Robert Thos.
 Pembroke Dock.—Williams, Cornelius
 Penrith.—Cowper, Joseph
 Penzance.—Shakerley, Benjamin
 Perth.—Donald, David
 Peterborough.—Heanley, Marshall
 Peterhead.—Tocher, James F.
 Petersfield.—Edgeler, William B.
 Plymouth.—Hunt, Freeman W.
 Pontefract.—Bratley, William
 Poole.—Pomeroy, Francis T.
 Portsmouth, &c.—Childs, James L.
 Preston.—Stuart, William
 Prestwich.—Mercer, Allan
 Ramsey (Hunts).—Palmer, Frederick W.
 Ramsgate.—Baily, Edward
 Reading.—Bradley, Charles
 Reigate.—Woodward, Moses M.
 Rhyl.—Lawrence, Geo. Richard
 Richmond (Surrey).—Thacker, William
 Richmond (Yorks).—Walton, E. B.
 Ripon.—Parkin, Joseph Brooks
 Rochdale.—Taylor, Edward
 Rochester.—Wyatt, Charles F.
 Romford.—Lasham, John W.
 Ross.—Matthews, Thomas A.
 Rothsay.—Duncan, William
 Rugby.—Brown, Frederic P.
 Ruthin.—Rouw, Theodore J.
 Ryde (Isle of Wight).—Pollard, Henry Hindes
 Rye.—Waters, William Allen
 St. Albans.—Ekins, Arthur E.
 St. Andrews.—Kermath, Wm. R.
 St. Antell.—Binks, Burcham
 St. Helens.—Wallbridge, John G.
 St. Ives (Cornwall).—Young, T.
 Saffron Walden.—Gilling, John
 Salisbury.—Atkins, William R.
 Scarborough.—Whitfield, John

Sevenoaks.—Pain, Edwin
 Sheffield.—Ward, William
 Shields, South.—Noble, John
 Shipley.—Dunn, Henry
 Shrewsbury.—Cross, William G.
 Slough.—Griffith, Richard
 Southampton.—Dawson, Oliver R.
 Southend-on-Sea.—Powers, E.
 Southport.—Righton, James
 Spalding.—Bell, E. Wightman
 Stafford.—Averill, John
 Stalybridge.—Simpson, Allwood
 Stirling.—Shairp, William
 Stockport.—Orton, Wm. Billing
 Stockton-on-Tees.—Braysbay, T.
 Stoke-on-Trent.—Adams, Frank
 Stone (Staffs).—Jacks, Frederick
 Stonehouse (Devon).—Maitland, F.
 Stourbridge.—Selleck, William R.
 Stowmarket.—Gostling, George J.
 Stratford.—Holford, Thomas C.
 Stratford-on-Avon.—Hawkes, R.
 Streatham.—Biscombe, William
 Stroud.—Coley, Samuel James
 Sunderland.—Garrison, John
 Swaffham.—Ball, Frederick R.
 Swansea.—Grose, Nicholas M.
 Sydenham, Upper.—Wilson, Alexander W.
 Tamworth.—Alkins, Thomas B.
 Taunton.—Short, George William
 Tavistock.—Gill, William
 Teddington.—Stacey, Peter
 Teignmouth.—Maudslayi, William
 Tiverton.—Havill, Paul W.
 Torquay.—Shapley, Charles
 Totnes.—Morse, Charles H. S.
 Tottenham.—Tanner, Alfred E.
 Treherbert.—Richards, Thomas
 Truro.—Percy, Thomas Bickie
 Tunbridge Wells.—Howard, Richard
 Twickenham.—Peake, Henry F.
 Uxbridge.—Waterhouse, Tom
 Ventnor.—Weston, Charles
 Wakefield.—Chaplin, John Henry
 Walsall.—Elliott, George
 Walthamstow.—Sanders, Arthur
 Warrington.—Greenough, Hugh F.
 Warwick.—Pruitt, Henry
 Watford.—Chater, Edward M.
 Wednesbury.—Gittos, Samuel J.
 Wellington (Salop).—Hall, Joseph
 Wellington (Somerset).—Windeatt, George John
 West Bromwich.—Roberts, George
 Westbury.—Paine, Charles
 Weston-super-Mare.—Hall, Edwin
 Weymouth.—Groves, Thomas B.
 Whitby.—Stevenson, John
 Whitehaven.—Kocher, Archibald
 Wick.—Miller, Kenneth
 Wigan.—Phillips, Jonathan
 Wimbledon.—Spencer, William G.
 Winchester.—Chaston, Alfred Ed.
 Windsor.—Russell, Charles J. L.
 Wokingham.—Spencer, Thomas
 Wolverhampton.—Gibson, Frederick John
 Woodbridge.—Betts, Alick Stephen
 Worcester.—Virgo, Charles
 Worthing.—Cortis, Arthur B.
 Wrexham.—Edisbury, James F.
 Wycombe.—Wilford, Josiah
 Yarmouth, Great.—Poll, William S.
 Yeovil.—Wright, Alfred
 York.—Sowray, Joseph

Mr. Frank H. Prosser was appointed assistant-secretary for North Birmingham, and Mr. J. Smith for Liverpool. It was agreed to offer the appointment of superintendent of examinations to the local secretary in each district where it is held.

THE STAFF.

Professor GREEN and Mr. HOLMES reported with regard to

the Genoa Botanical Congress, which they attended as delegates of the Society.

Mr. T. S. Dymond intimated his resignation of his appointments in the school and research laboratories, as from January 1, 1893, he assumes the position of staff-instructor in chemistry to the Technical Instruction Committee of the Essex County Council. The President congratulated Mr. Dymond and the Essex County.

EXAMINATION REPORT.

Mr. BREMIDGE, Secretary and Registrar, reported as follows:—

London:—

			Examined	Passed	Failed
Major	..	..	21	7	14
Minor	..	..	181	63	118
Modified	..	..	1	0	1

Edinburgh:—

Major	..	..	6	2	4
Minor	..	..	68	25	43

Preliminary

..	281	128	153
----	----	----	-----	-----	-----

These figures created considerable astonishment, upon which

The PRESIDENT said they were somewhat startling, but the want of knowledge displayed by many of the candidates in the practical part of the examination was simply astounding. In spite of the very detailed description of the requirements given in the schedule, men still presented themselves for the examination who were utterly ignorant of the uses of or how to handle the instruments required for conducting experiments or operations. He was surprised that those who had charge of these young men allowed them to enter for the examination. He knew that that was often the fault of the candidates, who insisted on having a "go" at the thing; but, however the matter arose, it was the opinion of both Boards of Examiners that it would be much better if they could refer candidates back to their studies for a longer period than three months. It also appeared, from the nervous and inexperienced manner in which candidates handled instruments before the examiners, that some schools were not be properly equipped for the training of candidates.

EXAMINATIONS IN SCOTLAND

THE Board of Examiners for Scotland met at 36 York Street, Edinburgh, last month, when the following gentlemen were successful in passing the examinations as indicated:—

MAJOR EXAMINATION.

Lee, James Arthur Richard, Mexborough, and Lyon, William, Edinburgh.

MINOR EXAMINATION.

Bell, Matthew, Edinburgh	McClumpha, Robert, Newcastle-on-Tyne
Boardman, Frederick James, Liverpool	McMillan, James McMillan, Glasgow
Booth, James Valentine, Salford	Maxwell, John, Edinburgh
Burnett, William, Oldham	Milne, Alexander, Edinburgh
Connochie, James, Selkirk	Moffat, Charles Dunwell, Manchester
Cook, Harry, Sheffield	Parry, Arthur, Liverpool
Davies, William, Greenock	Pirrie, J. M., Edinburgh
Evans, John Parry, Liverpool	Shaw, Thomas Alexander, Liverpool
Hampton, Peter, Arbroath	Smith, William Urton, Belfast
Hunt, Henry James, Edinburgh	Spanton, William Coulson, Edinburgh
Ker, William, Stranraer	Wilkinson, William, Manchester
Kidd, Andrew, Dundee	
Lean, Henry Sproston, Liverpool	
McFadzean, John, Belfast	

PRELIMINARY EXAMINATION.

WE have received from the Registrar of the Pharmaceutical Society of Great Britain the following list of persons who passed the First Examination, held on October 11, 1892:—

Adamson, Thomas M., Perth	Biffin, Frank, Brighton
Aldwinckle, John, Stamford	Blackwood, Robert J. S., Glasgow
Ashby, Holden M., South Norwood	Bleazard, Thomas, Preston
Askew, Thomas, North Shields	Boughen, Percy William, Buxton
Atkinson, John, York	Bould, Frederick Ewart, Dewsbury
Barker, Henry John, Brighton	Bowness, John H., Workington
Benson, Sydney, Wigau	Brown, Edward James, Portobello

Butler, John Howard, Cheltenham
 Caird, Harry, Fisharrow
 Carter, Leopold Ernest, Leeds
 Collinge, Joseph M., Oldham
 Collins, Joseph, Wrexham
 Cook, John, Leith
 Coull, Alexander, Aberdeen
 Courtney, George Doiton, London
 Craig, John Ross, Aberdeen
 Crampton, Walter, Southport
 Deans, Alfred, Aberdeen
 Dewar, John William, Edinburgh
 Don, George, Crieff
 Douglas, Arthur James, Kirkoswald
 Douglas, Robert Steel E., Annan
 Dow, William Burgess, Rothes
 Duguid, William, Perth
 Duncan, Howat, Arbroath
 Duncan, John, Aberdeen
 Edwards, George Rait, Edinburgh
 Eley, Philip G., Burton-on-Trent
 Epps, James W., Tulsa Hill
 Falck, Charles, Huddersfield
 Farrow, Tom, Stokesley
 Ferrier, John Greig, Arbroath
 Field, John Ernest T., London
 Fishbourne, James W., Markinch
 Fortune, James Alexander, Govan
 Garsed, William, Elland
 Gibson, Hubert, Leeds
 Glyn, Percy, Narberth
 Gordon, John Alex., Edinburgh
 Gray, James G. M., Dumfries
 Hacking, Charles Harold, Darwen
 Haigh, Thomas Crosland, Bedford
 Harlow, Walter Thomas, Burnley
 Hatfield, Francis C., Holywell
 Heeley, Frederick Fawcett, Hull
 Henry, John, Barrow-in-Furness
 Hill, Charles Alexander, London
 Hodgson, Edgar, Bradford
 Hopkins, J. S., Stow-on-the-Wold
 Hurst, James V., Birmingham
 Irvine, Alexander, Thurso
 Jackson, Robert E., Tynemouth
 James, John Earl, Birmingham
 Jones, Herbert Lloyd, Aberystwith
 Kahle, Martin A. G., London
 Kennedy, Robert, Johnstone
 Kingston, Walter W., Barnsley
 Lester, Frederick A., Sheffield
 Lewis, Walter John, Leicester
 Lindsay, John, Edinburgh
 Lund, Arthur, York
 Lyall, James, Edinburgh
 Macbride, Robert, Greenock
 McBryde, William, Stirling

McRobbie, Alexander, Aberdeen
 Matz, Max, Manchester
 Miles, Alfred, Aberystwith
 Milligan, John E. S., Halifax
 Moore, Thomas, Aberdeen
 Morris, Gerald Arthur, Ely
 Neville, Edwin, Wimbington
 Nicholson, Agnew, Annan
 Nicol, Alex. W. R., Tottenham
 Park, Henry Marshall, Tynemouth
 Penrose, Thomas, Luton
 Phillips, Ivor R., Abergavenny
 Rawling, George Rooks, York
 Rawlinson, Louisa H., London
 Reade, Arthur F., Wolverhampton
 Robbins, William, Bath
 Roberts, John, Bolton
 Roberts, William H., Manchester
 Robson, Harold, Huddersfield
 Ross, David, Edinburgh
 Schofield, Harry, Halifax
 Seel, Thomas, Barnsley
 Sharman, H. R., Chipping Norton
 Sharp, James Alex., Manchester
 Shum, Leonard, Madeley
 Simpson, Robert T., Blackpool
 Smith, Harry, St. Andrews
 Smith, James, Uddingston
 Smith, Margaret Alice, London
 Somerville, George, Edinburgh
 Southern, T. W., Wolverhampton
 Sprague, Charles, Okehampton
 Stables, James Ernest, Kendal
 Stokoe, John Calvert, Sunderland
 Taylor, Samuel, Birmingham
 Thirde, John Ingram, Dundee
 Thomas, Martin, Mold
 Thornber, Manoah, Bedford
 Town, George Ernest, Penistone
 Toye, John Joseph, Glasgow
 Traub, Leonard B., Kinross
 Tunstall, George F., Manchester
 Turnbull, William, Dublin
 Turner, Fredk. George, London
 Venn, Samuel E. M., Devonport
 Walker, James N. D., Saltcoats
 Walmsley, Joe, Darwen
 Walters, Howell Jones, St. Clears
 Wellington, Henry W., Freshwater
 White, Harold Percy, Rotherham
 White, Thomas R., Long Eaton
 Whitworth, F. W., Nottingham
 Wilford, F. J., Newport Pagnell
 Willcox, Harriett, Birmingham
 Windemer, Oscar R., Pembury
 Woodhead, Herbert, Leeds
 Woodruff, Walter, Stockport

Business Changes.

SAVEGE & Co. are proposing to start an English pharmacy at Madras. The mover in the matter is Mr. R. M. Savege, who was with a Madras firm for the last fifteen months.

MR. J. H. GRIFFITHS, who served his apprenticeship with Mr. J. Walker, Little Brighton, Cheshire, has purchased the business of Mr. W. H. Dangerfield, of Little Sutton, Cheshire. Mr. James Shacklady valued for both buyer and seller.

MR. ALEXANDER CLEGHORN, late of Edinburgh and Capar Fife, N.B., who the last ten years has been resident in Cape Town, recently, as a member of the firm Reeler & Co. there, has opened a new pharmacy at 16 Hout Street, Cape Town. The fittings have been made by a local firm in the latest London style, and the Colonial newspapers write very glowingly about the attractiveness of the pharmacy. Mr. Cleghorn is a member of the Cape Colony Pharmacy Board.

THE NEW U.S. PHARMACOPŒIA is expected to be ready for the printer this winter.

The Winter Session.

CHEMISTS' ASSISTANTS' ASSOCIATION.

At 103 Great Russell Street, W.C., on Thursday evening last week there was a good attendance of assistants, who were brought together in prospect of a debate on

THE CONDITIONS OF LABOUR IN PHARMACY.

The discussion was opened by Mr. Peter MacEwan, who said:—

The subject of our discussion to-night savours somewhat of the movement which is at present agitating the artisan class of the community, but further than the similarity in title there is little in common between them. The matter comes before us now in consequence of a lengthy correspondence in *THE CHEMIST AND DRUGGIST* during the summer months. It began with an appeal to chemists' assistants to boycott cutting drug-stores, and developed into a general complaint about long hours, poor pay, and bad masters. Such discussions are perennial. As far as periodical pharmaceutical literature goes back you will find that they have occurred in a modified form. However, the recent correspondence attracted considerable attention, and appeared to your Council to be of sufficient moment to warrant an evening being devoted to the matter here; so I was asked to open it.

I think we shall be wise if we confine our attention to-night to the aspects of the correspondence directly affecting assistants. It is not strictly our province to deliberate upon the novel or modern principles of trading, which have so materially altered pharmacy during our business life-time. Our relations are more directly with our employers, and certain reforms as to the conditions of labour are urged which we by united action may help to bring about. That at once introduces the idea of a union of assistants which we have heard of, and that not for the first time.

This is a proposal which deserves a few minutes' attention. Let me say at once that I do not favour it, and my reasons for that are: *firstly*, because no attempt has been made to utilise existing organisations for furthering the reforms; *secondly*, because the proposed reforms have not been adequately formulated; and *thirdly*, because the conditions of labour in pharmacy are different from those in trades which have successfully employed union to enforce the demands of workers.

POSSIBILITIES OF A TRADE-UNION.

Let us look at this third reason more critically. Successful trade-unionism exists in occupations wherein the conditions of work are tolerably uniform. A bricklayer, for example, is a bricklayer all the world over, and out of any dozen such men you find that, say, ten of them are equally competent to do a certain amount of work per hour. Common action amongst such men is, therefore, possible and reasonable. They may determine how long they will work per day, what remuneration they will demand for it, and that the standard so fixed will hold good for all who have passed the apprenticeship stage of the trade. Apply that principle to pharmacy. Is it possible that it can succeed? What standard of competency have we to go by? We know that the Minor Examination is not a test of business ability, and that it is the individual's experience and competency which determine remuneration in pharmacy. Consequently we are dealing with a set of workers whose interests are varied rather than uniform, and the extent of that variation must sympathetically affect any combined effort to settle the conditions and terms of pharmaceutical labour. Another consideration opposed to a trade-union in pharmacy is that the principle is in essence aggressive. In the large industries we have a struggle between capital and labour. There is immense disparity between the remuneration of the employé and the income of the capitalist; the former has body-wearing labour and but moderate or poor personal comforts, the latter is generally a man of ease, with all the comforts that wealth and leisure can give him, and which not one in 10,000 of the workers can ever by his own efforts hope to attain. It seems natural that there should be a struggle to strike a balance, and unquestionably a large measure of

success has followed the efforts of the workers in this direction.

How different is it in pharmacy! Every assistant is a potential master. His efforts are all to improve himself in his business so as to enable him to become an employer. There is no such wide gulf between us and our employers as there is between artisans and capitalists. Few chemists are capitalists, and the difference between the remuneration of the assistant and the income of the master is not a disparity. Therein is our advantage, for it is but a step from the lower position to the higher.

There are other considerations to be taken in viewing this proposal of an Assistants' Union—for instance, the necessity for a good working majority, and regular contributions to a common fund—but the conditions of our calling are so widely different from those which determine the success of trade-unionism that it would be folly to look at the matter more seriously in the meantime.

THE PROBLEM.

Having said this, let us look at the objects of our discussion. At the present hour throughout Great Britain hundreds—shall I say thousands?—of our fellow-assistants are hard at work, and probably most of them have had this experience since they left school, and may have little prospect of better things until the ring of the pestle has no meaning to them. Their work may be intermittent, not the body-wearing toil of the bricklayer and the mechanic, but the duration of it is none the less objectionable. Taking it on the higher standard, we must recognise the fact, which our leaders are never tired of uttering, that the nature of pharmacy requires that those who are in it must—in their early days, at least—combine head-work with manual labour. Dexterity of hand and precision of eye do not make a pharmacist, although they may a bricklayer. We need book-learning, and that cannot be got while we are serving customers and dispensing prescriptions. This ought to be recognised as a condition, a first principle, of our labour. The problem therefore resolves itself into two leading points—the hours of labour, and remuneration for labour.

THE HOURS OF LABOUR.

In regard to the hours of labour, the Legislature has laid down a principle which it is desirable should be adopted generally. Chemists' shops, like other shops, wholesale or retail, come under the Shop Hours Act of 1892, which requires that "no young person"—that is, a person under the age of 18 years—"shall be employed in or about a shop for a longer period than seventy-four hours, including meal-times, in any one week." That is practically a twelve-hours day. The Act is yet too recent to expect of it much influence; but there it is, and in time it will undoubtedly form the standard for older persons than apprentices.

From what I know of the trade, I believe I may venture to put down the average day at fourteen hours, including in this the few hours put in on Sundays. But many assistants have from ninety to one hundred hours per week, and very few indeed come under eleven hours per day. The average is in every sense deplorable, especially in pharmacy. A man who is engaged in business twelve hours per day requires at least eight hours' rest, so that we have no more than four hours of a margin, and in that, if he do his duty to himself and his calling, the assistant ought to further his personal accomplishments and professional knowledge. The conditions are eminently opposed to anything of the kind. Moreover, the indoor system, which is almost universal in England, considerably restricts the assistant's freedom in regard to the disposal of his own time. In that system I see the "rock ahead" to reform; and as one hailing from the other side of the Border, where the system is unknown, I may be allowed to state some objections to it.

THE INDOOR SYSTEM.

First, then, it is an objectionable system because part of the remuneration for services is given in board and lodging. Independent of the fact that it places the assistant on a commercial footing with the domestic servant, strict economics requires that the full value of services should be paid in current coin. This question of remuneration cuts both ways, of course, for an assistant with 40% or 50% indoors may be a better-paid man than one with 80% or 90% outdoors,

although both methods of payment may mean exactly the same to the employer. Still, the outdoor man has ulterior advantages over his indoor fellow.

In the second place the indoor system originated at a time when employers took upon themselves to control the conduct of their servants morally and socially. Times have changed this; but I maintain that the moral responsibility of masters in this matter remains, and is still implied by such restrictions as are common in regard to retiring at a certain hour to one's bedroom, and so on. But such things are the mere skeleton of the ancient duty, and it would be well if the figment were dropped altogether and the relations were reduced to a thorough commercial basis—viz., employment for services in the pharmacy, character and conduct outside that being a secondary matter, or only considered in their influence upon the work of the assistant.

A third and still greater objection to the indoor system remains—viz., its restriction upon the freedom of assistants as individuals. Since the master's responsibility for the personal conduct of his employes has been practically abandoned, it is not fair that he should control their time when off duty. Many are reasonable and do not think of that; but there are as many who stick to their ancient privileges, the consequence being that there is scarcely finality to the hours of labour, and the assistant's whole life is "shop."

SHOULD BE ABANDONED.

If it were possible to abandon the indoors system in England, I would say that the first effect would be a notable decrease in the hours of labour. Scotland, with its outdoor system, certainly compares most favourably with England. There the twelve hours day is very common. Comparatively few shops keep open after 9 o'clock, and when assistants have to commence work before 9 A.M. they are generally allowed an hour out for breakfast. The relations between masters and assistants are also, if anything, better than in England. They meet on a common platform—business—and that is none the worse, generally, of the absence of social relations. Good-feeling is the rule, and the results of the system are decidedly to the benefit of pharmacy, as judged by examination statistics and other things; but you must go across the Irish Channel to find the pharmaceutical utopia. There both the indoor and outdoor systems exist, but even in the indoor places there is astonishing strictness in the matter of hours, from 8.30 A.M. to 7 P.M. being quite a common day, and large freedom is allowed to those off duty.

BUT, THERE HAS BEEN PROGRESS.

This contrast, which, I believe, you will on examination find to be correct, leaves England with a great deal of leeway to make up, and it is that that we should set our hearts, as an Association, to accomplish. We shall not manage it in a day, and there is much to consider before we even begin, but that this Association is the proper body to take the matter up there can be no question. It is an organisation of assistants, it is in the metropolis, and is thoroughly respected—all of which circumstances are favourable to a beginning.

There is another side to the question, of course, and I have that very well expressed in a letter from a gentleman who took a prominent part in *THE CHEMIST AND DRUGGIST* correspondence:—"With reference to the 'hours of labour in pharmacies,' I am under the impression that it is not practicable to reduce them except in a few exceptional cases, and, moreover, they are much less now than when I first went out as an assistant. I was with old Mr. P. Squire in the old shop in 1865 and onwards for five and a half years, and the hours then were from 7 A.M. to 9 P.M. (no early evening off). After a lapse of twelve years I returned to the new shop, and found the hours then just the reverse—viz., from 9 A.M. to 7 P.M.; but there was this difference—that the men worked at a far higher pressure. It seems to me that in our business the question of hours must be, to a large extent, a question of give and take. As I have pointed out in *THE CHEMIST AND DRUGGIST* before, I have had a long and wide experience as an assistant. I went out as an improver at 17 years of age, and since then I have been assistant in all sorts of businesses—agricultural, watering-places, garrison towns, Deptford, Maidenhead, &c.—so have had some experience as to hours worked in various places. But I generally found myself fairly comfortable. For instance, at Brighton

I lived with a gentleman who occasionally lent me his gun, and I used to go prowling about shooting small birds. Occasionally, and whenever there was company, I used to be invited to take a hand at whist or vingt-et-un, or any game that happened to be played, and sometimes was invited to take the son to the theatre. In another place (Great Portland Street, London) we used to keep open till 10 at night and 12 Saturdays, but the afternoons being our slack time, the assistant and myself used to take them alternately, and I never found any assistant grumble at the arrangement, as they had three afternoons a week off. I and the assistant used to go out one day a fortnight from dinner-time till any time we liked at night, and also every night after 8 or 9 when we felt disposed, as the governor didn't live on the premises. Of course in the large houses, like Savory's, Squire's, Corbyn's, Bell's, &c, the men can have nothing to complain of. . . . No; the nature of the business will never admit of shorter hours at the latter end of the day, but I think employers might let their assistants out oftener in the mornings and afternoons."

A PLEA FOR THE JUNIORS.

We have still the question of remuneration for labour to consider, and here the path is not so smooth as in the matter of hours. We appeal for shorter hours on the basis of humanity, on the necessity for opportunities to educate ourselves in the scientific and book subjects requisite for our calling, and also to enable us to cultivate those social relations which are equally incumbent upon us. How few of those who come out good pharmacists have succeeded in securing those personal accomplishments of song and speech which are often material to social success! We have not the time for both, and we need it. But how is remuneration to apply? Well, so far as apprentices are concerned, I know of masters who undertake to send youths to chemistry and other classes during their apprenticeship. They give the time and pay the fees, considering the more intelligent service that they receive from youths trained in this way as adequate return, apart altogether from the fact that it is their duty to impart a knowledge of the business to the apprentices. There is plenty of room for the extension of this system. We may not claim the same pecuniary facilities for assistants; but we may at least urge that the low rate of remuneration of young unqualified men deserves consideration. I take the sound principle of post-pupilage service to be that the man who gives his service shall receive remuneration adequate to his comfortable sustenance, and to provide those moderate educational facilities which will ensure his progress in pharmacy. A young man who does an honest day's work ought not to be a charge upon his parents. If he is, the fault may be as much the parents' as the employer's; anyway, I am at least justified in appealing for more liberal consideration of the condition of junior assistants. There is too much tendency to regard them as cheap labour—to take advantage of their comparative inexperience. As men in the transition stage—the stage which is the making or marring of their career as pharmacists—I urge that employers should give greater attention to their book and class studies, and, where the circumstances favour it, go the length of making attendance upon evening or association classes part of the conditions of labour. At this, the most impressionable age, such influence would rapidly repay itself in improved service and diminution of the ranks of unqualified men. I have sufficient faith in human nature to believe that this would pay.

QUALIFIED ASSISTANTS.

And what shall we say of the men who are qualified, and who grumble about low salaries? That is a matter which is rapidly righting itself. As there is no systematic effort on the part of masters to keep down salaries, we may be assured that qualified men can generally secure their market value. Salaries are much better now than they were ten or twenty years ago, and the tendency, owing to the demand for qualified assistants, is still upwards. It would be unreasonable to demand remuneration in proportion to the hours of service, for the hours differ much in productiveness, and the true basis of remuneration for us is skill and knowledge. Moreover, we must not forget that the assistant's life is a comparatively short one, because he becomes a master far

more rapidly than is common in shop trades. And in whatever occupation we find the same circumstance obtaining, there the remuneration is equally modified.

A PROPOSAL.

So far, I have merely skimmed the surface of our subject, for I have kept the fact in view that these notes are to open a discussion, during which each one who speaks may amplify my remarks. But to give a practical turn to the whole matter, I would now move

That it be remitted to the Council of the Association to consider what steps can be taken to place before employers throughout the country our recommendation to extend the apprentices' seventy-four hours' week to assistants.

This does not necessarily mean a universal hour for closing, which is impossible, but it means more half-holidays, more evenings off, better-manned establishments, and generally an endeavour to free assistants entirely from "shop" during twelve hours each day. We may begin modestly—first, by putting ourselves into communication with kindred Associations throughout the country—and by next summer it may be possible to have a meeting—say, at Nottingham—of delegates from provincial Associations. We may start fair and square by taking the masters into our confidence, for although we want reform, we are not such noodles as to shriek for revolution.

DISCUSSION.

Mr. WALTON said a union was not wanted. The Pharmaceutical Society was not valued sufficiently by many assistants. Were this otherwise much benefit to assistants would be gained. Apprentices had a far easier time than in old days, but on becoming junior assistants their hours were very long. But the time allowed in the day compensated partly for this. Assistants were generally looking forward to be masters one day, and therefore must take every opportunity to become versed in the details of the business, and this meant sticking close to their work. A higher standard of competence would be ensured by masters compelling their apprentices to attend evening classes where possible. Mr. Walton further referred to the fact that the public are in the habit of shopping late in suburban districts, and this was largely responsible for late hours. He thought, too, that junior assistants were apt to overrate their abilities, and did not quite agree with Mr. MacEwan as to indoor and outdoor posts. He thought indoor men in London had a better time than the outdoor men.

Mr. HARRISON was glad to second the resolution. That assistants had grievances all were agreed, but a "trade union" would do little or no good. What was wanted was to get at the reasons of the unsatisfactory condition of things. Partly, at least, this lay with the assistants. In many cases they were not what they should be. The low standard of the preliminary examination was responsible for a great deal of this; the standard would ultimately have to be raised. With regard to outdoor and indoor posts, he considered the former far more satisfactory; many masters interfered in the private affairs of indoor assistants to a greater extent than was fair. That was seen in advertisements, where they saw strictures as to whether the assistant was a Churchman or not, smoker or non-smoker, and so on. These things had nothing to do with pharmacy, and as long as an assistant did his work that was enough. (Hear, hear.)

Mr. PARRY said that eighty hours and more per week was too much work for any man. We were living too fast now. If we did the work in half the time our results would be better. The limit mentioned in the resolution—viz., seventy-four hours—was as high as it ought to be. That assistants were not usually paid their real value was certain, but it was impossible this could be altered under present conditions. Masters could not afford to pay more, and until they could assistants must be content. Had there been a greater disparity between masters' incomes and assistants' salaries it would have been different. He did not believe the Pharmaceutical Society could do anything in this matter, but the Council of the Association meant to do their best to bring it to a fair issue. This would only be done by assistants and masters working together, and not against one another.

Mr. JOWETT believed assistants fully understood their own grievances. These assistants were yearly becoming masters

themselves. Did they, then, recognise the grievances in their own assistants' cases? If so, did they practise what they so lately preached? He preferred outdoor posts for every reason; and while he did not think it possible to have a uniform hour of closing, he generally favoured Mr. MacEwan's views.

Mr. GANE agreed with Mr. Harrison that much of the trouble was due to incompetent assistants. If an assistant would work well he would eventually succeed. Certainly salaries were not equivalent to the men's worth. There was a flagrant example of this in the dispenserships of Boards of Guardians. He knew of a case where the Local Government Board refused to sanction 140*l.* a year to a qualified chemist, while that salary was given without hesitation to a person, without qualification, who was to act as provision clerk.

Mr. BARNARD said masters had a perfect right to control indoor assistants after business hours. The fault lay on both sides, and assistants had brought many of their grievances upon themselves. Could not this Association approach the Early Closing Society on the matter of shop hours? They owned publicly that no attempt had been made to approach chemists on the matter for over ten years.

Mr. SAGE urged that the close attention chemists' assistants had to pay to their business hindered their becoming fit for social intercourse; nor did it allow them time to become well acquainted with the theoretical part of the business. The "last five minutes" was often the real cause of late hours.

Mr. McDIARMID urged the necessity of a union. This would draw together assistants who had hitherto held aloof. At present chemists' assistants were, as regards their hours, on a level with bus and tram conductors. Masters should not have such control as they often claimed over their assistants' spare time. He was not sure that Mr. MacEwan was right in objecting to a union, for anything they could do must be done by united action. Why should they not go straight for an assistants' union? (Applause.)

An ASSISTANT, with a Scotch accent, whose name did not transpire, spoke somewhat generally upon the legal conditions under which pharmacy is conducted in Great Britain and Ireland. He thought the latter had the advantage. He also advocated that the prosecutions under the Pharmacy Act should be undertaken by the Treasury.

Mr. ROBINS was not in favour of a union, and in an amusing speech argued that though it may be theoretically bad to live indoors, to work long hours, to have one's pipe put out, and not to be looked at if you are a Wesleyan or a Baptist, it all worked out fairly well in practice. At least, that was his experience, and he did not agree with Mr. MacEwan's motion.

Mr. E. UMNEY agreed with Mr. Harrison that a much more severe preliminary examination should be compulsory. Competition between masters was largely the cause of the troubles. He also spoke on behalf of junior assistants and apprentices, with a view to having their work confined more to the pharmaceutical side of the trade.

Several others having spoken,

Mr. MACEWAN replied. He insisted that before attempting to start a union use must be made of existing organisations. Chemists' assistants did not, as he had pointed out, possess the necessary qualifications for forming an aggressive union. There was not that equality in regard to competence that was so marked in mere mechanical occupations. In England matters were worse than in Scotland, and he pointed to the significant fact that with its smaller population Scotland possessed five assistants' associations, against four in all England; and those five were all large and thriving well. He attributed that to the fact that the outdoor system enabled assistants to associate, while the indoor system prevented their doing so. He feared that the advantages of the outdoor system were not sufficiently appreciated in England; yet he had heard from several employers who had changed from the indoor to the outdoor system that it had been altogether beneficial. It would take many years before much change could be effected, but now was the time to begin.

Mr. ROGERS, the President, said that the formation of a hostile union would be quite futile. The influence of a meeting such as this, with its results, would, he thought, be widespread. Moral force was the means by which success would be ensured. The fault of most of the grievances lay

both with the masters and the assistants—the masters often neglected their duties to their employes, and assistants thought of their rights whilst forgetting their duties. He was much pleased at the able way in which Mr. MacEwan had disarmed opposition, and was sure that the whole of the discussion would be of great value. Personally, he could not see how it was possible to restrict an assistant's hours to seventy-four, for he thought that a pharmacist should always be at the service of the public. If assistants would always take advantage of their opportunities much incompetence would disappear. An increased education did not always bring at once an increased salary; but a better education will play a great part in the future of these grievances. The motion was then carried *nem. con.*

The meeting adjourned at 11.20 P.M.

The annual *conversations* of the Chemists' Assistants' Association is fixed for November 17, and Mr. J. C. Stead, of 143 New Bond Street, the honorary secretary to the Conversation Committee, is inviting objects of pharmaceutical interest or curiosity for exhibition on that occasion. The price of tickets is fixed at 3s. for a single one or 5s. for a double one.

DUNDEE CHEMISTS' ASSISTANTS' ASSOCIATION.

At the meeting held at 74 Commercial Street, Dundee, on Thursday, October 27, there was a large muster to hear the public analyst, Mr. G. D. Macdougald, F.I.C., on the topic recently discussed in *THE CHEMIST AND DRUGGIST* under the title—

IS WATER ANALYSIS A FAILURE?

After referring to the origin of the matter and reading portions of the article and letters in *THE CHEMIST AND DRUGGIST*, Mr. Macdougald remarked that chemical analysts were therein charged, first, with inaccuracy in water-analysis—that was to say, waters sent to the same or different analysts, and which were supposed to be the same, were reported on quite differently—second, they were charged with giving opinions on waters on insufficient data, and with passing a water as wholesome or condemning it as dangerous as the analytical figures came up to or went beyond a certain empirical standard of purity; and, third, they were charged with usurping functions which should belong to others. His remarks were intended to refute these charges. Medical officers of health were apt to become autocratic in idea and general bearing in respect to the position which they occupied, and which was apt to engender some ill-feeling towards a class of men—the public analysts—on whom they were dependent. With regard to the variance of analytical results, Mr. Macdougald said that he was not there to plead immunity from error on the part of analysts, but he asked for some measure of consideration towards workers who laboured under considerable difficulty, and who were often blamed for the errors and mistakes of others.

As an instance of what he meant, he mentioned that in some cases two, and sometimes three, bottles of a water are sent to the analyst. On critical examination of these duplicate samples, very frequently he found that even to the eye the waters in the bottles were visibly different. One bottle would have more floating matter than the other; one bottle would have a dead fly in it, while the other had none; and one bottle would have an old cork in it, and so on. He knew from experience that the taking of two bottles of water—say, from a shallow stream or from a draw-well—so that each was exactly the same as the other, was a very difficult thing if precautions were not taken. For example, about a month ago he was present at the sampling of a water. A bottle was lowered sideways into a little pool at the edge of the stream. A second was dipped at the same place, and a third also. On examination, these bottles were visibly different. The disturbance set up by the first bottle caused a stirring-up in the pool, and the water was visibly dirtied. If each of these samples were sent to a different analyst, it was conceivable that the reports would differ. He did not wish to be understood to say that discrepancies between analysts were solely due to such causes, but they had to remember that the water-analyst set himself the task of measuring 1 part of organic impurity in 10,000,000 parts

of water, and such mischances as he had indicated—which were trivial enough to a mind not carefully educated to the work—were of vital consequence to the result of the analysis. In many cases, therefore, it was the sample which was to blame, and not the analyst. As to the charge that analysts were guilty of giving opinions on insufficient data, he held that before a sound opinion could be arrived at with regard to any particular sample of water, not only the analytical figures but the source of the water should be studied. It was often the case that authorities sending samples were sometimes distinctly averse to giving full information or affording facilities for inspection as to the source of supply and gathering-ground. There appeared to be in many quarters a desire to put the analyst as much in the dark as possible, part of the enjoyment of existence of his employers being to watch with what success he scrambled out.

In answer to Dr. Thresh, he would say that none were more fully alive than analysts to the benefit of studying the source of a water as well as the figures of an analysis previous to delivering a report. Dr. Thresh proposed instead, however, that medical officers of health should become analysts. There was something very airy, very delightful, and very hopeful about this proposition. There would then, of course, be an entire absence of any difference of opinion, because the medical autocrat would become the analytical autocrat as well. Analyses by two or more authorities would never be made, and as a result there would be a complete absence of disagreement. The arrangement would degenerate into the medical officer of health having, instead of an independent analyst as at present, an analyst working under him doing very much what he was told—at any rate, having his results filtered through the mind of someone who would accept or reject as his whims directed. The combination of medical officer of health and analyst might work extremely well in Dr. Thresh personally, but he feared Dr. Thresh had spoken on a subject which he had not thoroughly thought out, or, having thought out, by a judicious amount of dust-throwing trusted that the genus medical officer of health might come out with increased reputation, to the detriment of the chemical analyst. The idea of combining the offices of medical officer of health and analyst was never likely to become generally accomplished, on the well established principle that "to be jack of all trades is to be master of none." He did not say that in no case could the offices be satisfactorily combined, but he thought a reasonable view of such a combination could only lead to a belief that the chances of error in analytical work would be seriously increased.

Dr. Thresh was somewhat peculiar in some of his arguments. He said, in a letter to *THE CHEMIST AND DRUGGIST* of October 15, that when a medical officer of health considers an analysis necessary he should himself undertake it—that was, not when his committee consider it, but when he, the sanitary autocrat, considers, &c. In a word, Dr. Thresh proposed to do away with specialists.

Before leaving this question, and with special reference to Sir George Buchanan's utterances on the necessity of leaving analysis on one side and studying the sources of water instead, Mr. Macdougald asked what Sir George Buchanan would do in the case of a water issuing from one point in the earth or rock, the proximate source of which was quite unknown or very difficult to trace. There are many cases of waters issuing from points almost in the centre of populous places which are pure, and the proximate source and gathering-ground quite unknown. As a matter of fact, the only practical method of arriving at a knowledge of the material we are dealing with is by the internal evidence obtained by chemical analysis. Chemists are charged with uttering opinions on waters because the analysis happened to show a slightly higher or lower figure from a fixed standard of purity. Now, this can simply be denied. There is no chemist having any experience in water-analysis who has fixed and unalterable standards for each ingredient. There is no standard for chlorine, ammonia, nitrites, nitrates, lime and magnesium salts, &c. The amount of each ingredient is undoubtedly allowed to influence the mind, but there is no hard-and-fast amount for each ingredient. For example, if we find chlorine in the absence of ammonia, or much organic matter, and no nitrites or nitrates, a high chlorine would not condemn water, especially if the chemist knew it came from a source close to the sea-shore. Mr. Macdougald proceeded to

criticise in detail other statements by Dr. Thresh, arguing that in riding a hobby Dr. Thresh had allowed himself to say things which would not stand examination.

In regard to water-analysis itself, the lecturer said that recent research had made it abundantly evident that intimately connected with the appearance of disease there were organisms so minute and unweighable as to elude the most delicate processes known to the chemical analyst. Although such branches of recent bacteriological research were not touched upon by ordinary water-analysis, it did not follow that chemical analysis was useless. He held that a careful chemical analysis, combined with a bacteriological and microscopical examination, if required, and an examination of the source of supply where such could be made, would give sufficient data to form a very accurate opinion as to the fitness or unfitness of a water for domestic purposes. The standards which analysts had been blamed for setting up arbitrarily were really standards based on experience and common consent. Sir George Buchanan had even suggested that analysis was unnecessary if a careful examination of the source of supply was made; but the water-specialist was occasionally asked his opinion as to whether a particular water was safe to use for a town supply. He knew that to bring water to a town iron pipes were used, and that lead pipes were used for distribution from the water mains. A water might have a chemical action on iron and lead—not very great, perhaps, but sufficiently great to make it highly inconvenient, so that Sir George Buchanan could not, Mr. Macdougald feared, predict with any degree of certainty this danger by setting chemical analysis on one side.

"I think," he continued, "it may be shown on nearly every point that it is to chemical analysis we must look for the main facts upon which to judge of the quality of water for domestic purposes, and I think it may be held that chemical analysis will in the future hold quite as important a place as in the past, microscopical and bacteriological investigation being resorted to as at present when occasion demands. As the requirements of analysts become more thoroughly understood there will be added to their somewhat scanty information facilities for the examination of source of supply, and other helps towards arriving at sound conclusions. There is ample ground for affirming that water-analysis is not a failure. I do not wish in the slightest to hide my opinion of medical officers of health as analysts. I consider the attack has come from the wrong direction, and that the suggestion that medical officers of health would make a superior class of analytical specialists is most visionary, and at the same time one of the most amusing pieces of effrontery."

Baillie Ferrier, who presided, in proposing a vote of thanks to Mr. Macdougald, said that the city of Dundee was to be congratulated on having so able an analyst. He only wished that he could deliver his lecture before the Police Commission, so that some important points might be cleared up.

LIVERPOOL CHEMISTS' ASSOCIATION.

The first meeting of the present session was held in the Royal Institution on October 27, Mr. J. Hocken (Vice-President) in the chair. Some discussion took place as to a change in the hour of meeting, some desiring the meeting to be called for 8 o'clock. After a somewhat prolonged conversation it was resolved to go on as before and meet at 7 P.M. Mr. J. S. Ward, F.C.S., was re-elected President for the ensuing session.

The CHAIRMAN then called on Dr. Symes to read his paper on

THE MODERN INTERPRETATION OF THE PHARMACY AND PATENT-MEDICINE ACTS.

Dr. SYMES said: The recent requirement that candidates for the examination should possess a knowledge of the laws affecting the practice of pharmacy is both reasonable and desirable. In other countries a knowledge of such laws has long been considered an essential part of a student's education, and in this country one often laments that they do not constitute a part of the pharmacist's knowledge. When one reads of a coroner censuring a chemist for not registering the sale of a small quantity of laudanum "according to the requirements of the Pharmacy Act," or threatening

him with a fine for selling oxalic acid without a witness, "in violation of the law," and the man stands meekly by and tacitly admits that he has done wrong, one cannot help feeling that the craft is prejudiced for want of this particular knowledge on the part of the individual.

We cannot, of course, be expected to know the details of all the laws that affect us, but a general digest of these Acts enables one to keep within their requirements. But as we shall be all agreed that a special knowledge of the laws of pharmacy should be possessed by those who practise it, we shall be interested in learning what the student is expected to know. Is it the Act as passed in 1868, with slight modifications a year or so later; or is it the Act as changed from some of its original intentions, and read in the light of certain modern judgments and legal decisions? There is, as you know, a proverb that a coach and horses may be driven through any Act of Parliament; and if other Acts of which we know little are as elastic as the one affecting pharmacy, there need be no surprise that lawyers are always busy and have so lucrative an occupation.

An Act of Parliament, says the "legal mind," is an embodiment of the views of certain persons in a more or less vague form, only becoming a reasonable and exact measure after a number of actions have been taken under its provisions and the judges have defined what it really means. I do not wish to dogmatise, but it seems to me if we got at the intention of an Act when it was framed and passed, that would be the just view to take of it. As, however, men and things do not remain stationary, it can easily be conceived that an Act of Parliament, however just and effectual at the time of passing, may become otherwise twenty years later, and may be improved by judgments consistent with the changed condition of things. The impossibility of anticipating when drafting a Bill all the changes that will subsequently arise in the affairs it affects, no doubt accounts for many anomalies.

When the Pharmacy Act passed it contemplated restricting the sale of scheduled poisons to persons of experience and education registered under its provisions, in the interest of the public. There was but little difference of opinion as to the desirability of this, but considerably more as to the methods for accomplishing it. Ultimately it provided that all persons in business on their own account at the time of its passing should be placed on the register; that senior assistants having a vested interest should, if they desired to go into business on their own account, pass a modified examination, but if they remained assistants under registered masters they were in no way interfered with. Junior assistants and apprentices were not considered to have sufficient vested interest to demand special provision, and they, before they could go into business, were required to pass the ordinary examinations.

It provided a schedule of poisons, and put certain restrictions on their sale; it also required that regulations should be framed for keeping and selling such poisons. There were certain exceptions in favour of medical men, veterinary surgeons, executors of deceased chemists and druggists, and also of patent medicines. Now, how has the Act been interpreted, and how has it operated?

The Pharmaceutical Society repudiated the contract to provide regulations for keeping and selling poisons, and none of a compulsory nature exist. A registered company (not being a person) is said to be outside the Act, and can, therefore, carry on the business without registration. The seller (*i.e.*, the person who owns the business) is no longer the seller, but the person who hands the article to the customer. In this way common-sense is violated, and an injustice is done to the men who at the passing of the Act were allowed to continue to sell as previously under a qualified master. There were then but few qualified assistants, and the men who assisted in framing the Bill were employing, and continued to employ, unexamined men as assistants. The exemption in favour of executors was supposed to operate for a limited period (say, twelve months or so), whilst they were winding up an estate, whereas they carry on the business indefinitely if they employ a qualified assistant. The sixteenth section was intended to exempt all medicines bearing the stamp and known as "patent medicines" from the operation of the previous fifteen sections. Now we are told that the exemption applies only to those actually patented (which are very few in number), and this is utterly absurd

when read in the light of the intentions of the Pharmacy Act. The patent-medicine interest, which was then and is now very strong, would have prevented the Act from passing had it been otherwise. That they were subject to the regulations as to labelling provided in Section 17 is a fact which I called the attention of the Pharmaceutical Council to some six or seven years ago, but then there appeared sufficient reasons for not pressing this point. Mr. Ernest Hart has stirred up the whole question, and no doubt believes that he is serving both the medical profession and the public by straining the law against patent medicines. I am no advocate of these things, but it seems to me he should first endeavour to dissuade medical men from prescribing them. If patent medicines containing a small quantity of a scheduled poison are to be labelled "poison," so must the simple cough-mixture which the chemist puts up himself, and the value of the word "poison" is almost lost on the public. Disregard is also shown to the reply of the Privy Council to the Pharmaceutical Society on this question:—"My Lords having given their best consideration to the subject, are of opinion that the 'preparation' of a poison in the Pharmacy Act (1868) means a compound which, like the poison of which it is a preparation, is in itself deadly or dangerous, and that it does not mean a compound which in itself is perfectly harmless, although into its composition may enter a poison or the preparation of a poison which, taken alone, would be deadly or dangerous." It will be seen that to-day we have very little of the Act as passed in 1868. The book about to be published by THE CHEMIST AND DRUGGIST* will, no doubt, be valuable on questions of Pharmacy Law, as is the one from the same source on the laws affecting patent medicines, but whether it will be able to reconcile the changes which have been made without new powers from Parliament remains to be seen.

With reference to the patent-medicine law I have little to say. It was, no doubt, originally intended as a tax on secret medicines recommended for the cure or relief of disease, but it has been given a wider scope, and is often made to apply where no secret is claimed. The exemption from it of "all compositions in a liquid or solid state to be used for the purpose of compounding or making any artificial mineral waters" has, since the case of *The Attorney-General v. Lamplough*, been supposed to cover all granular preparations such as cit. caffeine, antipyrin, &c., but a recent decision of the Somerset House authorities does not allow the exemption to apply where the effervescent compound is made the vehicle of drugs such as those quoted above.

DISCUSSION.

The CHAIRMAN agreed with Dr. Symes that medicines containing poisons in small quantities should not be labelled with the word "poison."

Mr. A. C. ABRAHAM agreed with Dr. Symes in respect to the question of the seller, and thought that the decision in the *Wheeldon* case was ridiculous, as a man can only sell what belongs to him. The *Mackness* case, as other technical cases, had not been properly understood, and was decided under a misconception, as it is incorrect that the purposes of the Act had been served by the assistant being qualified. There was no provision whatever against unqualified persons being employed in Co-operative Stores. He quite coincided with Dr. Symes as to the labelling, as it was a source of danger that strong poisons and weak preparations should be alike labelled "Poison," as it would have a tendency to reduce the value of the word. As to the medicine-stamp law he would never expect that effervescent antipyrin when recommended for headache would be exempt from medicine-duty, and he saw a distinct difference between that and the ordinary effervescent preparations.

Mr. J. SMITH was somewhat surprised at the line taken by Dr. Symes and Mr. Abraham on the question of labelling

poisons, and thought they were helping the cause of their opponents. Recent action taken with regard to the restriction of the sale of patent medicines containing poisons to chemists showed that it was to their interests to secure this as much as possible. The selling of poisons was the foundation of the business of pharmacy, and encroachments on that branch should be fought against. He would have all stamped medicines, where the presence of a scheduled poison can be proved, labelled "Poison," and their sale restricted to chemists. With respect to the stamping of medicines, he thought it would be difficult to have liability to duty more clearly defined in any Act of Parliament, and no doubt the extra vigilance shown by this and other departments of the Revenue was due to the desire of Chancellor of the Exchequer to raise more funds without imposing fresh taxes.

Dr. SYMES, in reply, said the law must be accepted as it stands, but he doubted if an old law should be twisted to suit modern ideas. He distinctly objected to weak poisons being labelled "Poison," while strong preparations of drugs that are not in the schedule escape the caution-label. Poisoning is as frequent as ever, and the Society has not done much to protect the public from that danger.

GLASGOW PHARMACEUTICAL ASSOCIATION.

THE fortnightly meeting of this Association was held on October 27. Mr. W. L. Currie presided over a large and representative meeting of masters and assistants. Mr. Shennan was appointed librarian *vice* Mr. McKellar, who was unable to accept the office.

The consideration of the constitution of the Society was proceeded with. The following, amongst other regulations, were adopted:—"The objects of the Association shall be to promote the educational and trade interests of pharmacy, and to cultivate friendly intercourse among the members." "The Association shall consist of employers, assistants, and apprentices connected with pharmacy, and all persons interested in the advancement of pharmaceutical and chemical science; employers paying 5s., assistants 2s. 6d., and apprentices 1s. annually."

A vote took place over the following clause:—"In discussing matters relating to pharmaceutical legislation, only members who are registered under the Pharmacy Act shall have power to vote."

Mr. CARTWRIGHT, assistant, objected to this clause. In his opinion, assistants preparing for qualification were entitled to have a voice regarding matters of legislation likely to affect them after qualification.

Mr. LAING: Yes, a voice, but not a vote.

After some discussion, Mr. LAING said in drawing up this rule the Council had no idea of taking advantage of unqualified men. Their aim was to make the Association's decisions on matters of legislation authoritative, and that could only be done by giving a vote to those who had a real interest in the trade. At the same time, the qualified men would look after the interests of the unqualified, but their primary endeavour should be to get all the members of the trade qualified.

Mr. CARTWRIGHT said that since it was known that this clause was to be inserted in the constitution, it had given rise to a great deal of disagreeable feeling among unqualified men. They thought they were in fairness entitled to have a voice and a vote regarding the laws which were to govern them.

Mr. MOIR stated that this by-law was being put in for this reason—that when Mr. Carteighe was in Glasgow addressing the chemists and druggists in the city on the scope of his Bill, the meeting was swamped by unqualified men, and others outside the drug-trade altogether, whose combined vote gave to the rest of the pharmacists of the country a very erroneous impression of what the registered men in Glasgow thought.

Mr. DAVIDSON, who was introduced by the chairman as one of the originators of the old Pharmaceutical Association in Glasgow, said that he was at first inclined to take the assistants' view of the matter, but after thinking it over he had come to the conclusion that only qualified chemists and druggists should be allowed to vote.

The PRESIDENT said he was present at Mr. Carteighe's meeting, and could say from personal knowledge that the

* Since Dr. Symes's paper was read he has had our new book, and writes as follows concerning it:—"No man can afford to carry on a business without a knowledge of the laws which immediately affect him in so doing. The volume just added to the useful series of CHEMIST AND DRUGGIST Manuals, 'The Pharmacy and Poison Laws,' presents, in a historic and concise form, a digest of the laws as they were and as they are after various legal decisions. The student will be instructed, the busy man enlightened, and he who believes he knows all the laws by heart will be much interested by a perusal of this book."

bulk of those present were unqualified men who went to the meeting for the express purpose of voting against Mr. Carteighe's Bill. There was a considerable amount of time and money required in order to qualify, and when matters affecting pharmaceutical legislation were brought before them, he failed to see where an unqualified assistant had much to say on the matter.

On a division, fourteen voted for the clause remaining as it stood, and five for the amendment. Several members, including a number of qualified assistants, declined to vote.

The other clauses were passed without discussion.

It was agreed that trade matters be discussed at every alternate meeting.

Before concluding the proceedings, the PRESIDENT remarked that, as a result of THE CHEMIST AND DRUGGIST'S report of the last meeting of the Association, the Secretary had received a communication from Norwich asking for particulars as to the proposed lines upon which the Association was to proceed, in view of a new Society that was being established in that town.

French Pharmaceutical News.

(From our Paris Correspondent.)

A COLONIAL MUSEUM is being organised at Marseilles, under the superintendence of M. Heckel, professor at the Faculty of Sciences, supported by the Under-Secretary of State for the Colonies. The museum is to comprise a laboratory, library, and large showroom of more than 500 square yards, entirely fitted with showcases. Everything that is produced in the French colonies will be shown, as well as samples of home-manufactured goods sent to the dependencies.

ÉCOLE DE PHARMACIE PRIZES.—A list of prizes to be offered for competition by the Paris Superior School of Pharmacy during the coming year has just been issued. They are divided under three heads:—1. School prizes. 2. Prizes for practical work. 3. Foundation prizes. There are twenty-one awards in all, and the subjects for competition are very varied, comprising pharmacy, chemistry, physics, botany, zoology, mineralogy, &c. The most important is the Gobley biennial prize of 2,000*fr.* This is given every two years to the author of the best manuscript or printed work on a subject connected with pharmacological science. The school of Pharmacy proposes a subject, but competitors are at liberty to choose one of their own. Qualified French pharmacists and assistants are admitted to the competition. The subject suggested by the school for the coming year is, "Alkaloids of Microbic Origin."

AN ARSENIC TRAGEDY.—A mysterious and dramatic affair is now being tried at the Laval Assizes. About a year ago, a young veterinary surgeon named Trehet, who had just left the Alfort School, settled in a little town of the Mayenne, called Gorron, and boarded with a family named Tabur. The young man soon fell in love with the daughter, an exceedingly beautiful girl of 17, but the parents declined to let them marry. Soon, however, Mlle. Tabur's condition became interesting, but the father still persisted in his refusal. The poor girl was bitterly grieved by this attitude, and resolved to poison herself if, at the time of accouchement, he had not her parent's consent to her marriage. It was finally given, but too late, for the girl-mother died an hour after, poisoned by arsenic. Now a very serious complication arises. M. Trehet and Mme. Tabur stand together charged with poisoning the latter's daughter. Jealousy on the mother's part is stated by the prosecution to have driven her to persuade the veterinary surgeon to commit the crime.

PARIS SOCIETY OF PHARMACY.

THIS Society held its usual monthly meeting on Wednesday, November 2. M. Portes presided over a goodly gathering of members, supported by M. Bürker. M. Bourquelot continued his remarks on the

MUSHROOM SPECIES.

His examination, microscopical and otherwise, of various species, as well as the cultivation of different kinds of fungi, produced by damp, had led him to the conclusion that trehalose appears when the spores form in them. M. Grimbert inquired if mannite existed in young mushrooms. M. Bourquelot replied in a qualified affirmative, referring to Fischer's discovery of two varieties of mannite, and of the manner in which he distinguished them. According to Kobert the deadly amanitas owe their poisonous properties to a toxalbumin.

M. Léger made some remarks on a

REACTION OF COCAINE

depending upon the separation of the benzoyl group. He had tried the same on other bodies, such as beta naphthol, aconitine, benzoline, morphine, &c., and found the odour produced to be always the same in the end, though at first the smell might differ. Some of the bodies formed a yellowish liquid and some a white, but these were only details; the smell, after a certain time, was always alike.

After some remarks by M. Julliard on a recent note in the *Journal de Pharmacie et de Chimie* on mercury salts, M. Portes commented upon

A SAMPLE OF CHAMPAGNE

which had been attacked by what is known as the "maladie de la graisse." He had been requested to remove this defect, and had experimented on the wine with milk, &c., but without producing any permanent improvement. He then remembered Gaillon's studies on the action of bismuth salts in such cases. The fatty globules from which the disease derives its name, he found to contain a certain microbe, and by adding subnitrate of bismuth, in the proportion of 250 grammes to a hectolitre of the champagne, the microbe was destroyed. The next question was how to remove the bismuth from the wine. He finally decided on employing tannin, 50 grammes per hectolitre, which gave him the desired results. He calculated that some 35 grammes of the tannin would remain in the wine decanted, after a few days white of egg could be added, if thought necessary.

M. Grimbert asked if tannin alone would have sufficed.

M. Portes said it was not a question of rendering a litre of wine scientifically pure, but of making a large quantity drinkable and saleable. An enormous quantity of tannin would be required if M. Grimbert's suggestion were adopted, which would be expensive, and probably leave the wine tainted after all. M. Portes admitted that a small quantity of bismuth would remain in the wine, but nothing to create danger. As some members seemed to think the process unsatisfactory on this account, M. Portes said, "You must not exaggerate the toxicity of bismuth. In America they use it in diarrhoea cordials. I saw it in an American pharmaceutical work, of which I will translate the name, as I fear my pronunciation of it would raise a smile, seeing there is an Englishman present." THE CHEMIST AND DRUGGIST man, thus made the cynosure of all eyes, modestly bent over his pencilling while M. Portes made the translation referred to.

The meeting closed about 3.30 P.M.

Gazette.

PARTNERSHIPS DISSOLVED.

Callaway, J., and Vernon, T. H., under the style of Callaway & Vernon, High Street, Notting Hill, chemists and druggists.

Williams, S., and Isaac, E., under the style of Williams & Isaac, Pontardulais, Glamorganshire, copperas and chemical manufacturers.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATION.

Hyatt, William Herbert, Harlington, Bedfordshire, chemical and scientific engineer.

ORDER MADE ON APPLICATIONS FOR DISCHARGE.

Norton, Charles Benjamin Spragge, Bristol, chemist—discharge suspended for one month, to take effect from November 7, 1892.

ATTENTION

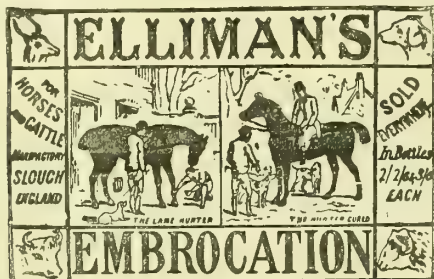
TO PAGE 17 (bottom folio)

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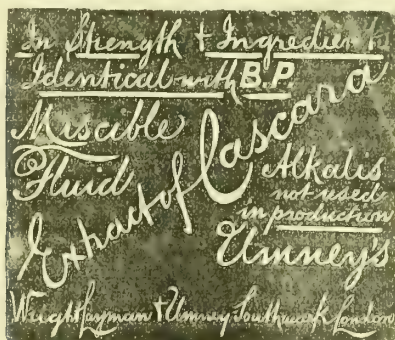


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Editorial Comments.

IMPROVED PAREGORIC.

WHEN a gentleman described as a "divisional secretary of the Pharmaceutical Society" appears in a police court as an expert witness, the magistrate naturally relies on his evidence in a question strictly pharmaceutical. Consequently, when a herbalist was summoned at the North London Police Court, under the Sale of Food and Drugs Act, for selling as paregoric a preparation entirely destitute of opium, and when, as appears from our report of the case, one of these "divisional secretaries" was called as an expert, and stated that there was no mention of paregoric in the Pharmacopoeia, the magistrate had scarcely any choice but to dismiss the summons. He could hardly decide on the bare authority of the divisional secretary that paregoric was essentially a compound containing opium. The expert called for the prosecution threw the case away simply through not reading THE CHEMIST AND DRUGGIST with sufficient care. Paregoric, paregoric elixir, and laudanum were added to the British Pharmacopoeia as synonyms for tinct. camph. co. and tinct. opii respectively in the reprint of that work which appeared in November, 1888, and the fact has often been mentioned by us since. These synonyms were added expressly to meet cases of the kind reported, and it is to be regretted that the very proper prosecution instituted should have failed for want of a correct representation of this circumstance.

Dr. Attfield has written to the papers in reference to the case alluded to, and has pointed out the error which vitiated the case for the prosecution. In his view, paregoric without opium is a nut without a kernel, a "diamond" ring minus the diamond, a "remedy" deprived of its remedy. A druggist, he explains, is the only person legally qualified and allowed to sell certain drugs which, poisonous in larger quantities, are priceless blessings in appropriate doses. The Medical Council foresaw the serious risks to infant life, and the serious harm to adults, that might ensue from the admi-

nistration of ever-increasing doses of "paregoric," not known to be opiumless, and subsequent innocent administration of similar, and perhaps deadly, doses of true paregoric, as properly sold by druggists. This was why they added the word as a synonym in the third reprint. We cannot help remarking in passing, however, that this is not quite a satisfactory method of making alterations which have, and are intended to have, serious legal consequences. It is reasonable to require, perhaps that every chemist and druggist shall provide himself with a copy of every British Pharmacopœia which the Medical Council may see fit to issue. He must do this if he would carry on his business properly. But Dr. Attfield's argument assumes that it is the duty of every vendor of medicines to buy every reprint of the British Pharmacopœia. It may be said that this is not necessary, as THE CHEMIST AND DRUGGIST may be relied upon to give information of anything of importance which the reprints may contain. This is the case; but we are not aware that the Medical Council has ever troubled itself to ascertain whether every chemist and druggist in the United Kingdom subscribes to this or indeed to any trade paper, and certainly that aristocratic body has never taken the pains to officially and spontaneously inform us of the legislative changes which it thinks proper to make.

The concluding paragraph of Professor Attfield's letter to the papers will, it may be hoped, have the effect intended of reverting some buyers of drugs from the huckster to the chemist:—

"The public cannot be expected," he says, "to judge of the genuineness of drugs. *Caveat emptor* does not apply to purchasers of drugs. Yet poor purchasers to save a penny, and the better-to-do to save a shilling, too often assume a power of judgment they do not possess, and pass the door of the duly educated druggist to purchase what they fancy to be cheap drugs elsewhere. Hence paregoric without opium *et hoc genus omne*. Meanwhile, the poor druggist, whom the public have rightly compelled to be technically and expensively educated, is only too frequently within measurable distance of a provisionless old age. They make him, by the Pharmacy Act, educate himself as a professional man, and then pay him as a tradesman or pass him by altogether."

THE IODINE MARKET.

FOR more than three years there has been no alteration in the price of iodine. That is in itself a noteworthy fact in the stormy history of the drug, and it appears still more remarkable when one considers the purely artificial basis of the monopoly which keeps up the quotation. The production of iodine, although already restricted to a small proportion of the legitimate output, is notoriously many times in excess of the requirements, and the price at which the monopolists sell the article bears only a distant relation to the cost of production. The principal consumers of iodine, who have now worked under stable market conditions since August, 1889, and who are doubly bound by conventions, as the prices of the product which they themselves manufacture are also kept uniform by a mutual agreement, would probably be well content if things remained as they are now leaving them a fair working profit on their goods, and securing them against the competition of new-comers.

But if we may place reliance upon a communication which reaches us from an apparently neutral source in South America, the end of the present condition of placid quietude is not far removed. The nitrate combination expires by effusion of time at the end of this year. The older, but commercially less important, pool, which controls the sale and regulates the output of the by-product—iodine—comes

to an end at the same time. The renewal of the nitrate combination our informant considers beyond doubt; but he expresses his belief that the iodine ring cannot much longer be kept together, as the stocks have now accumulated to such an extent that there will shortly be enough to supply the world's requirements for three years. It is not clear whether this statement refers to the whole of the supply under the control of the syndicate, including the notoriously heavy reserves in England, Hamburg, and New York, or only to supplies existing upon the Pacific Coast. Anyway, if we construe the assertion in the sense most favourable to the combination, by taking it for granted that every keg under the control of that corporation, whether in America or in Europe, is meant to be included, the total reserve quantity belonging to the various producers and entrusted for sale to the combination cannot be less than from 550 to 600 tons. The Chilean export statistics for the last eleven years give the shipments of iodine as below:—

Year ..	1881	1882	1883	1884	1885
Lbs. ..	317,000	484,000	421,000	417,000	443,000
Year ..	1886	1887	1888	1889	1890
Lbs. ..	329,000	170,000	342,000	449,000	984,000
					928,000

These figures show that the output of iodine has been increasing enormously since 1889, and it is probable that considerably less than half of the shipments of 1890 and 1891 has gone into consumption. It would not be at all surprising if, by the end of the year, a considerable proportion among the producers had come to the conclusion that it will pay them better to try to dispose of their property at a much reduced price, to be fixed by free competition, than to take the relatively high figure which the pool pays them for the percentage it is able to dispose of, and that a sufficient number of owners will stand off to prevent the renewal of the agreement. It is a significant fact that even during the last three years, when the combination has probably been more powerful than at any previous period, it has not been able to prevent altogether the exports of iodine by outsiders. It is true that these free-lance exports in 1891 amounted to less than 1 per cent. of the total, but their continuation nevertheless shows that a remnant of the producers have all along refused to bow the knee to the Monopoly Baal. It is noticeable, too, that instead of sending the bulk of their iodine to England, as they used to, the combination managers have lately made Hamburg their chief European repository, though possibly this is a simple matter of freight-expediency. The future career of the iodine combination will be watched with interest, even by those who have no direct financial stake in the fluctuations of the article. It is almost a marvel and it speaks volumes for the capacity of the wirepullers, that the organisation should have held together so long, considering the opposing interests and natural difficulties they have had to harmonise. Probably not a little of their success is owing to the fact that the headquarters are at a very safe distance from the main point of production, and that the organisers have been in the habit of dealing as cavalierly with the producers as with the consumers of the drug.

THE BATTLE AGAINST ADULTERATION.

THE annual report of the Local Government Board, just issued, contains the usual imperfect report of proceedings under the Sale of Food and Drugs Act. The compiler of the report seems as enamoured as ever of his precious statistics and percentages, and, for the benefit of the daily journalist, brings out the alarming fact that adulterated samples in

1891 averaged 12.2 per cent. of those purchased for analysis, while in 1890 the proportion was only 11.2 per cent. "This," says the Whitehall sage, "is a slight retrogression from the favourable returns of the three previous years, but shows decided improvement as compared with each of the two quinquennial periods commencing in the year 1877."

We have often shown that the attempt to reduce to statistical form such fragmentary facts as are contained in the reports submitted to the Board is misleading and ridiculous. What basis can there be for comparison of averages when one analyst returns as adulterated samples of lard in which he has found 0.1, 0.3, and 0.4 per cent. of water respectively, or when it appears that the City of London analyst reports three instances of adulteration out of 169 samples, while in Hackney the proportion is returned at 35 in 1,870, and in Clerkenwell 56 in 162? In Bethnal Green fraud seems to prevail to the extent of 15 per cent.; in St. George's, Hanover Square, it figures at 21 per cent.; and in Westminster at 0 per cent. What is wanted in these reports is a carefully and exactly compiled table showing exactly what the analyst says he found, how often he was confirmed, and how often he was proved to be wrong, and invariably the action taken on his reports and the results.

The compiler picks out a few scraps of intelligent comment such as that we have extracted about adulterated lard. Respecting drugs, he says—

We are glad to see that the number of samples of drugs examined, though still less than a quarter of that of the spirits, has somewhat increased of late years. Considering that the difference between pure and adulterated medicine may conceivably be a matter of life or death for the patient, it is desirable that still more should be done in this direction. We have received information of thirty-six cases in which proceedings were taken. Twenty-three penalties were enforced, amounting to 11*l.* 14*s.*

According to the analyst's reports 740 samples of drugs were taken, and 121 of these were found to be adulterated. Information regarding thirty-six prosecutions has been sent to the Board; but there are no means of ascertaining whether these are all, or half, or a quarter of the cases in which proceedings were instituted. This is another specimen of the worthlessness of the official statistics.

There are now 235 public analysts, and the total number of analyses made under the Act during 1891 was 29,028. There is a steady increase in the work done under the Act. Over 12,000 of the samples analysed were of milk; butter and spirits figuring next in order with 3,558 and 3,139 respectively. As far as the Board can judge from the returns, London milk still compares unfavourably with that supplied in the country. Special attention is directed to the sale of a condensed skimmed milk, the use of which for feeding children is calculated to ensure semi-starvation.

The right to sell chicory for coffee seems to be pertinaciously clung to. The Salford analyst mentions two cases in which the chicory constituted nineteen-twentieths of the whole, and suggests that the presence of the trace of the genuine article must have been due to the accidental use of a coffee-scoop to weigh out the chicory, and he adds that it is no wonder that there should be a decline in the consumption of coffee when adulteration is carried on to this extent.

Salicylic acid has been found in lager beer, tincture of guaiacum (!) in spirits, and to a large extent cotton-seed oil has been mixed with olive oil. One analyst found a so-called olive oil consisted of 3 parts of cotton oil and 1 part of mineral oil. The term "olive oil" is being dropped by grocers, and indefinite titles, such as salad, lucca, and household oils, with adjectives generally in the superlative, are being substituted, in order to evade the provisions of the Act.

COMMENTARY.

FOREIGN FATS IN WOOL-FAT.—It is generally considered that cholesterin fats are unsaponifiable, and that is true to the extent that aqueous solutions of alkalis have no effect upon them. But Messrs. Helbing and Passmore find that alcoholic solutions of alkalis do saponify cholesterin fats and they have just completed an investigation which has been made for the purpose of applying their observation to the analysis of wool-fats. Taking anhydrous lanoline as their basis, they find that 100 grammes of it require 8.4 grammes of KHO in boiling alcoholic solution; the same quantity of prepared lard requires 19.8 grammes of KHO; cocoa-nut fat 26.16 grammes, and olive oil 18.25 grammes of the alkali. Petroleum jellies are, of course, unsaponifiable. It is obvious, therefore, that it is possible to tell from the saponification equivalent of a wool-fat whether it is free from foreign fats or not. They have applied this and many other tests to lanoline and other commercial wool-fats, and the results of their investigation will be embodied in the next number of Mr. Helbing's *Record*.

A SENSITIVE PUBLIC.—The knowledge possessed by London correspondents of provincial papers is something more than marvellous. The correspondent of the Cardiff *Western Mail* writing in that paper on October 27, referring to the Charing Cross suicide which had been reported less than a week previously, declared that that event had had one curious result. "It has seriously affected the sale of chlorodyne. So sensitive is the public feeling on these matters that directly it became known the lady had poisoned herself with chlorodyne the demand for that commodity fell off. There is no doubt of the fact. I have it on the authority of a house in the City through which the sales are conducted that the demand has decreased considerably. It will, no doubt, revive later on when the memory of the pitiful tragedy is gone by. But for the present chlorodyne is a drug in the market in more senses than one." It is possible that the house in the City might have been able to appreciate a sudden public demand in three or four days, but how the public alarm could have manifested itself through retailers to the City house in that space of time, it is not easy to estimate.

ABUSE OF SCIENTIFIC TITLES.—Dr. W. A. Tilden writes a sensible but rather unnecessarily angry letter to the *Times* in respect of those people who seem to take such an inordinate pride in the display of a quantity of letters after their names. He expressly exempts from his criticism the use of letters indicating recognised university and medical qualifications, and he has no objection to those like M.I.C.E., M.I.M.F., F.B.I.B.A., or F.I.C., which are definite guarantees of professional efficiency. F.R.S., too, he points out is a real distinction which is justly prized. "But what," he asks, "the public to understand regarding such alliterations F.B.S., F.C.S., F.E.S., F.G.S., F.L.S., F.S.S., F.Z.S., and F.S.A., M.R.I., F.R.A.S., F.R.M.S., F.R.G.S., F.R.S.E., &c. With the exception of one or two of the societies represented here, admission is to be gained by almost any one who willing to pay the customary contribution to the funds of the society, and who can get two or more members of the society to testify to his fitness for admission, which generally means respectability and a profession of interest in the subject, the cultivation of which is the object of the society. The mischief arises when membership of such body is represented by witnesses in courts of law, or by candidates for public appointments as evidence of professional trustworthiness. If the public knew all about the societies no harm would arise; but judges, and barristers, and coun-

councillors, and town councillors cannot be expected to have this knowledge." Dr. Tilden says he brings this subject forward now because an attempt is to be made to get a Bill before Parliament for the purpose of securing to the respective societies the copyright of these letters of membership, and to prevent piracy of them. The effect of such a measure, he suggests, will be to exclude from these societies a number of amateurs, and he questions whether that exclusion would operate beneficially upon the work of the societies themselves. He recommends every member of these societies who respects himself to abandon the use of these unmeaning letters altogether. But he perceives very little prospect of such a general reform while an institute, having for its President the Heir Apparent to the Throne, condescends to bait its advertisements for subscribers with the offer of more letters. Among the benefits offered by the Imperial Institute is that every Fellow shall be entitled to attach to his name the distinctive designation of "F.I.Inst." It is to be hoped that Dr. Tilden's letter may make a few people a little ashamed of themselves, but it would do far more harm than good if it should succeed entirely. That spirit of emulation which forces so many people to seek to secure something which shall distinguish them from the crowd, a few letters, a bit of ribbon, or a medal, if not the reversion of a tomb in Westminster Abbey, is the spirit which keeps the world's life fresh and sweet.

MERCURIC CHLORIDE IN SPIRITUOUS SOLUTIONS.*

AS dispenser to the Royal Infirmary Mr. Johnson has to prepare large quantities of dilute aqueous solutions of mercuric chloride, and he sought a method of obtaining such solutions with the greatest expedition and accuracy. To weigh out and triturate the mercuric chloride becomes tedious when large quantities of such surgical solutions as 1 in 500, 1 in 1,000, 1 in 2,000, &c., are constantly in demand, and most dispensers keep, it is believed, stronger solutions on hand from which to prepare the more dilute.

The chloride is soluble enough in many media, such as glycerine, ether, absolute alcohol, rectified and methylated spirits, and sufficiently strong solutions are easily prepared from any of the above solvents for the purpose in hand. Such a solution in glycerine, of the strength recommended in Martindale—viz., HgCl_2 2 parts, glycerine by weight 3 parts—is convenient, since 1 fluid drachm mixed with 3 parts of water equals a solution 1 in 1,000; but this solution, though apparently stable, is viscid and difficult to handle with accuracy and speed. A solution in ether, though apparently fairly stable, is liable to evaporate, thereby becoming of uncertain strength. Alcohol, either absolute alcohol, rectified, or methylated spirit (280 grains in 4 fluid oz., of which 1 fluid drachm mixed with 1 pint of water equals 1 in 1,000) is the most convenient solvent and is used, it is believed, widely in hospitals and surgeries. Unfortunately, however, the spirituous solution is unstable. A reduction of the chloride takes place even while the solution is being effected, and, though never of large amount—often, indeed, very insignificant—is sufficient to lead to inaccuracy. A large number of experiments with solutions of the strength named went to prove that the reduction of the mercuric chloride was influenced by several causes, such as (1) strength of the spirit employed, (2) kind and quality of the spirit, (3) exposure of the solution to light, (4) method of preparation, (5) length of time the solution was kept, &c. The amount of reduction was always indefinite and most uncertain.

The precipitate varied in appearance from flocculent thick masses to a finely crystalline and amorphous powder. In

three similar solutions prepared at the same time and in the same manner, and allowed to stand for the same time (ten days), the reduction varied from 31 gramme to 18 gramme. The precipitate consisted for the most part of mercurous chloride, though organic compounds of mercurous also were present. The reduction was generally less in absolute alcohol than in rectified or methylated spirit. In the latter solvent the deposit was often coloured and flocculent, and of considerable depth. Light greatly influenced the solution. Exposed to direct sunlight, the deposit formed comparatively rapidly and in considerable quantity. It was found that the less the light, the less the deposit. Solutions kept altogether in the dark were often almost free from reduction. Agitation and large bulk of the solution appeared to favour the decomposition, and the deposit was usually greater when the solution was prepared by trituration of the salt in the solvent than when the solution was effected by warmth. It was found that the presence of ammonium and other inorganic chlorides was of no use in preventing the reduction, and that the addition of such compounds as chloroform, chloral, &c., to the extent of 1 per cent. only aided it.

After many fruitless experiments, free chlorine was passed through the solution for a short space of time with excellent results, with absolute alcohol, S.V.R., S.V.M., or S.V.R. with 1 per cent. CHCl_3 ; though the deposit varied in every case, complete re-solution of the deposit occurred at once when the chlorine was passed through. Each of the solutions had been prepared in a similar manner, and at the same time, and were of the strength already indicated.

The solution through which chlorine has been passed for five or ten minutes, or until very faintly coloured, remains perfectly bright and stable. Under ordinary conditions of light and temperature, the solution keeps clear and unaltered for any length of time; but if exposed to direct sunlight, a very slight reduction occurs after some time. The chlorine is generated in abundance from 2 or 3 drachms of chlorinated lime, to which dilute HCl is added, and a simple piece of apparatus may be readily improvised and kept on hand for the purpose. Spirit so chlorinated keeps indefinitely, and is of the greatest utility. A question, however, arose as to whether the minute amount of free chlorine present would in any way interfere with the germicidal powers of the aqueous solution made therefrom, and though at first sight it appeared to be unlikely that any such result would follow, the opinion of Sir Joseph Lister was asked. His reply is of particular interest, as it bears upon his present use of antiseptics. He wrote thus:—

Glenelg, N.B., Sept. 24, 1892.

MY DEAR SIR,—Your letter has been forwarded to me to this place. I have no hesitation in answering your question to the effect that the presence of the minute quantity of free chlorine cannot possibly interfere with the antiseptic action of the bichloride. If it had any effect at all, it would be to enhance the antiseptic efficacy. It might possibly make the solution act slightly more upon the steel of the instruments. I may remark that, as the result of recent investigations, I have for some months past abandoned the use of the bichloride in favour of our old friend carbolic acid. It has been shown that a 1-to-40 solution of carbolic acid is really superior in actual germicidal power for such organisms as cause inconvenience in surgery, as compared with any solution of bichloride that could be used for surgical purposes. I may add that very pure carbolic acid, soluble in less than 20 parts of water, may now be obtained at 1s. per lb. wholesale from any thoroughly trustworthy manufacturers, such as Morson & Co., of Southampton Row, London.

Believe me, sincerely yours,

JOSEPH LISTER.

P.S.—For purifying instruments and sponges, and the skin of the part to be operated upon, a 1-to-20 solution of carbolic acid is, of course, used.

Although Sir Joseph Lister has abandoned the use of bichloride of mercury in favour of carbolic acid, the former is still largely used, though we may expect many to follow the example of the great surgeon in giving it up. There appears to be some uncertainty as to the effect of heat upon aqueous solutions of mercuric chloride. In "Martindale" there is a statement, concluding with a note of interrogation, that "heat reduces the salt to calomel." Mr. Rushton Parker, one of the honorary surgeons to the Royal Infirmary, was anxious to be assured on this point, and as the result of many experiments, performed quantitatively, Mr. Johnson could not detect the slightest reduction of the chloride in such solutions as 1 in 500, 1 in 1,000, 1 in 2,000, &c., even after they had been submitted to prolonged boiling.

* Abstract of paper read by Mr. J. R. Johnson, pharmaceutical chemist and teacher of practical pharmacy in the Royal Infirmary, Liverpool, at the meeting of the Liverpool Pharmaceutical Students' Society, October 27, 1892.

Legal Reports.

WEIGHING PAPER WITH SUGAR.

An important grocery case came before the Queen's Bench Division of the High Court, Mr. Justice Mathew and Mr. Justice Gainsford Bruce sitting as a Divisional Court, on October 27.

The Wolverhampton Stipendiary Magistrate had imposed a penalty of 5s. on a grocer's assistant, named Harris, who had been prosecuted by an inspector of weights and measures, and who, supported by the local Grocers' Association, now appealed. The prosecution was taken under section 26 of the Weights and Measures Act of 1878. The words of the section are as follows:—

Where any fraud is wilfully committed in the using of any weight, measure, scale, balance, steelyard, or weighing machine, the person committing such fraud, and every person party to the fraud, shall be liable to a fine not exceeding 5*l.*, or, in the case of a second offence, 10*l.*, and the weight, measure, scale, balance, or steelyard shall be liable to be forfeited.

Daniel Harris was an assistant to Mr. Snape, a grocer, and the inspector's assistant purchased from him a number of articles, including tea, lump sugar, and raisins. Each of the articles purchased was weighed by the defendant at the time, or had been previously weighed by him, and in each instance the paper in which the articles were wrapped was weighed by the defendant as part of the article purchased. The average weight of the paper was 10 drachms. The scales and weights were in themselves correct; but the placing of the paper in the goods' scale had the effect of rendering them 10 drachms in the pound against the purchaser. It was also admitted that the purchaser took no paper or vessel in which the article purchased could be taken away, and that the purchaser was aware that it was the practice of grocers to weigh the paper with the article purchased, and no protest was on this occasion made against the practice. It was contended, on behalf of the defendant, that as the practice of weighing the paper with the article purchased was for the mutual convenience of the purchaser and the vendor, and the purchaser was aware of the practice and did not protest, no fraud was wilfully committed by the vendor, and no offence committed under the section. The Magistrate was of opinion that the placing of the paper on the scale and weighing it with the article purchased was a fraud upon the purchaser, and that being intentionally committed in accordance with the practice it was wilfully committed within the meaning of the Act. He therefore convicted the defendant, and fined him 5s. and costs. The question for the opinion of the Court was whether the said decision was correct in law. The Magistrate said the point was one which gave him considerable difficulty. He willingly stated a case for the opinion of the superior court.

Mr. Justice Mathew said it was perfectly plain that this conviction must be quashed. There was no fraud here. To sell groceries weighed in paper was a practice universally understood all over the kingdom, and was a practice well known to buyers as well as to sellers. The purchaser here saw the goods weighed in the paper, and did not object, being quite content to follow the practice. How was it possible to say there was any fraud in such a case?

Mr. Justice Gainsford Bruce concurred.

Conviction quashed accordingly.

ACTION UNDER THE WEIGHTS AND MEASURES ACT.

AT Newark, on October 26, Robert Milward, chemist, Colliingham, was summoned for having in his possession certain false weights on September 20. Mr. Smith appeared for the defendant, who pleaded not guilty. Inspector Garforth said he visited defendant's shop on September 20, and found his weights had not been adjusted or stamped for two years. He examined eight weights and found them all light, varying from $1\frac{1}{4}$ to $\frac{1}{4}$ drachm each. By Mr. Smith: Defendant had not taken his weights on three occasions and been unable to get them adjusted. When he went to Milward's shop he did not lose his temper because the latter was not quite civil. He did first attest the weights and ordered defendant to get them adjusted, and then made a second test and confiscated

the weights. His action was not due to want of civility on the part of plaintiff. The Bench imposed a penalty of 5s., and remarked that they did not altogether approve of the action of the inspector on the occasion of his visit to defendant's shop.

PLACING GOODS.

In the Westminster County Court, on Tuesday, the Zola Company, who are patentees of an invention for ladies, sought to recover 12*l.* for goods supplied to the order of the defendant, Mr. Fearons, in business at Market Street, Durham.

The plaintiffs' traveller said that in July last he called upon the defendant at his place of business with a view to getting an order. The defendant himself was busy at the time, and referred witness to a gentleman at the back of the shop, who he said would attend to him. He (witness) explained what the goods were for, and how much they would be in demand so soon as they became known to the public, and the result was that he received an order for several dozen, amounting to 12*l.* The order was not given by the defendant, but by the gentleman to whom he (witness) had been referred. A few days later the parcel was despatched from London, but after keeping it for some days the defendant returned it to the plaintiff firm, together with a letter to the effect that he never gave the order nor did he authorise anyone to do so on his behalf, and had therefore returned the goods.

Mr. Batty, a member of the plaintiff firm, said there was a large demand for the article, which was sold by all the leading chemists. The rule of the firm was that no traveller was allowed to take conditional orders or to send goods on sale or return.

For the defence, Mr. Fearons said he had been in business for many years, but had never heard of these goods until they were brought before his notice by the plaintiffs' traveller. He totally denied that he referred the traveller to one of his employes, or that any of his servants had authority to give such an order as the one alleged. After he inspected the goods he told the traveller that if he liked to send in some samples they should be submitted to his manager, and if approved of an order for a larger quantity would be given. A few days later he was surprised to receive a package from the plaintiff, together with an invoice for 12*l.* He at once returned the goods.

His Honour (Judge Bailey) said he entirely believed the defendant, and gave judgment in his favour, with costs.

ANOTHER MILK-OF-SULPHUR CASE.

AT the Brentford Petty Sessions, on October 22, Mr. A. W. Berry, 31 Parade, Hanwell, chemist, was summoned for having sold to Inspector Tyler precipitated sulphur which was adulterated. Inspector Tyler proved taking the sample, and produced the certificate of the analyst, which showed that it contained 38 per cent. of sulphate of lime. The defendant said the purity was guaranteed by the London wholesale house with whom he was in communication. Mr. T. A. Woodbridge, on behalf of the latter, said it was not true. They sold it as a compound, such as the analyst showed it to be. The defendant denied all knowledge of such a compound. He had no warranty. He was ordered to pay the costs.

ALLEGED ROBBERY BY A CHEMIST'S ASSISTANT.

AT Malling (Kent) Police Court, on Monday, before the Hon. E. V. Bligh, D. Macdonald, who is also known under several aliases, was charged on a warrant with stealing 5*l.* in money, and goods valued at 3*l.* 14s., the property of his employer, Mr. Henry C. H. Oliver, chemist and druggist West Malling, on October 22.

Superintendent Lane informed the Magistrate that he proposed that day to produce sufficient evidence to justify remand, to enable him to make inquiries as to the prisoner's antecedents.

The prosecutor deposed that the accused entered his service as an indoor assistant on October 18, and that ear on the following Saturday morning he was missed from the house. The cash-box was subsequently found broken open and the contents, in addition to a quantity of stock, stole

In reply to the Bench, prosecutor stated that the prisoner, at the time he engaged him, was staying at a lodging-house at Woolwich. He had since ascertained that the reference which prisoner gave was a fictitious one.

Superintendent Lane deposed to proceeding, in company with prosecutor, to Brighton, where he found the prisoner who had some of the stolen property in his possession passing under the name of Lewis. Since his removal to the Malling Police Station, the prisoner (added the Superintendent) had made a very important confession, and a number of chemists, residing in different parts of the country, were being communicated with respecting this. The prisoner was then remanded for a week.

"IMPROVED PAREGORIC."

SOME time since a poor woman purchased a compound under the above title for the relief of a cold from which her child was suffering. She bought 2 oz., and paid 2d. for each ounce. Her child did not progress under the "improved" paregoric; so she went to another shop and got a similar quantity of paregoric. After giving the child half this stuff the child died. There was an inquest, and then came the question as to the compositions of the respective paregorics. The sequel was shown in the North London Police Court on Friday afternoon, when a herbalist, Mr. Arthur Bedell, of 3 Chatsworth Road, Clapton Park, was summoned for selling, to the prejudice of the purchaser, 2 oz. of paregoric elixir which was devoid of opium, and was not therefore of the nature, substance, and quality demanded by the purchaser, and contrary to the statute in that case made and provided.

Inspector Panter, officer under the Sale of Food and Drugs Act, in the employ of the Hackney District Board of Works, prosecuted, and Mr. Pattinson defended.

An assistant to the inspector stated that on September 22 he went to the defendant's shop and asked for 2 oz. of paregoric. He handed a bottle and the stuff was put in, and when the inspector stepped up, took the bottle from his hand, and told the defendant it had been purchased for the purposes of analysis. Then the defendant produced a label and wanted to stick it on the bottle, but the inspector would not part with the bottle—he took the label. The label read as follows:—"Improved paregoric, warranted to contain no opium or other poisonous drug, and may therefore be given with the greatest safety to the youngest child." He paid 8d. for it.

Inspector Panter corroborated, and added that the defendant, after the purchase had been made, said, "I beg pardon; there is a label which I ought to have put upon the bottle." He wetted the label, but witness took it and would not part with the bottle. The witness here produced the certificate of the analyst at Somerset House, which stated that the sample contained no opium.

Mr. Pattinson: We admit that.

The Inspector (cross-examined by Mr. Pattinson) said he had an idea of what paregoric was; but he had an expert witness in court who would tell exactly what it was. The legal secretary of the Pharmaceutical Society was in court, and had seen the British Pharmacopœia of 1885, and also the editions of 1889, and did not see "paregoric" mentioned either. It was a little after 1 P.M. when the purchase was made. The assistant asked for "paregoric elixir." The elixir was given some time after defendant was told that the stuff was to be analysed. Was aware that the defendant was a herbalist and not a chemist, and also that, as such, he was not entitled to sell poisons.

Mr. Pattinson: And do you know that in this British Pharmacopœia—

Mr. Bros (magistrate): You had better call the witness in the Pharmaceutical Society to talk about that.

Inspector Panter, in further reply to Mr. Pattinson, said told the defendant the purchase was made for the purposes of public analysis, and at the same time handed him a card.

Mr. Robert Owen Fitch, chemist and druggist, divisional secretary of the Pharmaceutical Society (South Hackney branch), produced a copy of the British Pharmacopœia.

Mr. Bros: Is there anything in that book about paregoric elixir?

The Witness: No; not in this last edition.

Mr. Bros: What is paregoric?

The Witness: Compound tincture of camphor.

Mr. Bros: And you say paregoric, as paregoric, is not there at all?

The Witness: No.

Mr. Bros: What is the compound known as "paregoric"?

The Witness: It is a composition of opium, benzoic acid, camphor, aniseed, and proof spirit of wine.

Mr. Bros: Is there any other name by which this paregoric elixir is known?

The Witness: Yes.

Mr. Pattinson: If he did not know of what tincture of camphor is composed, he would be at liberty to sell any substance which he might call "paregoric" if it was not in the British Pharmacopœia and contained no poison?

Mr. Fitch: He is not supposed to know our trade at all.

Mr. Bros: There is no substance called "paregoric"?

Mr. Fitch: No.

Mr. Bros: What is the essence of paregoric?

Mr. Fitch: Opium. And the danger is this—that if the people buy this stuff for their children, and give them large doses in the hope of doing them good, and then afterwards give them equally large doses of the real paregoric got from properly-qualified men, the result is fatal.

Mr. Bros: This is evidently a safe stuff, so far as it goes. (Laughter)

Mr. Pattinson, in addressing the magistrate on behalf of the defendant, said he was summoned for selling paregoric which did not contain opium. There was evidently no standard for paregoric, because it did not appear in the British Pharmacopœia. Mr. Fitch had said he could not show the word "paregoric" in the British Pharmacopœia at all. Some person goes into a shop and buys an article and pays for it, and another person steps up and says it is taken for the purposes of public analysis—

Mr. Bros: There is nothing in that. The only thing is, did the person get something he did not ask for? These officers have to employ subterfuges in order to carry on their business.

Mr. Pattinson went on to say that the circumstances of the case were very simple. The purchase was made on the afternoon of Thursday, September 22, which was the day for early closing. Mr. Bedell was engaged in correspondence on the one hand, and was told that his dinner was ready on the other. Whether it was the seductive character of the dinner or the fact that he wanted to get through his correspondence that made him serve the customer so hurriedly he could not say, but certain it was he inadvertently omitted to put on the label which had just been read. The inspector asked for a substance called "paregoric," and was served, and would not allow the defendant to put on the label, "Improved paregoric." The stuff was taken away and analysed, and no opium found; but his Worship knew that a herbalist dare not sell a substance with poison in it. If he had sold such stuff he would have been very soon before his Worship for selling a poison without the usual chemist's licence. There was no intention to defraud, because the defendant was selling what he contended was an improved paregoric.

Mr. Bedell was sworn, and said the reason he forgot the label at first was that he was busy at the time. His wife was away, his correspondence in arrears, his dinner ready. He had a copy of the British Pharmacopœia, and relied upon that for safety in preparing his improved paregoric.

Mr. Bros said there was no doubt that if the defendant had sold the stuff with the label upon the bottle the purchaser would have got what defendant called "paregoric," and been able to decide whether he would have it or no. There appeared to be a doubt as to whether opium was an improvement at all. (Laughter.) However, this summons would be dismissed.

Mr. Pattinson: Will you allow costs?

Mr. Bros: No. I would if he had put the label on promptly.

AN APPEAL.—We learn that it is the intention of the Hackney District Board of Works to appeal in the case, and that Mr. Bros, the magistrate, is not disinclined to grant it, since it has been brought to his notice that "paregoric" is actually in the British Pharmacopœia, though not in the edition brought into court.

THE APOTHECARIES' ACT—AN APPEAL CASE.

IN the Queen's Bench Division of the High Court of Justice, on Wednesday, before Mr. Baron Pollock and Mr. Justice Hawkins, Mr. Houghton appeared in support of an appeal by the plaintiff in the action of the Society of Apothecaries *v.* Jones, against a judgment of the County Court Judge of Derby. Council said that three actions were brought against the defendant for acting and practising as an apothecary without being duly qualified under sections of the Act of 1815. The County Court Judge gave judgment for plaintiff in one case, but dismissed the other two. The penalty in each case was 20*l.*, and the plaintiffs held that judgment should have been given for them in all three cases, it being conceded that the defendant had acted as an unqualified person within the meaning of the Act. The point for their Lordships' decision was whether the Judge was right in holding that where several patients had been attended to on the same day by an uncertified person it could only be regarded as a comprehensive offence, or whether, as the appellants contended, it constituted a distinct offence in each case. The special object of the Act of 1815 was to prevent the public from being prescribed for or doctored by an unqualified person. The County Court Judge, in giving his decision, said he thought the matter was one which might well come under the consideration of a superior court, thus showing that he did not hold a very strong opinion on the point. The actions against the defendant were instigated at the instance of the Medical Defence Union, who made it their special business to enforce the provisions of the Apothecaries' Act. The Medical Defence Union had no power in itself, but what they did was to call the attention of the Society of Apothecaries to such cases as they thought should be the subject of prosecutions. It must be assumed in favour of this body that they only took into Court cases such as the present, where there was a glaring breach of the provisions of the Act.

Mr. Justice Hawkins: I don't see that that will at all affect the question we have to determine. The point is whether the defendant has committed three separate offences or only one by attending three persons on the same day though on different occasions.

Mr. Houghton said a great many authorities were referred to by the learned judge in giving his judgment, but there was really no authority for treating this as a single offence.

Mr. Justice Hawkins: Suppose an unqualified person, say an assistant to an apothecary, is employed in compounding medicines and making up draughts. If he makes up and disposes of 500 pills to as many customers, is he liable to a penalty of 5*l.* in respect of each pill? (Laughter.) That would mean 2,500*l.* Such a construction of the Act would be reducing it to an absurdity. Would it not be more reasonable to treat the offence as one? You can take another instance. Suppose there was an Act against swearing and the amount of the penalty was made dependent upon the social rank of the offender. Thus, a common man is to pay 1*s.*, another man of higher position 2*s.*, and another 5*s.*, and so on. If a man was to commence swearing early in the morning and did not leave off until night would he be liable to a penalty for every oath he uttered? (Laughter.)

Mr. Houghton: I don't think any man would consider 1*s.* unreasonable for swearing all day. (Laughter.)

Mr. Baron Pollock: The words in the Act are "for every such offence." What is the offence?

Mr. Houghton: My proposition is that each distinct act constitutes an offence in respect of which a penalty can be recovered. If that is not so but little effect can be given to the words of the section, "act or practise."

Mr. Justice Hawkins: There is a good deal of difficulty about this. If a man gives advice to one hundred persons in the course of two hours or so, is he to be made liable for penalties in each case?

Mr. Houghton: I should say that, as a matter of fact, he would make himself liable. If not, the second person who came for advice would have no chance of remedy. There might be no connection between the treatment of the patients, and there would be a separate diagnosis in each case. So far as the three cases in question are concerned, the diagnosis appears to have been simple. The defendant in each case came to the conclusion that his patients were suffering from affections of the liver, and he gave them the same sort of medicine. He gave them some pills, and told

them they could have some more if they wanted them. Supposing only one case had been brought out of the three, the learned Judge must have arrived at the decision that an offence had been committed.

Mr. Baron Pollock: The learned judge seemed to have assumed that the acts done in one day constituted a single offence.

Mr. Houghton: I submit that the day has nothing to do with the matter. If this view of the learned judge were to be taken as correct, very little protection would be afforded by the Act. The defendant carried on a large business and had agencies in various towns. He had issued cards stating that he cured cancers without operation, and that he had made 75 cures of cancer in Nottingham alone. One card read, "All germs of consumption cured even when they are given up." (Laughter.) I do not know whether "they" refers to the germs or to the patients. (Renewed laughter.) As a matter of fact, County Court judges all over the country had imposed more penalties than one in actions brought by the Society of Apothecaries, but I do not think that this fact was made known to the learned judge.

Mr. Justice Hawkins: Does it not come to this, that every case depends upon the peculiar circumstances surrounding it, although there may be some general rule to go by? There is such a thing as continuity. The acts complained of may in some instances be continuous. It strikes me that the judge looked upon this as a continuous act, and treated it as one offence accordingly.

After further argument on points of law their Lordships reserved judgment, Mr. Baron Pollock remarking that the question was one of importance.

RISKS OF ARTISTIC ADVERTISING.

AN action has been tried before Mr. Justice Chitty, in which a German firm, named Schaner, sought for an injunction and damages against Messrs. J. C. & J. Field (Limited) for an alleged infringement of copyright. The defendants in 1887 registered as a trade-mark in England a picture of a half-length figure of a girl with a lighted candle in her left hand, and shielding her face with her right hand. This was adopted from a German oil-painting or photograph thereof, called "Lisette." The plaintiffs are proprietors of the painting, and in January, 1892, they registered themselves as owners of the copyright in this country. In consequence of certain Orders in Council, made under the International Copyrights Act, they could not go back on what had taken place previous to their registration, and the action virtually resolved itself into a claim that Messrs. Field should not issue certain show-cards bearing this design. In support of their allegation that the show-cards infringed their artistic copyright they produced one of these so mounted in an oval frame as to hide all words relating to the defendant's business, and they said this would pass as a reproduction of their copyrighted picture.

Mr. Justice Chitty refused to grant the injunction. The defendants had not attempted to use their trade-mark in any other than a legitimate trade way, and it would be absurd to say that the owners of a trade-mark might use it, but not advertise it.

PROSECUTION UNDER THE PHARMACY ACT—PLEA OF INFANCY.

AT St. Helens County Court, on Wednesday, his Honour Judge Shand heard an action brought by the Council of the Pharmaceutical Society of Great Britain against Agnes Jones, a girl aged 14 years, employed as an apprentice to the drug trade by Messrs. T. & W. Harrison, of Boundary Road, St. Helens, and Eccleston Street, Prescott, to recover 5*l.*, a penalty incurred by the defendant in selling a certain oxalic acid contrary to the provisions of the Pharmacy Act, 1868.

The facts were admitted, but the case was defended on the plea of infancy.

Judgment was given for the plaintiffs, with counsel and witnesses' costs. Notice of appeal was given on the question of infancy.

Bankruptcy Reports.

Re ARTHUR DARNBROUGH, Middlesborough, Chemists' Assistant.

At Middlesborough County Court, on October 24, before his Honour Judge Turner, this debtor appeared in answer to a summons issued against him for amounts alleged to be owing to several creditors. In reply to the representative of a tailor to whom defendant owed 2*l.* 10*s.*, defendant said he was at present an assistant to Messrs. Slinger & Sons, wholesale chemists, York, and was in receipt of 30*s.* a week. His intemperate habits might have had something to do with his present position, but he had been out of employment seven months. Some other debts were proved, and his Honour said it appeared that defendant owed 29*l.* in all, of which about 18*l.* was owing to creditors at York. Darnbrough had given undue preference to certain creditors, and he therefore refused to make any order.

Re NAYLOR, PIKE & GRIMES, Fenchurch Avenue, E.C., Birmingham, Bombay, and Calcutta, East India Merchants.

MR. REGISTRAR BROUGHAM presided at a sitting of the London Bankruptcy Court on Friday, October 28, for the public examination of these debtors, whose affairs are now being wound up in bankruptcy.

Mr. Naylor, the senior partner, was the only one in attendance. He stated in the course of the examination that he only returned from India in 1891, and consequently he knew very little about the firm's affairs. An action had been brought against them by Mr. Thomas Beecham, St. Helens, Lancashire, to recover 2,600*l.* for goods supplied. They had counterclaimed 5,000*l.* for work and labour done, and further contended that the goods were supplied to them on the "sale or return" principle. An affidavit to that effect had been made by witness, and leave was thereupon given to defend the action.

Mr. Reginald Brown (for the trustee): Is it not a fact that at the time you swore to that affidavit the goods had been pledged to a bank?

Witness admitted that to be the case, but explained that he was not aware of it at the time he made the affidavit, the goods having been pledged by his partner, Mr. Grimes. He still believed that the old goods were supplied upon sale or return.

In reply to further questions, witness said the Birmingham business was now closed. The joint liabilities of the firm amounted to between 6,000*l.* and 7,000*l.*, but he was unable to state anything with regard to the assets, as they were all in India. The books of the firm had been handed over to be trustee.

Mr. Brown complained that no accounts had yet been filed, and up to the present the trustee had been unable to obtain any information upon the firm's affairs. Mr. Grimes had the management of the Indian branches. In addition to their trading as general merchants and shippers to India, they had an interest in several Indian newspapers and journals.

The examination was adjourned to enable the accounts to be filed.

Re GEORGE ANTHONY PARKIN, 3 Blossom Street, York, Chemist and Druggist.

THE statutory meeting of the creditors under this failure took place on Tuesday at the offices of the Official Receiver, York.

The debtor's unsecured liabilities amount to 2,117*l.* 12*s.* 2*d.*, and preferential creditors, 39*l.* 17*s.* The assets consist of cash 3*l.* 14*s.* 11*d.*; stock, 670*l.*; trade fixtures, 115*l.*; furniture, 30*l.*; life policy, 7*l.* 10*s.*; bank debts, 113*l.* 17*s.* 6*d.* These are the amounts they are estimated to produce. Total, 955*l.* 10*s.* 9*d.*

The debtor alleged his failure to have been caused through expending money in improving his business, advertising patents, fixtures, and cost of removing from one shop to another. It appeared that 100*l.* 8*s.* 4*d.* was owing to Mrs. Parkin (debtor's wife), but debtor was informed that his

wife would not be able to rank as a creditor until the other creditors had been paid in full. The debtor had no offer of composition to submit to the meeting, and had been adjudged bankrupt. It was decided to leave the estate in the hands of the Official Receiver for summary realisation, but three creditors were appointed to act in conjunction with the Official Receiver as a committee of inspection.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

COLLIER—MORRIS—On October 25, at the parish church, Erdington, near Birmingham, by the Rev. H. C. Collier, Vicar of Twyford, Bucks, uncle of the bridegroom, assisted by the Rev. F. S. Swindell, M.A., vicar, Frederick Harrison, eldest son of Frederick B. Collier, chemist, Erdington, to Edith Rosetta, elder daughter of E. Morris, late of Moreton, Herefordshire, and niece of Mrs. Cox, of Gravelly Hill, Birmingham.

SANDY—HALE—On October 25, at St. John's Hackney, Frederick William Sandy, chemist, 302 Mare Street, Hackney, to Angelica Hale, widow of Matthew Hale, of Sylvester Road, Hackney.

WATKINSON—CROSSLEY—On November 2, at Market Street Congregational Church, Farnworth, by the Rev. W. Hewgill, M.A., assisted by the Rev. J. C. Nesbit, B.A., of Leicester, Harold Arthur Watkinson, third son of J. W. Watkinson, wholesale druggist, of Farnworth and Poulton-le-Fylde, to Clara Beatrice, eldest surviving daughter of David Crossley, of Farnworth.

DEATHS.

BINGLEY—Mr. Bingley, chemist and druggist, Guildford, was found dead in bed on Tuesday, November 1. The deceased is believed to have poisoned himself, and left a letter asking that his body should be buried in a pauper's grave, and he enclosed a lock of hair and a ring to be buried with him. His letter concluded, "'Tis better to have loved and lost, than never to have loved at all."

DAVENPORT—On October 23, at Brighton, after a long illness, Eliza Clarendon, wife of J. T. Davenport, of Brighton

EFFLAND—On October 25, Mr. Augustus Frederick Effland, aged 72 years, a chemist, lately residing at 197 Waterloo Road, died in St. Bartholomew's Hospital from injuries received through being run over by a hansom cab in Queen Victoria Street a few evenings previously. At the inquest, held on October 26, Mr. Arthur M. Wier, house-surgeon, St. Bartholomew's Hospital, stated that deceased was unconscious when admitted, and remained in that condition till death. He had sustained fracture of three ribs on the right side, and bruises on his forehead and right thigh. In his opinion death was due to laceration of the brain. The jury returned a verdict of accidental death, and exonerated the driver from all blame.

HINDES—On October 25, at Edinburgh, James Hindes, chemist, Dalkeith.

SLEGGS—On October 23, Mr. George R. Sleggs, chemist and druggist, of Brighton Road, Seacombe, Cheshire. Aged 55 years. Mr. Sleggs was postmaster of the Seacombe postal district, and until about four years ago was in business in Robson Street, Everton. He took an active interest in Church affairs.

CAPE EXAMINATIONS—At the meeting of the Cape Colony Pharmacy Board on October 7 four candidates were examined, two of whom, Messrs. Hampson, of East London, and Taylor, of King William's Town, passed.

PAIN-KILLER ON FIRE—There was a fire at Perry Davis & Sons' manufactory, Pond Street, Providence, R.I., last month, which destroyed about 500 gallons of pain-killer, the upper storage and roof, and, together with water-damage, the loss was about \$10,000. A man and eight girls narrowly escaped.

Personalities.

MR. A. E. EKINS has been appointed County Analyst for Hereford.

THE eldest son of the late Mr. John L. Kirkland will take his father's place in the firm of McKesson & Robbins.

MR. SAMUEL JONES, chemist, Holywell, has been returned a second time as member to the Local School Board, without opposition.

MR. A. FORREST, of Heaton Moor, Stockport, manufacturing chemist, has been made a Justice of the Peace for the Manchester Division of Lancaster.

MAJOR LE CARON has another book on the stocks, which will deal with the personal side of his adventures. Perhaps he will give us a little more pharmacy it.

MR. ALBERT DOMIER, of 13 St. Mary-at-Hill, E.C., is a member of the International Committee for the foundation of a Hofmann Institute in Berlin, to commemorate the work of the famous chemist, and will receive subscriptions for that object. On November 12 the German Chemical Society will celebrate the twenty-fifth anniversary of its foundation, and the committee hope to be able on that day to submit definite plans for the application of the memorial fund. Particulars of the proposed "Hofmann-Haus" have already been given in this journal.

A MEMORIAL-TABLET, erected by friends of the late Mr. Francis R. Passmore, was unveiled last Friday evening, in the presence of about two hundred persons assembled in the schoolroom at Lansdowne Place, Old Kent Road. This in-



stitution, the oldest Ragged School in South London, was superintended for twelve years by Mr. Passmore. The memorial, of which we give a reproduction, is of white marble, with coloured marble pillars, and contains an excellent photograph on porcelain in the centre.

MR. JAMES H. HARTRIDGE, of the firm of Blondeau et Cie., who with his wife is spending a vacation in the United States, had a thrilling experience while going down the St. Lawrence River on the steamer *Arinthian* on September 20. While on the rapids below Coteau Landing the boat was discovered to be on fire. It was impossible just at that point to run the steamer ashore, but the pilot managed to take the boat within 30 feet of the shore. The flames meanwhile had spread rapidly, and the heat and smoke were

unbearable. On nearing the shore Mr. Hartridge jumped into the water, and, securing a couple of small boats near by, came alongside and assisted in taking off the remainder of the passengers. Mr. Hartridge promptly headed a subscription list with a liberal donation as a testimonial to the sturdy pilot. The *American Druggist*, from which we have gathered these particulars, has interviewed Mr. Hartridge regarding the means which Messrs. Blondeau et Cie. have adopted in England to prevent excessive cutting of "Vinolia" preparations. Mr. Hartridge said that his firm had succeeded in preventing the extreme cutting of prices. As to the plan, he said: "When we get a report that the prices of our goods are being cut by, say, Mr. Jones, of Edinburgh, we communicate with him immediately by letter, asking him to raise the prices; if this does not succeed we wire one of our Scotch representatives to interview Mr. Jones at once. Calling on Mr. Jones he remonstrates with him in a friendly manner, assures him of our support should he re-establish prices on a legitimate basis, and makes it plain that unless the cutting is discontinued he can get no more goods. . . . One fact I think our experience has proved, and that is that proprietors can control the retail prices if they will, but it requires energetic action and liberal expenditure to do so."

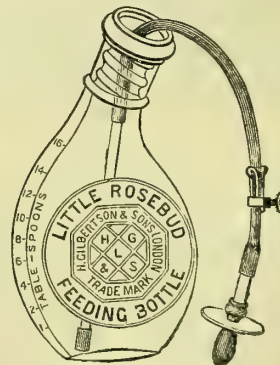
Trade Notes.

THE SANITAS COMPANY have added to their long list of specialities a "Sanitas cream," put up in collapsible tubes, and intended as an antiseptic and soothing application for wounds, abrasions, and all skin-affections. It is a soluble application redolent of the healthy atmosphere which surrounds all the Sanitas preparations.

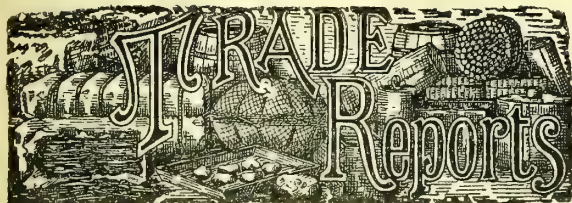
MESSESS. SEABURY & JOHNSON announce this week that their London office and warehouse have been transferred from Jewin Street to 32 and 33 Snow Hill, where Messrs. Fassett & Johnson will henceforth act as their sole representatives for Great Britain and the colonies. Mr. A. H. Mason, who has been conducting the business of the firm in London for several years past, is removing to New York, where he will take up the secretaryship of the firm.

MESSESS. CONDY & MITCHELL (LIMITED), of 67 and 68 Turnmill Street, referring to the report of a conviction which we published on October 22, the prisoner having been found to be associated in a system of stealing some druggists' proprietary articles—Condy's Fluid among others—ask us to request chemists to let them know if their article should be offered to them at prices below their own, as they say the accomplices of the convict are still at large.

LITTLE ROSEBUD FEEDING-BOTTLE—Messrs. H. Gilbertson & Sons fit up under this name a series of feeders, one of which we figure here. Each bottle is fitted with a regulator, an attachment which is practically indispensable in the proper feeding of infants, while the graduation marks are a



great aid to nurses in diluting the food or adding to it lime-water or other correctives. The feeders are substantially fitted with black-rubber tube and teat, glass tube-union and valve glass-tube. The boxes are beautifully labelled, and we understand that when certain quantities are ordered the retailer's own name is printed on the labels.



Notice to Retail Buyers.—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., November 3.

The Iodine Convention.

We hear from an official and neutral source in Iquique (Chili) that, although the Iodine Convention is still in force at this moment, the agreement will not remain tenable for long (the report was penned about two months ago), because under the operation of the Convention the stock of iodine is accumulating to such an extent that there will soon be enough for three years' consumption. It is, therefore, sought to arrive at an understanding upon a new basis, upon which it is proposed either to stop the production altogether for a period, or at any rate to limit it to such an extent that the accumulated stocks will have a chance of absorption by the ordinary consumption. The exports of iodine from Iquique in 1891 were 9,144 quintals, of which 1,823 went to Liverpool, 5,147 to Hamburg, 1,764 to New York, and 399 to other ports. The producers who do not belong to the Union exported 74 quintals. The nitrate combination, which was formed in 1891, will, so far as the present arrangements go, remain in force until the end of 1892. There is hardly any doubt that it will be renewed.

ACETANILID.—The price has been raised 2d. per lb. to-day. It was formerly from 1s. 6d. to 1s. 7d., now it is 1s. 9d. per lb.

ACID (CARBOLIC) is altogether flat and neglected. Liquid 95 to 97 per cent. is now purchasable at as low a price as 1s. per gallon, while crystals may be had at 4d. to 4½d. per lb. for 34° to 35°, and 5d. to 5½d. per lb. for 39° to 40°.

ACID (CITRIC).—The market is very quiet. The English makers ask 1s. 6d. per lb. for B.P., while second-hand holders quote usual commercial quality at 1s. 5½d. to 1s. 5¾d. per lb. The following figures refer to the exports of citric acid from this country:—

	1889	1890	1891	1892
	Cwts.	Cwts.	Cwts.	Cwts.
October	322	589	713	297
January 1–October 31 ..	5,081	5,516	4,292	6,305

The imports of concentrated lemon-juice have been:—

	1889	1890	1891	1892
	Pipes	Pipes	Pipes	Pipes
October	25	159	60	70
January 1–October 31 ..	3,579	3,401	1,581	2,046

ACID (TARTARIC).—Unaltered. English (B.P.), 1s. per lb. from the manufacturers; foreign, 11½d. to 11¾d. per lb., according to position. The English makers quote 12½d. per lb. for forward delivery, and report a fair business in that position.

ALCOHOL.—German potato-spirit is again cheaper. Best quality is to-day quoted at 8½d. per proof gallon, c.i.f. terms, for 2,000 gallon contracts, casks excluded.

ANISE.—New Russian anise is now held for 25s. per cwt. Old-crop seed may still be had from 21s. to 23s. 6d. per cwt., but there is only very little to be had.

ANISE (STAR).—There is none offering on the spot. For shipment 89s. per cwt. c.i.f. is quoted, but we have not heard of any business over 81s. c.i.f. London, and 83s. 6d. c.i.f. Marseilles. Second-hand holders ask 84s. c.i.f.

ANTIMONY.—Small sales are reported at the rate of 25s. 6d. per cwt. for crude Japanese on the spot. *Regulus antimony* is also firmer at 45s. to 45s. 6d. per cwt.

BALSAM (COPAIBA).—The imports from South America into New York are much below the average this season.

CAFFEINE.—The Germans have raised their price, which is now from 6s. 6d. to 7s. per lb. net. English is being offered at the same price.

CAMPHOR (CRUDE).—The market is firm on the spot, but very little business is reported. Japan camphor is very scarce, both on the spot and for arrival. The price asked here is 160s., and for arrival 150s., c.i.f. terms. The *Cardiganshire* has arrived with 152 tubs and 424 cases.

CAMPHOR (REFINED).—The German agents have raised their price by ½d. per lb. this week, 1s. 8d. per lb. net being now the quotation. Some second-hand stuff is still offering at 1s. 7½d. per lb. however.

CANARY-SEED.—The market remains fairly steady, but there is less demand at this moment for *Turkish* seed, which may be had at from 75s. to 80s. per cwt. *Morocco* seed may be bought at almost the same figure, and is generally given the preference. *Spanish* seed runs in price from 85s. to 88s. per 464 lbs. About 500 bags Morocco and Turkey seed sold a few days ago, at 77s. for the former and 80s. for the latter description.

CHAMOMILES.—*Belgian* flowers are very firmly held, and are slightly dearer again; 76s. 6d. per cwt. is asked for fine white flowers, and 73s. 6d. per cwt. for second quality.

CHLOROFORM.—After a prolonged period of underselling, the Scotch and English makers have at length established a uniformity of price. They have bound themselves, we understand, not to sell under the price of from 1s. 8d. to 1s. 6d. per lb. for methylated chloroform, according to quantity, and at from 4s. 4d. to 4s. 5d. per lb. for the pure.

CINCHONA.—The cinchona auctions on Tuesday were of moderate extent. The catalogues comprised:—

	Packages	Packages
Ceylon cinchona	1,128 of which	1,038 were sold
East Indian cinchona ..	480	434
Javanese cinchona	8	—
West African cinchona ..	118	91
South American cinchona ..	425	354
	2,159	1,917

The assortment was a fairly good one, and the tone throughout was very firm, improving in holders' favour as the auctions proceeded. Some lots gave rise to very brisk competition, and very little was left unsold. The unit averages from 1½d. for ordinary to 1¾d. per lb. for fine barks. The following were the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	108,374
„ Brunswick quinine works	100,922
Messrs. Howards & Sons	44,485
Agents for the American and Italian works	34,480
„ Frankfort-o/Main and Stuttgart works	31,085
„ Auerbach works	30,820
„ Paris factory	13,540
Sundry druggists, &c.	34,517
Total quantity of bark sold	398,223
Bought in or withdrawn	52,310
Total quantity offered	450,533

It should be well understood that the quantity of bark bought gives little or no clue to the quinine represented by the purchases, as firms who buy little will sometimes bid for rich barks only, and *vice versa*. The following are the prices paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Ordinary woody to fine bright quilly stem and branch chips, 1½d. to 3d.; good bright shavings, 3d. to 3½d.; fair to good root,

2½d. to 3½d.; ordinary dust, 1d. to 1½d. per lb. Yellow varieties: Ordinary to good bright quilly chips, 3d. to 5½d.; a few fine lots, 6d. to 6½d.; fair root, 4½d. to 4¾d. per lb. Grey varieties: Dull small twigs, 1½d.; ordinary woody to fair bright stem and branch chips, 2½d. to 4½d.; one good lot, 5½d. per lb. Hybrid chips, 2½d. to 4½d.; shavings, 3½d.; root, 3d. per lb. *Renewed*.—Red varieties: Good bright spoke-shavings, 4d. to 5d.; ordinary to good stem and branch chips, 2d. to 3d. per lb. Grey varieties: Ordinary to good bright quilly renewed chips, 3½d. to 6½d.; stem chips, 5d.; root, 6d. per lb. Hybrid chips, 4d.; shavings, 4½d. per lb.

EAST INDIAN CINCHONA.—*Original*.—Red varieties: Good stem and branch chips, 2½d. to 3½d.; fair stem quill, 3½d.; rather dusty root, 2½d. per lb. Dull yellow spoke-shavings, 2½d. per lb.; ordinary woody to good quilly grey chips, 2d. to 5d.; thin dull twigs, 1½d. to 2d.; fair chips and shavings mixed, 2½d. to 4d.; fair root, 3½d. to 4d. per lb. *Renewed*.—Yellow spokeshavings, 2½d.; grey ordinary chips, 3½d.; good to fine bright quilly chips, 4½d. to 7½d.; a few lots, 8½d. to 8¾d. per lb.

SOUTH AMERICAN CINCHONA.—The only kind of South American bark offered at the auctions was the cultivated Bolivian *Calisaya*, most of which was country-damaged. Good strong quills sold at 8½d. to 8¾d.; fair at 6½d. to 7½d.; broken quills and chips at 4½d. to 6d. per lb.

AFRICAN CINCHONA.—New arrivals of San Thomé bark, *via* Lisbon, sold at 3½d. per lb. for fair but somewhat irregular *Succirubra* quill. All of this bark was country-damaged, as usual.

The exports of cinchona bark from Java during the month of October are cabled as having been 750,000 lbs., against 1,050,000 lbs. in October, 1891. Good Guayaquil bark, for which there is some inquiry, appears to be rather scarce.

COCHINEAL.—The recent advance is said to have been principally caused by speculative buying, and prices are about 1d. per lb. higher altogether. Fair Teneriffe qualities are worth 1s. per lb. for black and white; fine up to 1s. 6d. per lb.

COCOA-BUTTER.—The monthly auctions of Cadbury's cocoa-butter were held on November 1, when the large supply of 450 2-cwt. cases sold at irregular prices, declining from 13½d. to 12½d. per lb.

CUBEBS.—The stock in Amsterdam on October 1 was 497 bales, but during the month of October it was almost doubled, and buyers are standing off, in fear of further arrivals.

CUMIN-SEED is firm, both for *Maltese* and *Morocco*. The stocks of the former kind are very small now.

CUTCH is firmly held. "MM" brand, in tablets, is quoted at 32s., "Star B" at 31s., and "Eagle" at 30s. per cwt.

FENUGREEK-SEED is scarce, and higher prices are asked for all kinds.

GALANGAL-ROOT is in demand, but difficult to get. There does not appear to be any on the spot, nor, according to the latest mail advices (September 29), is there any stock at the Chinese ports, where the nominal quotation is \$2 50 to \$2 60 per picul. A few days ago 25s. per cwt. was paid here. Some weeks back the quotation was 18s. c.i.f. for October-November shipment.

GALLS (CHINA).—A very firm market, with sales of good quality on the spot at 55s. to 56s. per cwt. The quotation for arrival is 54s., c.i.f. terms. *Turkey* galls are neglected, with small sales of blue Smyrna at 55s.; and green Bassorah at 50s. per cwt.

GLYCERINE is again a little dearer. Some of the German makers have put their price up to 46s. per cwt. for double-distilled s.g. 1,260.

GUM ARABIC.—At to-day's auctions a rather considerable quantity of East Indian gums was offered, of which only a small part sold at lower rates all round, except for Ghatti, which is, if anything slightly dearer. Brown Amrad, Cawnpore and Kurachee gums were about 1s. to 2s. lower, and for Aden lower rates must also be taken to effect sales. The following prices were paid:—*Cape* ordinary glassy to soft brown, 17s. to 36s. per cwt. *Australian* ordinary dark and blocky to fair bold red, 20s. to 35s. per cwt. *Persian* good pale small "insoluble," 32s. per cwt. *Aden* fine sorts, 42s. 6d.

per cwt. *Amrad*: fair ambery to good bright Cawnpore. 30s. to 43s.; good to fine pale Kurachee, 44s. to 65s. per cwt.; *Ghatti* ordinary to good fair, 20s. to 31s. per cwt. A parcel of Soudan gums, from Suez, was to have been offered at to-day's drug sales, but when the first lot was reached the auctioneer announced that he had received a telegram from Egypt instructing him to withdraw the whole parcel, and not to offer anything further at present. Privately 70s. per cwt. has been paid for good sorts. There have been some arrivals of Talca and Gebzirah gum, but there is no demand. Of so-called "insoluble" gum, from Bushire (Persia) a large arrival has recently taken place. *Senegal* gum is offering cheaply at 48s. per cwt. for Bas du fleuve.

GUM ASAFCETIDA has been in some request. The stocks are diminishing, and for good kinds high rates must be paid.

GUM BENZOIN.—*Sumatra* has been in request at full prices.

GUM KINO is very firm. On the spot 110s. per cwt. has been paid for good East Indian.

GUM TRAGACANTH has been in strong demand both last week and this, and a considerable quantity has changed hands at rising prices: Good to fine Bagdad seconds (druggists' kinds), at 11l. to 11l. 10s.; thirds and fourths, at from 10l. down to 7l. per cwt.

HONEY.—It is stated from America that the supply of fine white *Californian* honey is exhausted both in San Francisco and in New York, and other kinds are rising sharply. Pale amber is quoted at 47s. per cwt., c.i.f. from New York, or at 42s. 6d., c.i.f. by sailer, from San Francisco.

INDIARUBBER is easier. Sales of fine Pará have been made at 2s. 9½d. per lb. on the spot, and at one period there were further sellers for delivery at 2s. 9d. per lb.

IPPECACUANHA.—Since last week's auctions a few bales of *Rio* root appear to have been sold privately at 8s. per lb. for fair quality.

JALAP is being offered at 1s. 5d. per lb., c.i.f. terms, from New York. The arrivals there are said to show mostly small root of rather inferior quality. In London the market has risen to 1s. 7d. per lb. on the spot, which is now asked; the last sales of good quality were at 1s. 6d. per lb.

LIME-JUICE.—Fair quality *Jamaica* juice has now advanced to 1s. 1d. per gallon, and some business is reported at that figure.

LITHIA SALTS.—There has been quite a run on *Carbonate of lithia* this week, owing, it is said, to the circumstance that some speculators sold a considerable quantity forward at low prices when, a few months ago, the makers raised their quotations. The time for delivery is now due, and it appears that there is not enough to be had in the second-hand. From 5s. to 6s. 6d. per lb. has been paid for considerable quantities, but the manufacturers will not now quote any price at all.

NAPHTHA (WOOD) has advanced in price, and is now firmly held at 4s. 4½d. per gallon for miscible, 60 per cent. o.p., and at 3s. 10½d. per gallon for solvent.

OIL (CASTOR).—There is a much better feeling in the market. French oil (first pressing) for delivery from now to April next is held for 25l. per ton, f.o.b. Marseilles. A considerable business in *East Indian* oil was transacted in Liverpool last month, but in *French* oils the trade has been somewhat stagnant; 2½d. per lb. has been paid for fair quality of this description on the spot. In London the stock of seconds (which are selling at 2½d. per lb.) has been much reduced.

OIL (COD-LIVER) is rather dearer again, from 72s. 6d. to 75s. per barrel being asked for non-congealing Norwegian, with small stocks everywhere.

OILS (ESSENTIAL).—*Menthol* has further advanced; 10s. 9d. per lb. has been paid for good native brands, and 11s. per lb. is now asked on the spot. For October/November shipment 10s. 6d., c.i.f. terms, is quoted. *Japanese Oil of Peppermint* on the spot has sold at 6s. 9d. to 6s. 10½d. per lb. American oil of *Peppermint* is steady, with fair sales on the spot of HGH oil at 12s. 3d. D. & O. in tins at

10s. 6d. per lb. *Star-anise* oil is very firm at the increased prices reported last week. On the spot 6s. 3d. per lb. is the highest price paid, and for arrival sales are mentioned at 1s. 6½d. to 5s. 7d., c.i.f. A fair quantity of *Lemongrass* oil (300 cases) is reported to have changed hands a few days ago at 1½d. per oz., c.i.f. London, for November-January steamer shipment. On the spot 1½d. per oz. is the nearest price. New season's oil of *Pennyroyal* is offering from the States at 7s. per lb., c.i.f. terms, with, it is said, a declining market. *Sassafras* oil is steady, at 1s. 7½d. to 1s. 8d. per lb. *Eucalyptus* oil continues to be in good demand, although there is no lack of supply. For good brands 3s. per lb. has been paid. To-day the price for Cocking's *menthol* is 12s. per lb.

OILS (OLIVE).—In common oils a considerable business has been done at rising prices; for *Spanish* and *Messina* oils 38s. per cwt. has been paid, and for *Syrian* oil 36s. per cwt. Eating-oils have also been in better demand, the crops being very deficient this season. "Cream" oils are quoted at 5s. 6d. to 6s., "sublime" at 4s. 6d. to 5s. per gallon.

OPIUM.—The London market is quiet but steady. For new *Persian* opium 11s. to 11s. 6d. per lb. is asked, and for old crop 1s. less. For delivery, holders are inclined to ask a little more money. Old *Salonica* is held at 7s. 9d. to 8s. per lb., at which quotations small sales are reported. Fine new Turkey opium is selling at 7s. 3d., current to good seconds at 6s. 9d. to 7s. per lb. Writing on October 22 our Smyrna correspondent states his belief that the price of opium will be well maintained, as the weather remains dry.

POTASH SALTS.—*Canadian pearlshakes* are dull of sale at 45s. per cwt., first Montreal *Potashes* are now 26s. 6d. per cwt., which shows a slight advance. *Chlorate of potash* is rather firmer this week. For immediate delivery from 7½d. to 8d. per lb. must be paid. December is quoted at 7½d. and first quarter 1893 at 7½d. per lb. f.o.b. Liverpool.

QUICKSILVER.—Flat and quiet. Importers want 6l. 10s.; second-hand owners are willing to sell at 6l. 7s. per bottle.

QUININE is rather easier. The B & S agents are willing to-day, to submit offers at 10½d. per oz. for acceptance. Second-hand German bulk may be bought at 9½d. per oz. No business is reported.

SAFFRON.—There are rumours that the new crop is a much better one than last year's. The prices asked now for best Valencia are from 26s. to 27s. per lb.

SARSAPARILLA.—*Honduras* root is said to be scarce in the States, with much diminished stocks and a higher tendency. For the best brands 1s. 5d. to 1s. 6d. per lb. "c.i.f." is asked. *Mexican* sarsaparilla has arrived in large quantities, but mostly of the inferior Tuxpam character, of which further large supplies are said to be on the way, and which offers at 4½d. per lb. c.i.f. The Tampico or Vera Cruz variety is said to be comparatively scarce at 4½d. per lb. "c.i.f." terms.

SCAMMONY.—The market has been cleared, and for fine virgin scammony 24s. per lb. has been paid. Of *Scammony root* a parcel was recently sold in Liverpool at the rate of 26s. 6d. per cwt.

SENEGA.—It is reported that this year's crop in the States has been only one-third of an average, and in Manitoba less than one-tenth of that dug last year. The New York houses expect higher prices, as there is very little offering now and the usual European orders have not yet been filled. From 2s. 3d. to 2s. 6d. per lb. c.i.f. terms is asked, according to quality.

SHELLAC.—The market closed very dull last week. On Monday 86s. to 86s. 6d. per cwt. was paid for 300 cases orange TN for January delivery. At the auctions on Tuesday 613 cases, were offered, of which with fair competition 454 sold at an advance of 1s. to 2s. per cwt. on orange and button lac. For garnet lac bids of 77s. per cwt. were refused. The prices paid were as follows: *Second orange*, livery to good bright flat worked, 85s. to 87s.; good bright but cakey reddish to fair pale unworked, 83s. to 85s., per cwt. *Button lac*, unworked pale seconds, 90s.; resinous dark ditto, 82s. to 85s.; thirds from 82s. down to 74s. per cwt. The London and Calcutta statistics for October are both considered favourable to holders. After the auctions the market assumed a firmer tone, and 1,000 cases TN orange for December delivery sold at 88s. 6d. to 89s., and January at 88s. per cwt.

SPERMACETI.—Good *American* refined is held for 1s. 4½d. per lb., and quoted at 1s. 4d. per lb. c.i.f. from New York. *Chilian* has been sold at 1s. 3½d. per lb. lately, but holders are not willing to continue business at that figure.

SPICES.—At auction on Wednesday Zanzibar *cloves* were again about ½d. per lb. lower, and of 862 bales offered a portion sold at from 2½d. to 2¾d. per lb. for dull to fair. Very fine bright realised 3½d. per lb. Privately a fair amount of business has been done for arrival at somewhat easier rates. *Mace* is quiet but steady, with some business at the auctions at 1s. 9d. per lb. for ordinary red Penang, and from 1s. 6d. to 2s. 9d. per lb. for common to fine West India. *Nutmegs* are slightly firmer. *Ginger* dearer for Cochin. The small supplies of Jamaica offered at auction were all bought in, and of a parcel of 280 bags African root a portion sold at 33s. 6d. per cwt. for fair quality. *Pepper* closes firmer for black, but lower again for white descriptions (especially Penang) on the spot. Of the latter a fair quantity of Penang sold at 3½d., and of Singapore at 4½d. to 4¾d. per lb. For black Singapore, rather dull to fair, 3½d. to 3¾d. per lb. was paid.

SQUILLS.—Fine pale *Malta* squills have realised 5d. per lb. to-day. Common qualities are still offering at 2d. per lb.

STICKLAC is firmly held. Sales of good *Siam* are said to have been made at 75s. per cwt.

TONQUIN BEANS.—Good *Angostura* beans are very scarce here and held for 11s. per lb. For ordinary to fair black *Pará* from 1s. 11d. to 2s. 3d. per lb. has been paid privately. It is reported from New York that for genuine *Angostura* beans as much as 10s. 6d. per lb. has been paid, and that holders are now asking 11s. 6d. per lb. for the small available stock. *Parás* have not moved in a corresponding fashion, and are held at 1s. 9d. to 1s. 10d., c.i.f., for black, and 3s., c.i.f., for fine frosted.

TURMERIC.—At auction 324 bags *China* were all bought in at nominal prices: Fair bright, mixed with bulbs, at 20s. 6d.; common dark, at 18s. per cwt. Privately the market is dearer for *Bengal*, which has sold at 23s. per cwt. for fair finger, while 25s. is asked. *Madras* in very small supply, and 33s. has been paid for bright but wormy finger.

VERMILION.—The English manufacturers, in order to meet the competition to which they are increasingly exposed, have reduced their quotations, while at the same time reducing their scale of discounts to 2½ per cent. The new prices are: For lots up to 30 lbs., 2s. 2d. per lb.; for lots from 30 to 150 lbs., 2s. per lb.; and for lots from 150 to 300 lbs., 1s. 10½d. per lb. Chinese vermilion has been sold in a small way at 2s. 8d. per lb.

WAX (JAPAN).—Still advancing. On the spot 39s. has been paid, and for arrival 34s. to 35s. c.i.f.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

ONE hundred cases of *Karahissar* opium have been sold to the Dutch Government agents at the rate of 7s. 5d. per lb. f.o.b. Sixty cases of *usual kind manufacturing* opium sold at the rate of 6s. 6d. per lb. f.o.b., and for 20 cases *Yerli manufacturing*, 6s. 9d. per lb. f.o.b. has been paid. Market firm.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, Thursday night.

AT to-day's auctions, 3,761 bales of Java bark were sold, leaving about a quarter of the supply undisposed of. The market was a trifle easier, the average unit being 6½ cents (= not quite 1½d. per lb.). Manufacturing bark in chips, quills, and shavings sold at 9 to 66 cents (= 1¾d. to 12d. per lb.); ditto root at 17 to 41 cents (= 3d. to 7½d. per lb.); manufacturing bark in quills and chips at 18 to 54 cents (= 7½d. to 10d. per lb.); and ditto root at 9 cents (= 1¾d. per lb.). The principal buyers were the Auerbach, Brunswick, Frankfort-on-Maine, and Mannheim factories.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Mr. Mond's New Process.

SIR,—In your leader of last week you made reference to a suggestion which originated from me in 1888, at a time when the Weldon-Pechiney process was prominent before chemical attention—viz, the employment of a fixed quantity of magnesia spread over a large surface for use in assisting the decomposition of hydrochloric-acid vapour by means of atmospheric oxygen.

I would like to point out to your readers that this "suggestion" was thoroughly well based upon the results of numerous quantitative experiments which were made in my laboratory, and accounts of which were contributed to the *Journal of the Society of Chemical Industry* (vol. vii, pp. 286-292), and to the *Chemical Trade Journal* (September 22, 1888). In the last-named contribution in particular I established the practicability of my process for manufacturing chlorine by passing an adjusted mixture of air (or oxygen) and the vapour of hydrochloric acid over or through a permanent quantity of magnesia at a suitably high temperature. Obviously, as I then pointed out, it is not necessary to employ pure magnesia, but "it will suffice to employ broken brick, ballast, clay balls, pumice-stone, or other porous material as a carrying agent for the magnesia."

I patented the process, but failed to succeed in obtaining a manufacturing test of it. However, it would appear that my investigation has contributed to the success which is now claimed by Mr. Mond, as to whose process, in turn, there is, I think, much cause for doubting if it will "pay."

96 Amhurst Park, N.,

October 29.

Yours faithfully,

C. T. KINGZETT.

Solutions of Medicinal Resins.

SIR,—In the excellent paper read by Mr. H. Wyatt, jun., before the Liverpool Pharmaceutical Students' Society, on October 27, 1892, and published in last week's CHEMIST AND DRUGGIST, the fact is noted that medicinal resins are soluble in alkaline solutions, and that soap-like bodies are formed. The author, in his concluding remarks, says he wishes to draw attention to a method which is capable of extended application in making liquid preparations of drugs which owe their activity wholly or in part to resins or resinoid bodies.

Some three or four years ago this subject of soluble medicinal resins occupied my attention. I found that it was quite possible to make alkaline compounds of the Pharmacopœia resins perfectly soluble in water. I discovered, however, that these compounds when taken by the mouth did not act so energetically as the free resins. I prepared some soluble podophyllin from a sample of resin, of which $\frac{1}{4}$ grain acted in a very prompt manner when taken as a powder mixed with a little sugar; it required at least 3 or 4 grains of the soluble resin to produce any appreciable effect. In this combined soluble form resin of podophyllin does not appear to act upon the bowel in that stimulating manner so characteristic of this purge.

Mr. Wyatt appears only to have prepared solutions in glycerine for rectal injection; these solutions, it is stated,

being active and reliable. It would be interesting to know whether a solution in water alone would be equally active.

The Dispensary, Guy's Hospital,
October 31.

Yours truly,
H. COLLIER.

Insect-powder.

SIR,—May I ask you to give me a small portion of your space for a purpose which I venture to think of considerable importance to the trade? Very many chemists, like myself, put up and sell their own insect-destroying powder, and I wish to caution them to be very careful not to supply their own preparation if Keating's should be asked for. Of course, many will say "Certainly not," without realising the necessity for extreme care in the matter, and suddenly find themselves—through inadvertence, or perhaps excessive zeal on the part of an assistant—the recipients of a communication from Messrs. Keating involving them in considerable loss.

It may be supposed by some members of the trade that the term "Keating's Powder" is for the public almost synonymous with "insect-powder," and is asked for by the ounce and by the pennyworth, whereas Keating's preparation is only sold in tins; but in all such cases the difference should be explained to the customer, as Messrs. Keating naturally object to the existence of any such idea, which is obviously injurious to their interests. I have lately had a difficulty in this matter, and that is why I wish to bring the subject before the trade. My own preparation was inadvertently supplied when Keating's was demanded, and although I have to thank Messrs. Keating for having acted fairly, I would caution the trade that inadvertence is no legal defence, and Messrs. Keating are evidently determined to maintain their own proprietary rights to the uttermost.

In conclusion, let me state that I write this in the hope that it may serve not only to prevent friction between members of the trade and Messrs. Keating (who have, I am convinced, no desire to harass or annoy, but merely to protect their rights and interests), but a most serious loss if once they commenced proceedings.

I am, yours obediently,

October 31.

J. G. CANDY.

Longevity of Chemists.

SIR,—It is perhaps worth pointing out that the average age of the six chemists whose death (with statement of age appended) is announced in this week's CHEMIST AND DRUGGIST is 72. This speaks pretty well for the healthiness of the trade, and if a chemist's life is worth living at all—but that, as Mr. Kipling says, is another story.

Yours, &c.

Epworth, Oct. 29.

C. C. BELL.

The October Examinations.

SIR,—Complaints are often made against the Pharmaceutical Society (generally by those who do not support it) which on inquiry are found to be unjust. As a young member of that Society, I have listened to many such complaints, and have earnestly endeavoured to bring the complainant to a better frame of mind.

I regret that a complaint is now abroad for which there seems to be some just cause.

Many of your readers will be aware that the October examinations in London are generally held about the beginning of the second week in that month, while the Major portion of the recent examinations was held in the month of September.

The result of this early date fixed for the examination was that many of the candidates, having made arrangements, expecting the date to be about the usual time, suffered great inconvenience, to say nothing of having lost three weeks or so, during which many, no doubt, had intended to go over some parts of their work which, perhaps, required strengthening.

To give a case in point, two gentlemen, past and present assistants of mine, who have been devoting all their spare time in working for the Major during the past twelve months, attending classes, &c., and doing a good deal of practical work, had arranged to give their entire time and attention to

look over their past work for six weeks prior to the examination.

The early date fixed for the examination reduced that time to about half, and of which alteration they only had four or five days' notice.

I honestly think that some injustice has been done to those candidates who were required to present themselves before October 1, and some official statement is called for.

Many have questioned the legality of the proceeding, seeing that the acknowledgment sent to each candidate for his fee stated that it was received for the Major examination "to be held during the month of October."

I am faithfully yours,

Grassendale Pharmacy,
near Liverpool.

THOS. S. WOTHES.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMIST AND DRUGGIST'S DIARY, 1892, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

142/74. *P. E. C.*—Thanks for your suggestion. The fact is, nearly the same proportion of English candidates fail in Edinburgh as in London. It is the excessively high percentage of passes amongst the Scotchmen that brings up the average. Last month's results were extraordinary, however.

150/72. *Festina Lente.*—Mr. Joseph Bosisto delivered a lecture on the eucalypti at the Colonial and Indian Exhibition, which was reported in THE CHEMIST AND DRUGGIST of July 3, 1888. See also our reports on the Exhibition in the previous volume to that.

146/5. *Sacch. Ust.*—(1) We have in type a paper on the subject, which please wait for. (2) The liquor is a proprietary one, or is claimed to be. We have failed to trace a formula for it.

144/63. *Eddie.*—Red-currant Cough-syrup:—

Vinegar of ipecacuanha	3iiss.
Antimonial wine	3iiss.
Red-currant jelly	3viij.
Water	3vj.
Syrup of red poppy	3iii.

Dissolve the jelly in the water by the aid of heat and add the other ingredients.

Dose: For adults a teaspoonful; for children 10 to 30 drops according to age.

145/12. *Brewer.*—Book on Vinegar-making.—Churchill's "Acetic Acid and Vinegar" (5s.).

137/27. *Albumose-peptone.*—(1) Quite right; the iron is precipitated, and the supernatant solution is neutralised with soda to ensure that all the iron precipitable is thrown out. (2) There is no such dye.

156/43. *Lanoline.*—It would be absurd for us to attempt to advise you on such scanty information as you give us. Consult a respectable local solicitor promptly.

156/73. *J. H. C.* asks:—It has been alleged that the substance chloroform was discovered by experiments on ants. Can you inform me by whom it was discovered and what part, if any, the ants played in the discovery?

145/71. *Cutis.*—You should have no difficulty in getting a preparation such as you indicate by looking through the last few volumes of THE CHEMIST AND DRUGGIST.

140/68. *Saccharum.*—See page 622 of the current volume.

137/68. *Spero.*—A reply to a similar question has recently been given.

150/62. *Shakbeen*—(1) A special linen cloth is woven in Holland for covering Dutch cheese, and this cloth is highly sized. (2) Bone-black is used for decolorising sugar solution previous to crystallisation.

141/63. *Coch. Mag.*—(1) Tic mixtures.—January 30, 1892, page 186. (2) Quinine and iron Mixture.—July 25, 1891, page 123.

136/48. *G. C.*—We have considered your suggestion as to the production of a non-poisonous disinfectant, but it is perfectly ideal at the present time.

145/47. *D. A. G.*—For directions as to fixing shop-labels, see THE CHEMIST AND DRUGGIST, May 30, 1891, page 780.

141/44. *Luda.*—Gum Capping for Bottles.—See THE CHEMIST AND DRUGGIST, January 2, 1892, page 31.

150/43. *Amyli.*—In the formulæ for baking-powders, page 622, 50 oz. of the diluents is meant in each case.

126/41. *Theatrical Chemist.*—(1) Ginger-wine Extract.—See THE CHEMIST AND DRUGGIST, January 3, 1891, page 32. (2) Theatrical Face-paints.—March 28, 1891, page 461.

151/38. *Subscriber.*—We think condensation of moisture takes place in the enclosed part of a window as well as the upper, but a layer of spongio piline placed between the two parts so as to absorb the drops that trickle down might suit your purpose. This may be removed and dried when necessary.

195/36. *C. T. M.*—Sorry we cannot assist you in the matter. We have not examined the preparation.

137/33. *Senew.*—The only plan we can suggest is to subject the boxes to a dry heat as strong as they can bear. Any odour which would cover the one the boxes have must, of course, be more powerful, and that might be more objectionable.

141/31. *F. W. S.*—We answered the question a few weeks ago.

139/10. *Cream.*—We are not experts in dairy matters, but we understand that the abnormal thickness of some Preserved Creams is due to richness of the milk and the manner in which the cream is separated. The milk is placed on the hob for an hour or more, when the cream forms a thick scum; this is carefully removed, and well beaten up with the preservative. Large quantities of boric acid are used—certainly not less than 10 grains to the ounce.

128/49. *J. A. (Geneva).*—(1) Orange wine is made in the following manner:—Dissolve 23 lbs. of sugar in 10 gallons of water by boiling, and if not perfectly clear on straining add the whites of six eggs, again boil, and strain upon the rinds of 100 oranges. Add the juice of the

oranges, and, when cooled to 80° F., 6 oz. of fresh yeast. Allow to ferment for four days, strain into a barrel, cork loosely, and, after a month, add 2½ pints of brandy. A month or two afterwards the wine is ready for use. As it requires some experience in wine manufacture to produce a satisfactory product, you may find the following formula suit your purpose better:—

Oil of orange	viv.
Spirit. rectificat.	3ss.
Magnes. carb.	3ss.
Syrup	3ij.
Vin. xerici, ad	3xvi.

Dissolve the oil in the spirit and triturate with the magnesia, add the syrup and the wine, and filter.

(2) Glycerine and Cucumber.—See page 568 of this volume. (3) Cod-liver Oil Emulsion.—The following formula is a satisfactory one:—

Cod-liver oil	3vi.
The yolk of one egg	
Powdered tragacanth	gr. x.
Elixir of saccharin, B.P.C. ..	3ss.
Tincture of benzoïn	℥xl.
Spirit of chloroform	3iij.
Oil of wintergreen	℥v.
„ sassafras	℥v.
„ bitter almonds	℥ij.
Water to	3xij.

Put the tragacanth in a dry mortar and triturate it with a little of the oil, then add the egg-yolk and stir briskly, adding water until the mixture thickens; add a little more oil, then more water, and so on alternately, diligently stirring all the time, until 4 oz. of water have been so used and the whole of the cod-liver oil. Transfer to a pint bottle, add the elixir, tincture, spirit, and essential oils, previously mixed; shake well, and make up to 12 oz. with water.

If you wish a hypophosphited emulsion, dissolve in the water 48 grains each of calcium and sodium hypophosphites.

126/11. B. C. L.—Arsenical Soap (for taxidermy):—

White arsenic !.. .. .	3iv.
Slaked lime	3iv.
Carbonate of soda	3xij.
Powdered camphor	5vi.
Soft soap	3iv.

Mix thoroughly, adding water to bring the mixture to the consistence of soft soap.

132/21. L. J.—We have no recollection of the article which you mention; perhaps the particulars were mentioned incidentally in connection with some other subject. We have frequently heard estimates of the Amount of Dispensing done Daily by leading firms in the three kingdoms, and, as far as we can recollect, the average number of prescriptions handled by any firm did not exceed 300 daily. This number is exceeded by the Army and Navy Stores, we should think, for there at least fifteen men are engaged in dispensing solely, and a day's work for a dispenser is forty prescriptions. Fifty prescriptions is considered a phenomenal day's work. In these times 1s. per prescription is reckoned a fair return. This is a subject which is worth looking into further, and we should be pleased if those interested would send us a few data on post or letter cards. L. J. wants to know "the particulars of a day's dispensing, and the charges made for same, by one of the leading Irish firms of dispensing chemists." To that we should like to add Great Britain.

149/42. J. R. Walker.—(1) Tellurium is now believed to be a mixed "element"—that is to say, it consists of more than one substance. One of these substances retains the name tellurium, the other has provisionally been called "austrium," but quantitative details are yet wanting. We are not aware that the metal is put to any use in the arts. It is a tin-white metal, which is very apt to crystallise. We should think that its presence in an iron ore would be detrimental in steelmaking, as it is akin to sulphur, and that is an element which steelmakers find it necessary to get rid of in smelting. With concentrated sulphuric acid the metal gives

a red solution, the colour being discharged on heating. When acid-tellurium solutions are treated with sulphuretted-hydrogen water the colour at first produced is reddish brown, with a peculiar fluorescence, then a reddish-brown precipitate is thrown down, and this becomes black as the proportion of sulphuretted hydrogen is increased. We must refer you to Fresenius for more detailed tests. (2) Dr. Lee Brown's "Manual of Assaying" is a good book. It is published by E. H. Sargent & Co., Chicago. For metallurgy generally see the 1892 DIARY book-list. You should take a session at a metallurgy class (under the Science and Art Department) before thinking of adopting assaying as a profession. That will do you good. It is a wrong notion to suppose that very few people follow the profession of assaying: metallurgy is one of the most popular science subjects.

* * * We have received a very large number of replies to the *fac simile* prescription which was printed last week, but these, with other correspondence and replies, are crowded out.

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The book is obtainable through the usual wholesale houses.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

MONDAY, NOVEMBER 7.—Society of Chemical Industry (London section), Royal Society's Rooms, Burlington House, at 8 P.M. The following papers will be read:—(1) "New Method for the Preparation of Nitrous Oxide"; (2) "Notes on Schürmann's Reactions," by Mr. Watson Smith; (3) "Distillation of Wood," by Professor W. Ramsay and Mr. J. C. Chorley.

THURSDAY, NOVEMBER 10.—Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 9 P.M. Short papers

THURSDAY, NOVEMBER 10.—Dundee Chemists' Assistants' Association, at 9.15 P.M. Mr. W. G. Smith, B.Sc., on "Botany in Relation to Pharmacy."

THURSDAY, NOVEMBER 10.—The Liverpool Pharmaceutical Students' Society, at the Botanical Laboratories, University College, 8.30 P.M. Mr. E. Davies, F.I.C., F.C.S., on "Ring Formulae and the Aromatic Compounds."

THURSDAY, NOVEMBER 10.—Glasgow Pharmaceutical Association. Smoking-concert to be held in the Alexandra Hotel at 9 P.M.

THURSDAY, November 10.—Pharmaceutical Society, North British Branch, Edinburgh, at 8.30 P.M. Professor M. Charteris, M.D., Glasgow University, will give the Inaugural Sessional Address on "Suggestions for a Revised Pharmacopœia."



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Summary.

THE Chemists' Aerated and Mineral Waters Association (Limited) announce a dividend of 10 per cent., free of income-tax.

WE have received over a hundred renderings of the Australian prescription, and give a summary of them, with some comments.

MESSRS. PEARS's evening magic lantern display in Oxford Street is alleged to cause annoyance to a draper opposite, who has applied for an injunction.

A CORRESPONDENT points out, in reply to a letter last week, that the death-rate of chemists is above the normal for males in the ratio of 1,015 to 1,000.

WE report the election of five chemists and druggists to mayoralties, as well as a goodly list of them who have won seats on municipal councils. Three of the pharmaceutical mayoralties are over Welsh boroughs.

THE principal item of Irish news refers to the intention of the Pharmaceutical Council to test the question whether magistrates have the power to reduce penalties imposed on unqualified persons for the sale of poisons.

MACDONALD, the chemist's assistant who was last week charged at Malling with stealing from a chemist, has been further examined. He says his real name is William Shepperley, and that he has systematically obtained situations by means of forged testimonials, afterwards robbing his employers. We publish his portrait.

THE President of the Midland Counties Chemists' Association advocates a territorial representation on the Pharmaceutical Council, with the object of inducing more interest and combination in pharmaceutical affairs. A Birmingham chemist, who was present at the meeting, writes to us scoffingly in respect to it.

THE various sections of the Society of Chemical Industry have resumed work for the winter. At the London meeting Mr. Watson Smith described a new process for making nitrous oxide gas, and Professor Ramsay showed that absorbent cotton-wool yields little acetic acid on destructive distillation, but the matter removed from it yields a large quantity.

AT the evening meeting of the Pharmaceutical Society on Wednesday, Mr. Carteighe advocated that medical purchasers of poisons unknown to sellers should be treated as ordinary unknown persons. The discussion on the paper in which he expressed this view was somewhat general, and Mr. Carteighe, as President of the Society, refused to answer categorical questions put to him.

THE never-ceasing difficulties and inconveniences resulting from the seven protective tariffs in the Australasian colonies form the subject of an Editorial article. Other articles deal with the provision of an orphan fund for the orphans of members or associates of the Pharmaceutical Society exclusively, which has been resolved upon by the Pharmaceutical Council, and with the curious divergence of opinion on the Australian prescription, which we published in facsimile a fortnight ago.

POST-CARD COMPETITIONS.

WE propose to initiate a new series of post-card competitions, which will be open to subscribers and their employes and members of their families. The first of the series is open during the present month, and its object is to secure ideas, plans, sketches, or suggestions for

A CHRISTMAS DISPLAY

of goods of any kind generally sold by chemists and druggists. The display may take the form of an effective window-dressing, counter-arrangement, or any other scheme which will give prominence to the goods, which will be consistent with the season, and encourage trade or draw custom. We shall give a guinea to the person who sends in the best idea, plan, sketch, or suggestion on a post-card, reserving the right to bestow a suitable recognition upon three or more next in order of merit. Post-cards will be received from November 7 to November 30, but we ask those who compete to begin early in the month. We do not exclude from the competition any ideas which have been carried out by chemists in past Christmas seasons. These will be treated on their merits. Nor do we place any limit upon the number of post-cards which a person may send in, but the rule is strict as regards "one idea on one post-card."

Competitors will please use white post-cards if they send any sketch.

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English News.

Influenza.

Already cases of influenza are cropping up here and there in London. They are said to be true influenza, too.

Beecham's Advertisements on Sails.

At Eastbourne, last week, Charles Hide was summoned for exhibiting Beecham's pills advertisements on the sails of his boat on the beach. The summons was issued under the by-laws regulating the beach. On the application of the defendant's representative, the case was adjourned for a fortnight, on condition that the sails containing the advertisements should not be exhibited in the meantime.

Drug Contracts.

Mr. E. Millhouse, chemist and druggist, New Road, Gravesend, has been appointed chemist to the Gravesend Board of Guardians for the ensuing quarter. Mr. F. Steadman, High Street, Ashford, Kent, has been appointed chemist and druggist to the Ashford Local Board.

How the Government Treats its Dispensers.

Mr. G. C. Ewing, dispenser in charge of medical stores at the Royal Naval Hospital, Stonehouse, has been granted a pension of 17*l.* 8*s.* 4*d.* per annum after forty years' service.

Charge of Passing Counterfeit Coin.

At the Lambeth Police Court, last week, George Collins, *alias* Collier, 58, was committed for trial on a charge of uttering counterfeit coin. Only a few days before the present offence he had been released from prison upon ticket-of-leave for a similar offence. On this occasion the prisoner went to the shop of Mr. William Wills, a chemist, of the Camberwell Road, and purchased a seidlitz powder, for which he tendered what appeared to be a half-crown. The complainant gave change, and after the prisoner had left found that the coin was base. A few days after, the prisoner again came to the shop, and asked for a seidlitz powder, and put down in payment a counterfeit half-crown. Finding he was detected, the prisoner called out, "Never mind the change," and ran into the street. He was pursued and given into custody. A warder at Holloway Prison proved that in 1881 the prisoner was convicted at the Central Criminal Court for uttering counterfeit coins and sentenced to five years' penal servitude.

A Highly Improper Remedy.

The Coroner for Birmingham, on Wednesday of last week, held an inquiry respecting the death of Frederick Charles Phillips, aged 6 months, whose parents reside in Vincent Street, Balsall Heath. The child had suffered from bronchitis and inflammation of the lungs, and the mother had given him a small dose of a patent soothing-syrup. Dr. Bryce, who examined the body after death, said there was sufficient healthy lung left to have carried on life, and if professional advice had been called in the disease might have been cured. The remedy supplied was a highly improper and injurious one. A verdict of death from natural causes was returned.

Medical Education of Women.

There is a growing feeling in religious circles that the old methods of evangelising in India and other countries are capable of large reform, and the direction in which most good is expected is the encouragement of women to become medical missionaries. We observe that there is a Zenara Medical College at 58 St. George's Road, S.W., in close association with which is the Pimlico Hospital for Women and Children. Here there is a school of *materia medica*, pharmacy, &c., where ladies and nurses are taught prescribing, dispensing, and the methods of applying remedies. The student, says the prospectus, learns how to make solutions, mixtures, pills, powders, spirits, tinctures, infusions, and decoctions. The chemical principles involved in the various processes are explained. Lectures are given twice a week, and the course of instruction, which extends over a period of six months, is recognised by the various licensing boards.

Mr. Fernando Again.

On Tuesday, in the Westminster County Court, the case of Grimwade *v.* Fernando came before Judge Bayley by way of a judgment summons. The defendant, Mr. Frank Fernando, said he still carried on his chemist's business at Victoria Street, Westminster, but had several other judgments against him, one being due in a few days. His Honour: How much is that for? The Defendant: 2*l.* His Honour made an order of committal suspended for one month, but at defendant's request extended it to six weeks.

A Dishonest Errand-boy.

At the Mistley Police Court, on Monday, Walter Ernest Larter, an errand-boy, was charged with having, on November 2, stolen 5*s.* from the till in the shop of Mr. William Mann, chemist, of Clacton-on-Sea. The prosecutor (who affirmed instead of taking the oath) said he had missed money from his till, and consequently marked one pound's worth of silver and put the key in a secret drawer, where he usually kept it. On the date named he saw the lad from his office go to this secret drawer and take the key, and he afterwards heard the chink of money. At the police station two florins and one shilling were found upon the prisoner. These he identified as a portion of what he had marked. The prisoner pleaded guilty. In consideration of his youth the Magistrate, after warning the boy, said he would bind over the boy's father in the sum of 10*l.* to bring his son up for judgment when called upon.

Risks in the Travelling Medicine Trade.

At the Newport (Mon.) Police Court, on November 3, three young black men applied to the Bench for advice and assistance under the following circumstances:—The tallest and apparently the eldest of the trio said he was a native of Boston, U.S.A., and wished to invoke the aid of the law in obtaining wages legally due to himself and friends from a Dr. Dexter, who had a place of business in Cardiff at present, but who was in the habit of travelling about from town to town. About a fortnight ago "Dr. Dexter" engaged four black men to travel about with him and live in his tents. Dexter had three tents, one being a consulting-room, the second a bedroom, and the third a kitchen. Dexter sold bottles of stuff which was supposed to be an infallible cure for toothache, neuralgia, &c. The speaker took a miniature bottle of the compound from his pocket, and said it was warranted to effect an instantaneous cure. He handed the bottle to the magistrates' clerk for his personal use. It appeared that the doctor was from Texas, and he had lately pitched his tent at Pontlottyn. He sent the three blacks to Tredegar to distribute bills, stating he would be there on the following day. Instead of going to Tredegar he went with his wife to Cardiff, whilst the goods were sent to Newport. The result was that the three blacks were left without money or food at Tredegar, but they afterwards followed the tents, &c., to Newport. In reply to the Mayor, applicant said they had not had any breakfast that morning, consequently his Worship directed the Head Constable to render them what assistance he could in helping them out of their immediate distress. The Mayor also told the blacks that they might hold any of the doctor's goods until their wages were paid.

Chemist's Assistant Committed on a Charge of Libel

Mark Frater, a chemist's assistant (on the Register), has been committed for trial by the Portsmouth Magistrates on a charge of sending a libellous letter to the colonel commandant at the Eastney Barracks concerning the master tailor employed there, alleging improper conduct on the part of the latter towards his (Mr. Frater's) wife. In court both Mr. and Mrs. Frater asserted the truth of the charge he had made, but the Magistrate refused to hear the case on its merits, saying his only duty was to consider (1) whether the letter was written by the defendant, and (2) whether it was libellous. The circumstances would be for the consideration of a jury. The defendant was committed to the Assizes of his own recognisances of 50*l.*

A Druggist Charged with Theft.

Herbert Cattermole (24), of New Road, Battersea, described as a druggist, but not on the Register, was charged at the Lambeth Police Court on November 4 with stealing an

ceiving two 10l and four 5l. Bank of England notes, 22l. in gold, and a gold ring, the property of George Chambers. The prosecutor said in August last he drew the notes in question from the Birkbeck Bank and placed them in a tin box. On August 6 they were missing. The prisoner used to visit the landlord of the house in Henry Street, Kennington, where he was then lodging. The prosecutor alleged that two notes had been changed by the prisoner at the Two Brothers Tavern, New Road, Battersea, and it was attempted to show that these were two of the missing notes. Mr. Biron remanded the prisoner, but consented to take two bails in 25l. for his appearance, which were tendered and accepted.

Death of a Lady from Chloroform.

An inquest was held at Cromer on November 5, respecting the death of the wife of Mr. Sydney Buxton, M.P. (daughter of Sir John Lubbock), who was found dead in bed. When found she was clutching in her right hand a bottle which had contained chloroform, and a handkerchief. She had bought 2 oz. of chloroform on the previous day from Mr. David Dalley, chemist and druggist, Cromer. She had suffered lately from sleeplessness and headache. A verdict of accidental death was returned.

Robbing Employers.

At the Birmingham Police Court on November 7, James Birch, aged 27, was charged with stealing twenty-eight calico polishing-buffs, 30 lbs. of cyanide of potassium, eleven brushes, and nine bars of polish from his employers, Messrs. Canning & Co., chemists, Great Hampton Street. Thomas Wood was charged with unlawfully receiving the goods. Both men confessed their guilt, and were sent to gaol for three months with hard labour.

The Supply of Chloride of Lime to Local Boards.

At the meeting of the West Cowes Local Board last week, a letter was read from Mr. W. H. Hewitt, chemist, stating that he saw by the newspaper reports that the supply of chloride of lime was under consideration, and he should be glad to serve the Board. Messrs. Hewitt & Son had been supplying it, but it seemed to him more fitting that an article like this, on which, to a great extent, the health of the town depended, should be supplied by a chemist who was in a position to know what he was selling, rather than by a grocer or other tradesman—(laughter)—who could not be expected to know if the article contained 15 or 30 per cent. of chlorine. Mr. Mundell moved that tenders be called for. This was seconded by Mr. Hewitt, but he afterwards said he believed the Board had already resolved that they should not ask for tenders. Mr. Atkey said at the present time the Board's officers were able to buy this article where they considered it most advisable, and he moved that the present system be continued. Seconded by Mr. Fellows, sen., and carried, Mr. Mundell withdrawing his motion.

Advertising Ideas.

The following is cut from the *Spalding Free Press* :—

CORN DESTROYER—Why suffer from corns when a box or jar of Corn Destroyer by J. SMITH, cutler and grinder, 13 South Street, SLEAFORD, will effectually remove them never to return. This great secret has only been discovered by deep study, and J. S. offers to return 2s. to any person who can prove that the ointment has been unsuccessful. [Then follow directions for use, price, &c.] N.B.—Umbrellas re-covered from 1s. upwards. Gibson, chemist, agent for Spalding.

The following is quoted from a price-list issued by Jesse Williams & Co., pharmaceutical chemists, Cardiff :—

As we hope to be amongst you, as guardians of your health, for many a long day yet, it will not pay us to sell goods which will not give satisfaction. In medicine quality is the first consideration, but don't you forget that if you give 25s. for a sovereign you give too much. Firms who talk of quality only, and stick up the price above the reach of the masses, are no better than firms who sell inferior drugs at a low rate. The one is a humbug and the other is a swindler.

Our idea is to sell the best article at a price profitable to ourselves, and yet within the reach of everybody. To put it short, 20s. for a pound is the game that pays in the long run.

We started our show in January, 1885. Since then we have served over 1,000,000 (one million) customers. It is evident there is something about our business very different to the regular run of chemists.

We may say the Proprietor comes of a family of very successful chemists

—Mr. D. P. Roberts, chemist, North End, Croydon (far away the biggest concern in the neighbourhood); Mr. Frosser Roberts, pharmaceutical chemist, 13 Church Street, Camberwell, and 239 Walworth Road, London (also the biggest concern in that neighbourhood); and Mr. Jesse Williams, whom you all know about here, were all brought up under the same roof; but, then, we didn't leave our ideas in the roof, neither did we lock them up in the back parlour, but we have given them to the people, and in return the people have liberally patronised us.

Will you give us a turn? You will. Thank you.

Defective Durham Drugs.

The Durham County Analyst (Mr. W. F. K. Stock), in his quarterly report, says :—"A sample of spirit of nitrous ether, purchased and paid for as the standard article, was found to be deficient in the essential nitrous ether to the extent of no less than 60 per cent., after the very generous allowance of 20 per cent. had been made for 'lost by evaporation.' A sample of tincture of rhubarb was analysed, in which 14.50 per cent. of the proof spirit had been replaced by water."

Mr. Sargent's Letters.

Mr. Sargent is adding to his anxieties by looking after the enforcement of the Excise laws as well as the Pharmacy Act. Mr. James Lees, of Lees Road, Oldham, sends us the following communication in the familiar handwriting :—

November 1, 1892.

Violations of the Pharmacy Act, 1868, in the plurality of shops, &c. by one person or persons, with violations of the Excise Act, 1890, section 9, in the plurality of licences.

LICENCES.

DEAR SIR,—I am desired to state this subject has been transferred by the Home Secretary to the Inland Revenue Commissioners in the settlement, the Act 1890 not admitting of plural, off, or wholesale and retail licences together. Your attention is earnestly demanded. Further reference to the Town Council, Police, and Excise, &c., &c.

Yours truly,

Mr. James Lees.

G. W. SARGENT.

Alleged Fraud on Chemists.

The man Robert Williams, who, as reported last week, was charged with cheating a chemist and other tradesmen at Bamber Bridge by buying some trifling article, paying for it with one coin and then with another, transferring only a part of the change to its proper owner, was, on November 4, committed to the Preston Sessions for trial, there being a long list of previous convictions against him. Prisoner had been found guilty of a similar offence at the Manchester Assizes, and committed to gaol for eighteen months, having only just completed his term of imprisonment.

Purchasing Poison.

At Islington, on Monday evening, Dr. G. Danford Thomas held an inquiry touching the death of Sarah Elizabeth Gurl (53), a widow, employed as a domestic servant in the Essex Road. It transpired that she had bought from the shop of Mr. W. McGeorge, 346 Essex Road, a packet of "Cobra vermin-killer"—a preparation of the chemist's own making, which contained, he said, $1\frac{1}{2}$ gr. of strychnine per packet. The deceased was known as Mr. Jackson's servant, and had previously purchased similar packets for the destruction of vermin, for which she said she wanted another packet. The deceased signed the poison-sales book as "Mary Coombe," and every requirement of the law was observed, the packet being duly labelled. The Coroner: These precautions the chemist is bound by law to take, but you may take a ginger-beer bottle to an oilman's and have it filled with carbolic acid enough to kill a dozen people without let or hindrance of any kind, and no question will be asked.

The *Daily Chronicle's* comment on this case is curious, to say the least. The *Chronicle* confirms the statement that carbolic acid can be obtained with absurd ease, and adds :—"It would be a pity if it were otherwise, for it is an excellent disinfectant, and it is useless for the purposes of such men as Neill. But packets which contain $1\frac{1}{2}$ gr. of strychnine in each should only be sold when there is a witness to certify to the purpose for which the poison is required. The law was fully complied with in the case, but it is obviously defective."

Chemist's Suicide at Guildford.

An inquest was held at Guildford, on November 2, on the body of Frederick Bavis Bingley, aged 54, chemist, of the High Street, who on Tuesday last week was found dead in bed, examination subsequently showing that he had taken a considerable quantity of prussic acid. It was stated that deceased was in pecuniary difficulties, and owed his landlord more than nine months' rent. He had promised to give up possession of the shop on the previous Monday, and told his landlord on the evening of that day that his only alternative was the Union. The latter stated at the inquest that he asked him if he had any friends who would assist him. Deceased replied that he only had one brother, and it would be useless for him to see him, as they had not been friends for many years. Witness then asked him if he would allow him (witness) to see his brother, to which the deceased gladly assented. He then gave witness his brother's address, and he took a train to Barnes, saw his brother, and explained to him the deceased's difficulties. His brother said that he had already rendered all the assistance he could, and that he was not in a position to help the deceased further. The deceased's brother gave witness a sovereign for him. Witness got back to Guildford about half-past 9 in the evening, when he saw the deceased and told him the result of his interview. Deceased said, "Then it's all up with me," and asked whether he was to go out that night. Witness told him that he would rather he did so, and gave him half a sovereign in addition to the other sovereign to pay his hotel expenses for the night. Deceased said it would be a great favour if witness would allow him to remain until the morning. Witness gave the deceased permission to remain, and promised to see him at 9 o'clock the following morning. At 7 o'clock the next morning witness saw blue smoke issuing from the deceased's kitchen chimney, and at half-past 8 Mr. Currington came across the road and spoke to witness, saying that he thought there must be something wrong with Mr. Bingley, as the boy could not obtain admittance. Witness called the boy in, and from what he stated witness went to the police-station. Accompanied by a police-sergeant, witness went back to the house. On the top floor in the front room they found the deceased lying dead in bed. Witness did not notice any bottles near the deceased.

Medical evidence showed that the deceased died from taking prussic acid.

The Coroner then read the following letter which the deceased had addressed to Mr. H. Portsmouth, the relieving-officer:—

12 High Street, October 29, 1892.
DEAR SIR,—Will you be so good as to send me on Monday morning an order for admission to the workhouse for that date (October 31)? Please state the latest hour for entering. I declare myself as requiring shelter at that date.
Yours truly,
F. B. BINGLEY.

The Coroner said that at the bottom of this letter the deceased signed his name, "F. B. Bingley, aged 53, born at Pinhoe, Devon." The deceased had written another letter addressed to Mrs. Speck, who was in the habit of doing housework for him. The letter, which was found on the mantelpiece of the room in which deceased died, ran as follows:—

I leave you the only penny I have and my favourite ring. Will you take my clothes, giving receipt for what you think useful for you? Also a good character if asked for. Pick out all the photographs you like, and burn the others. Will you have the hair and ring buried with my body? It is better to have loved and lost than never to have loved at all. Let my body be buried as a pauper in unconsecrated ground, with no funeral service, no mourners, and peace and charity for us all.

Your obedient friend,
F. B. BINGLEY.

The foreman asked what had become of the sovereign and half-sovereign which Mr. Newham had given the deceased. Mr. T. Hook (the Coroner's officer) said that he had thoroughly searched the deceased's premises in company with the Coroner, but could not find the money. Perhaps when the furniture in the house was cleared out the money might be found.

The Coroner, in summing up, said he thought there could not be any doubt in the mind of the jury as to the insanity of the deceased at the time he committed the rash act. Men held life too dearly to take it away when they were in their proper senses, and his experience was that in almost every case of suicide the deceased were more or less insane. The jury returned a verdict of suicide whilst temporarily insane.

Deficient Seidlitz powders.

At Dewsbury Police Court on Friday the Heckmondwike Co-operative Society was summoned for selling seidlitz-powders not of the nature, substance, and quality demanded, and Mr. Redfearn, secretary of the Society, appeared. The powders were purchased at the branch stores at Hightown by Inspector Bridge. On being analysed they were found to be deficient by $8\frac{1}{2}$ grains. Mr. Hines, of Bradford, appeared for the makers, and stated that there was not the slightest intention of the makers or the Society to defraud; the powders were made before the law was altered with regard to the preparation of the purchased article. The Chairman (Mr. F. Ellis) said he was of the same opinion, and the Society was simply ordered to pay the nominal fine of 1s. and costs.

Irish News.

The Reduction of Penalties.

The recent decision of the Magistrate at Templemore, who refused to increase the fine of 1s. to 5s. in the case of a grocer selling a scheduled poison, as reported last week, raises a nice point, which is to be tested in the law-courts. Section 30 of the Pharmacy Act of 1875 says the offender "shall for every such offence be liable to pay a penalty of five pounds." But section 15 of the Pharmacy Act Amendment Act, 1890, says, "shall for every such offence be liable to pay a penalty not exceeding five pounds." The Magistrate holds that the insertion of the words "not exceeding" invests him with a discretionary power to inflict a fine of less than five pounds, and that, as section 23 of the Amendment Act provides, "This Act and the principal Act shall be read together and construed as one Act," he is at liberty to apply such discretion in prosecutions brought under section 30 of the original Act of 1875.

The Druggist's Licence not Valid in Victoria.

An Irish registered chemist and druggist, in the person of Mr. Thomas McDowell, late of Bangor, co. Antrim, now residing at Ballarat, South Australia, has been refused a certificate as a dealer in poisons by the Pharmacy Board of Victoria, the reason assigned being "that in view of former decisions of the Board, this qualification could not be recognised." Mr. McDowell is registered as a chemist and druggist under the Amendment Act of 1890. The Victoria Board of Pharmacy accept the licence of the Pharmaceutical Society of Ireland.

Tempting Chemists.

A provincial doctor, formerly a chemist, has been endeavouring, under an assumed name, to obtain medical advice from unqualified people in Dublin, and shows himself anxious that they should accept a fee. We have not heard of any victims.

Prizes.

At the recent distribution of prizes in connection with the schools of the Royal College of Surgeons, Dublin, the following were awarded:—For *Chemistry*—M. J. Carroll and E. W. Sillery (equal), first prize, medals and cheques. *Practical Chemistry*—H. Eardley, first prize, medal and cheque; H. J. Conyngham, second prize, certificate and cheque. *Pharmacy*—R. M. Hamilton, first prize, medal and cheque; H. B. Montgomery, second prize, certificate and cheque. *Medical*—E. J. Moore, first prize, medal and cheque; E. Meeke, second prize, certificate and cheque.

Scotch News.

A Chemist's Wife Divorced.

In the Court of Session, Edinburgh, on Saturday, Andrew Ferguson McAdam, chemist (no., however, on the register of chemists and druggists), 514 St. Vincent Street, Glasgow, sought a divorce from his wife, Jane Taylor or McAdam, supposed to be at Holland, Manitoba. Pursuer said he was 31 years of age, and was married to defender in June, 1831. Three months after marriage he noticed there were occasional outbursts of intoxication. She pawned his goods, and since 1833 has had a child of which he was not the father. He forgave that, thinking it would be a turning-point in her life. She broke out again and cleared the house. When he spoke to her about this she swallowed vermin-killer, and her life was saved with difficulty. He again furnished the house, in order to help her to reform, but she cleared it out a third time. After that she went to live with her father, and had frequently declined to go back to her husband. Lord Low granted a divorce.

Dundee News.

Dundee will shortly be lighted with electricity. Messrs. J. Hardie & Son have decided to adopt the new illuminant, which will doubtless prove much healthier than gas-lighting.

Restricting the Gaiety.

The committee of the Edinburgh Chemists' Assistants' and Apprentices' Association has decided to forego the annual *conversations* this year, and to unite with the Edinburgh Pharmacy Athletic Club in holding an assembly in the Literary Institute on December 9, 1892. Tickets are to be sold at popular prices—gentlemen 7s. 6d., ladies 5s., apprentices 3s. Surplus proceeds are to be equally divided between the two Associations, to be employed for the furtherance of their respective objects.

The Edinburgh Local Committee

of the Pharmaceutical Conference have now made up a statement of the income and expenditure in connection with the Conference meeting and it is highly satisfactory, showing, as it does, a balance on hand amounting to nearly 30l. A meeting of the committee will be held shortly to consider as to the disposal of the surplus.

MUNICIPAL HONOURS.

Councillor W. Parkinson, of the firm of R. Parkinson & Sons, chemists, Barnley, was on November 9 made an alderman, and unanimously re-elected Mayor of Barnley. Whilst in the Council he has given his attention specially to the sanitary work of the borough.

Mr. Councillor Jonathan Phillips was returned for the fifth time for All Saints' Ward, Wigan, by 559 votes to his opponent's 175. Mr. Phillips has been Chairman of the Sanitary Committee for several years, and is looked upon as a somewhat advanced sanitarian.

Three of the newly-elected Welsh mayors are chemists and druggists. Mr. E. Ceredig Evans, who was on Wednesday elected Mayor of Cardigan, is the son of Captain John Evans, of New Quay. Born in 1852, he was apprenticed to Mr. J. D. Treharne, chemist, of Cardiff, and, proceeding to London, qualified at an early age. Succeeding to the business of the late Mr. John Williams, chemist, High Street, Cardigan, seventeen years ago, he has conducted it successfully up to the present time. He has held a seat in the Town Council for over seven years; is a director of the Cardigan Gas Company and of the Cardigan Mercantile Company, and vice-chairman of the Burial Board.

Mr. John Llewellyn, Mayor of Cowbridge, was born in that town on March 19, 1844. He was articled at an early age to his uncle, Mr. Thomas Lister, chemist, of Cowbridge, and in the ordinary course qualified as a chemist and druggist, becoming later a pharmaceutical chemist by examination. On Mr. Lister's death in 1874, Mr. Llewellyn succeeded to his business, which he has since carried on very successfully. He was a councillor of the old corporation of Cowbridge, which was dissolved by Act of Parliament in 1866, and he

was the only member of that body who succeeded in being elected on the new council. He is a director of the Cowbridge Gas Company and of the Glamorgan Steam Joinery Company.

Mr. Alderman Jenkin William Evans, the Mayor of Lampeter, was born at Glanbran Farm, in the parish of Cilcennin. After receiving his education at Aberayron Grammar School and at the Jasper House Grammar School, Aberystwith, he was apprenticed to the late Mr. Wm. Griffith, chemist, Aberayron. Upon the completion of his term he removed to London, where he remained for a few years. In 1857 he commenced business at Lampeter as a chemist and druggist, and has been very successful. He has taken an active interest in public affairs, having been a member of the old Local Board for a great number of years, and also a member of the Town Council since the incorporation of the borough in 1884, as well as one of its first aldermen.

Mr. Alderman William Mount has been re-elected Mayor of Canterbury; Mr. Arthur G. Gamble has been chosen for Grantham; Mr. George Strawson for Bishop's Castle; Mr. Jonathan Slater for Wells (third time); Mr. Alderman D. J. Paterson for Mansfield; Mr. Alderman Wild for Hyde (second year); Mr. Alderman William Merry for Ilkeston; and Mr. Alfred Ream for King's Lynn.

Mr. J. J. Perkins, chemist and druggist, has been for the third time returned unopposed to the Lichfield City Council.

Mr. E. H. Dyer, pharmaceutical chemist, has been unanimously elected to fill a vacancy in the Honiton Town Council.

Mr. Andrew Thompson, chemist, has been re-elected to the Carlisle Town Council.

Mr. T. C. Lamb, chemist, High Street, Chatham, has been elected as a Liberal member for the St. Mary's Ward to the Chatham Town Council.

Mr. Valentine Norman, chemist and druggist, Godalming, has been elected to the new Council of the lately-formed extended borough.

Mr. R. E. Smith, who has been elected a member of the Hastings Town Council, is a native of the town, having been born at the dispensary in High Street, where his father was dispenser for years. Mr. Smith acted as dispensing assistant for many years.

Mr. H. A. Costerton, senior partner in the firm of Headland & Co., Brighton, was returned at the head of the poll for the West Ward at the recent municipal election.

In Scotland.

Mr. John Andrew, chemist, Camnock, has been elected a burgh commissioner.

Mr. R. A. McIvor, chemist, has been elected a member of the Eyemouth burgh commission.

Councillor Charles Hicks, chemist, Rothesay, has again been returned to the town council.

Mr. David Lamont, chemist, Inchinnan Road, Renfrew, is one of the new councillors for the burgh.

Ex Bailie J. C. Sharp, chemist, Musselburgh, who had long been a councillor and magistrate of the burgh, but retired some months ago owing to ill health, has again been elected to the council and appointed a magistrate.

Mr. David S. Robertson, chemist, has been returned at the top of the poll in the first ward of the Royal Burgh of Ratherglen, N.B., as their representative in the Town Council.

Mr. William Doig, chemist, Dundee, has been raised to the magistracy of the burgh. One half the present occupants of the magisterial bench of this ancient royal burgh are chemists—Messrs. Ferrier, McKinnon, and Doig, who hold the first, second, and third bailihips respectively.

ENGLISH-DRAWN OIL OF SWEET ALMONDS.—The United States Consul in Liverpool recently received orders from his Government to inquire into the manufacture of oil of sweet almonds in England. He reports that two London firms, whom he names, seem to be the principal, if not the only, firms in England engaged in this business. The kernels are crushed by hydraulic pressure, and from the cake thus formed the oil is distilled. The same process is carried on in Havre; but it is said that there the kernel of the peach is used instead of the almond, and that, consequently, the oil is cheaper in price and not so good.

French Pharmaceutical News.

(From our Paris Correspondent.)

FATAL RESULT OF EXAMINATIONS.—A young pharmacist's assistant, named Clauzel, committed suicide last Sunday at Marseilles under painful circumstances. He had repeatedly failed at his examinations, and, in despair, took several grains of sulphate of strychnine. He expired three hours later, a prey to terrible sufferings. He obstinately refused all antidotes.

CARBOLIC ACID AS A DETECTIVE.—Parisians have been much exercised for a week past concerning a horrible discovery of the decapitated remains of a woman in an empty house in an outlying district of the city. Everything points to a crime of the worst nature, but there was no clue to follow except the very slight one that the remains smelt strongly of carbolic acid. M. Monquin, Police Commissary, has, however, received a statement from the proprietor of the Faubourg Montmartre Pharmacy to the effect that an individual purchased a kilogramme of carbolic acid from him on the eve of the crime being discovered. The pharmacist was able to furnish a description of his doubtful customer which may assist the authorities.

THE SALE OF A SPECIALITY.—The Paris Court of Cassation has recently rendered judgment in an interesting case concerning the sale of a pharmaceutical speciality. The facts are as follows:—In 1887 M. Nativelle, manufacturer of a special crystallised digitalin, disposed of his entire rights in the same to a M. Martignac. This sale comprised Nativelle's name, his trade-mark, processes, material for manufacturing, &c., without reserve. The terms were a certain sum in cash, and the vendor was to receive half the profits for life. In course of time, however, things did not go on satisfactorily, and Nativelle claimed that he still retained a full partnership in the concern. But Martignac did not look at the matter in the same light, and the Court of Cassation has supported him. The judgment sets forth that in the contract of sale there is nothing to show the existence in the future of a partnership. Although the plaintiff reserved to himself a half-share in the profits of the business, he ran no risk in case of loss; consequently, the Court considered the defendant justified in refusing Nativelle the privileges of a partner, and decided accordingly.

THE QUESTION OF FREE MEDICAMENTS AT HOSPITALS.—In their own interests, as well as in that of pharmacists, the Syndicate of Doctors of the Seine have issued what they term "a note on the subject of dispensaries and hospitals for consideration by the Municipal Councillors of Paris." In this document attention is drawn to a certain number of cases, prejudicial alike to pharmacists, doctors, and to the deserving poor, of persons in good circumstances who obtain advice and medicines gratuitously. It appears, however, that the extent of the abuse has been unduly magnified, as an inquiry at the Public Relief Department shows. Cases of the kind undoubtedly exist, but the precautions taken by the authorities render them rare. All patients who apply at a hospital are admitted immediately if their condition necessitates it; but if, on inquiry, the invalid is found to be able to afford payment, a charge at the rate of 3f. 30c. per day is made. It is evident that the surroundings of a hospital do not encourage well-to-do people to go there. Free consultations are given at the Paris hospitals almost indiscriminately, but in very few does this include the free supply of medicaments. The exceptions to these are three children's and three special hospitals. As a matter of fact, the abuses are combated as much as possible, and neither pharmacists nor doctors have any great cause for complaint.

PHARMACY AT THE THEATRE.—Under the title of "Le Brillant Achille," at the Renaissance Theatre, pharmacy has again been made the subject of a play—this time in the form of an operetta. A worthy pharmacist, M. Ledouillet, has a daughter, Mlle Rose, who is madly in love with the handsome Achille Toupard, whose acquaintance she has made at Etretat. But the father is anxious that the young lady should marry his assistant Bonami, and in order to bring

this about he ingeniously sends out cards announcing his daughter's marriage with the assistant—of course, without consulting the interested parties. This is managed so well that Achille firmly believes Rose to be married, and when, after a year's absence, he again appears at the pharmacy, it is under the impression that she is a married woman. Here the inevitable salacious part of the story commences, the attractions being enhanced by witty dialogue and comic situations. The upshot of all is that Rose declares herself not to be married, but says she will have Achille, and M. Ledouillet discovers that he has schemed to no purpose. The handsome intriguer is caught by his own trap, and finally marries the young lady. Bonami, the assistant, supplies the comic element to the piece, and in some extraordinary way manages to find his way to the nuptial chamber in the lightest of bathing costumes. MM. C. Clairville and F. Baissier are responsible for the words of the piece, and M. L. Varney contributed the music.

MEDICAL AND PHARMACEUTICAL RELIEF.—The Department of the Seine Inférieure is about to inaugurate a revised system of public relief as regards medical aid and medicaments. In connection therewith the Prefect has issued a list of regulations comprising twenty-five articles, which are divided under four headings as follows:—(1) General dispositions, (2) establishing lists of deserving poor, (3) medical service, (4) accounts. On paper the organisation appears complicated, but it may work smoothly in practice. The medicaments supplied by pharmacists are to be charged by a special tariff, which is very low, but in case the sums voted for the public relief do not cover the expenses a further reduction, which cannot surpass 20 per cent., will be made on the pharmacist's accounts. The lists of the deserving poor are to be drawn up by the Municipal Councillors in each district, who will be aided in their labours by a medical man and a pharmacist, each nominated by their colleagues. The patients are to have the right of selecting their medical attendant and pharmacist. But there will be no favouritism; all members of the profession in the entire department can prescribe for the poor if they accept the tariff. Pharmaceutical specialities and mineral waters are especially noted as luxuries, and must be paid for apart. The pharmacists will only be reimbursed once a year for the medicines supplied. The accounts are to be made up annually on January 15, each statement having its prescription attached, and after they have been examined and passed by a commission which is to include three pharmacists, payment will be made.

LA SOCIÉTÉ DE THÉRAPEUTIQUE.—The last meeting of this Society, under the presidency of M. Labbé was entirely devoted to reading a summary on the work accomplished during the 1891-92 session and to a communication by M. Adrian on the use of sulphuric acid and sulphuric acid of soda. The report was read by Dr. Bardet, assistant secretary. He confined himself to comparing the business of the last three years, and was able to prove a considerable increase in the number of scientific communications made to the Society, besides which the questions treated have improved as regards their value to therapeutics. Dr. Bardet showed that the papers and observations on diphtheria and its treatment, salts of strontium, benzonaphthol, benzoate of bismuth, solutions of digitalin, &c., have been extremely profitable to science. M. Adrian, in presenting his paper on sulphuric acid and sulphuric acid of soda, remarked that since the communications of MM. Berlioz and Ruante on the solvent properties of sulphuric acid its employment in therapeutics has been much generalised. Druggists now prepare it in large quantities, but he has noticed that the article varies with each manufacturer. M. Adrian finds there exists in the drug trade, in addition to the sulphuric acids used for dyeing, two compounds—one, sulphuric acid, an oily liquid obtained by treating castor oil with sulphuric acid and adding carbonate of soda until exact saturation; the other, sulphuric acid of soda, a soapy mass with alkaline reaction and absolutely inert. M. Adrian has followed exactly the process indicated by M. Berlioz, and expressed the opinion that it would be useful to specify that sulphuric acid is the real medicament, and the only one that ought to be employed. He thinks errors in compounding would be avoided by this means.

Foreign and Colonial News.

CUTTING is very severe in San Francisco at present owing to the fact that a new firm with abundant capital has started there on rock-bottom lines. Hitherto San Francisco druggists have been wonderfully loyal in the matter of prices.

DAMAGE TO A HAMBURG CHEMICAL-WORKS.—The chemical-factory of Sthainer, Noack & Co., in Hamburg, has suffered considerable damage recently by a fire which in an adjoining warehouse destroyed three million marks' worth of goods.

IN CHICAGO an Apothecaries' Society has recently been formed, the immediate object being to make arrangements for the entertainment of pharmaceutical visitors while the World's Fair is open. The initiation fee of \$25 and annual subscription of \$24 indicate a short life for the Society.

HONOURS FOR M. PASTEUR—The French Academy of Science has resolved to open an international subscription with the object of presenting M. Pasteur, on the occasion of his seventieth birthday, on December 27, with a testimonial expressive of the esteem in which he is held by savants throughout the world.

PUNISHMENT FOR REVENUE FRAUD IN GERMANY.—Distiller Leo Lewek, of Posen, Germany, has recently been sentenced to twelve months' imprisonment and a fine of 0.169m. for having defrauded the Revenue by successfully claiming drawback of duty upon alcohol which he had falsely declared to have been exported.

NEW SODA-WATER PROCESS.—A Berlin firm have applied for a patent for an invention by which the carbonic-acid gas is transferred out of a metal container in which it is kept under high pressure directly into the glass bottle which has first been filled with water, thus avoiding the use of all complicated machinery. It is possible—so the account runs—to fill 50 bottles per hour at a total cost of about 4d.

TO THE GLORY OF SCHEELÉ—The one hundred and fiftieth anniversary of the birth of Scheele, the great Swedish chemist, on December 9, is to be made the occasion of a great celebration in his native country. In Stockholm a splendid monument to Scheele's memory is to be unveiled. His collected works, also, are soon to be published by Baron Nordenskjöld, and every effort is to be made to revive interest in the famous chemist.

U.S. TRADE-MARKS.—The following were registered at Washington on October 3:—"Hall's Infallible Scotch Cure," for proprietary medicine for the cure of rheumatism, dyspepsia, and diseases of the blood, by Maynard D. Brown, Glasgow, Scotland; "Gyne Vita," for medicines for the local treatment of diseases peculiar to women, by Gyne Vita Manufacturing Company, Philadelphia, Pa. Registered October 25:—"Electropoise," for electro curative apparatus, by Electrolibration Company, Birmingham, Ala.

THE NITRATE-TRADE AT CHICAGO.—The Government of Chili has decided to contribute the sum of 2,000l. in aid of the like sum appropriated by the nitrate combination for the purpose of developing the consumption of nitrate of soda and of providing for an exhibit on the most complete scale of nitrate and its by-product, iodine, at the Chicago Exposition. The annual subscription of 1,000l. by the Nitrate Railways Company for the advancement of the nitrate industry will this year be also applied to the same object.

THE REGISTRATION OF FIRMS ACT became law in Victoria on September 1, and will come into operation from January 1 next. After that date all businesses, old as well as new, carried on under a name which does not specify all the partners, or which does more than that, must be registered. Firms already in business are allowed three months from the commencement of the Act in which to register, and new firms must be registered before commencing business. A fee of not more than 5s. will be charged for each registration, and default carries a penalty of 5l. for the first, and 10l. for every subsequent, conviction.

A CHEMIST WRONGFULLY DECLARED MAD.—The pharmacy in a small town in Bosnia remained closed for some

days recently, the chemist being laid up with a severe attack of kidney-affection. The pharmacist was gradually recovering, but still unable to give unremitting attention to his business, when the authorities suddenly appeared, and shut up his shop by force, giving as their reason that the chemist had been reported mad by his neighbours. After several days spent in vain endeavours the pharmacist succeeded in convincing the authorities of his sanity, and they released their hold upon his shop. He reopened the business, but has since been obliged to sell it.

COD-LIVER OIL MANUFACTURE IN NEWFOUNDLAND.—The process of manufacturing cod-liver oil at Portugal Cove, Newfoundland, is as follows: It requires, as a rule, 2½ gallons of liver to produce a gallon of oil. The livers are first carefully washed, and must then be "cooked" at once. For this process they are first put into a large tin boiler, which is plunged into a large iron boiler filled with hot water, the water not being allowed to touch the livers, which are thus gently steamed till a quantity of oil is floating on the surface. This is dipped out and filtered through bags of molskin. The last filtration leaves the oil perfectly transparent, and without any unpleasant taste or smell. The oil is exported in 60-gallon casks.

THE NATIONALISATION OF RUSSIAN PHARMACIES.—The semi-official *Moscow Gazette* states that "in Government circle in Russia there is a constantly-growing belief in the necessity of transferring all pharmacies in the country to the Government. The present owners of pharmacies (says the *Gazette*) make such enormous profits that even if the cost of all medicines were reduced by 25 per cent. the revenue of the pharmacies would suffice for the support of the head of the establishment, with his staff of assistants, and of one or more doctors to be located at each pharmacy to provide medical assistance gratis for the poorer classes. Moreover, if transferred to Government care, it would be possible to extend widely the free distribution of drugs to the poor."

THREATENED ATTACK ON ENGLISH PILL-MAKERS.—We clip this paragraph from the *Pharmaceutical Era*, whose Philadelphia correspondent is responsible for it:—"The United States will soon thrust another thorn into the sides of our English brethren, which will perhaps prick more and go in deeper than many of the previous ones. The cause of all this is one of the leading drug manufacturers in this city, who is now making quinine pills in such a way and at such a low figure that it places the price of them far beneath those manufactured by the drug manufacturers of Europe. As soon as it was found that the quinine trade was being engulfed by European houses, Powers & Weightman engaged in the manufacture of quinine pills compressed by weight, which is quite an innovation to the trade, and they are sold at a figure slightly above the cost of manufacture." Now, what does this mean—Yankee bunkum or business?

CANADIAN NOTES.—A correspondent of the *Canadian Druggist* states that as the Pharmaceutical Society of Great Britain refuses to accept the diploma of the Pharmaceutical Association of the Province of Quebec, a feeling has arisen in Montreal against accepting their diploma there, and a good many licentiates advocate the passing of a specific resolution to that effect. We have heard of that before, but it is well that Canadian pharmacists should know that the British Pharmacy Act gives no authority for the acceptance of diplomas for registration.—The Dominion Disinfectant Company has been registered, with a capital of \$5,000, for the purpose of manufacturing disinfectants, particularly of "Roberts' ozonator" with "sanitas fluid." The company's place of business is in Montreal.—A Montreal physician has been fined \$25 and costs for keeping an open drug-store and at the same time acting as a physician, in defiance of the Pharmacy Act. He was also fined the same amount for habitually leaving his drug-store in charge of an apprentice.—The Ontario College of Pharmacy is the richer by a bequest of \$3,000 from the late Mr. J. H. Roberts, of Ottawa.

"TOBACI FOLIA": AN EXPECTORANT SEDATIVE.—Mr. James Jones, a chemist, of Long Street, Cape Town, was summoned the other day for contravening the Sabbath Observance Act by selling cigars on a Sunday. Defendant boldly pleaded that tobacco was a drug mentioned in the Pharmacopœia, and that, therefore, he was justified in selling

it. He maintained that all the chemists in Cape Town did the same, and proposed, if necessary, to call them as witnesses—a suggestion to which the Magistrate demurred, on the score of the limited time at the disposal of the Court. The defendant, in the course of his evidence, said he had been a registered chemist in the colony for ten years; he had always sold cigars on Sundays; he had never been warned against selling tobacco.

The Magistrate: Do you sell these cigars as a medicine?—Yes: and I sell opium for smoking continually on a Sunday.

Chief Inspector Clarke: Were these cigars sold as a medicine?—Yes.

The Magistrate: Were these cigars sold under the prescription of a medical man?—No.

Mr. Mortimer Tohill, chemist, Buitengracht Street, in giving evidence for the defence, said that it had always been his custom, and the custom of chemists generally, to sell tobacco as a drug; he kept it as an expectorant sedative, and he had never been warned in any way that it was unlawful sale.

The Magistrate said he did not himself see any great harm in chemists selling cigars on Sunday; but if he were called upon to uphold the law on the subject he had no alternative but to say that it was unlawful. This was the first case of the kind, and the defendant was not warned; but it was unlawful under the ordinance, and if they sold cigars after this they would do so at their own peril. The case was then withdrawn by consent of the prosecution.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on Wednesday, November 2, at the Society's House, 67 Lower Mount Street, Dublin, at 3 P.M. Present: the President (Mr. William Hayes), in the chair; Mr. Beggs (Vice-President); Messrs. Wells, Hodgson, Grindley, Lyons, Charles Evans, Conynghame, Dr. Burnes, Simpson, and Downs.

MR. GIBSON'S NOMINATIONS.

The PRESIDENT read the following letter from Mr. Samuel Gibson:—

71 and 73, King Street, Belfast, October 6, 1892.

MY DEAR MR. HAYES,—I need scarcely tell you that I was much pleased at the conciliatory spirit shown towards the druggists yesterday, and only hope that it will continue. There is no reason why it should not be so. There was a matter that I intended to have brought forward, but did not wish to disturb the improved tone by raking up old sores; but I feel rather hurt by the reference which you and Mr. Wells made at the special meeting in saying that the names proposed by me were a bogus collection. The facts of the case are as follows:—I received the names from several of our Chemist and Druggist Association committee in Belfast, and, instead of writing them out, I marked them in a copy of the Calendar. After the meeting, I wrote to Mr. Ferrall asking him to write to them to forward him their subscriptions, as he had done before. He replied on October 8 asking me to apply to them myself, as he was very busy. At once, on getting the supplemental notice, I wrote asking them to forward me their subscriptions. I did not get their replies until the morning of the special meeting. I wired to Mr. Boyd to guarantee them on my behalf, but, unfortunately, he did not get the telegram until after he had left for Council. This makes it clear that I was not proposing "bogus" members. I would, therefore, ask that you either set me right before our members and associates by a letter to THE CHEMIST AND DRUGGIST, or refer to the matter at next meeting of the Council.

Yours truly,
SAMUEL GIBSON.

The PRESIDENT added that it was only right that the above letter should be publicly read in order that Mr. Gibson's explanation should go forth to the members.

MISCELLANEOUS CORRESPONDENCE.

A letter was read from the editor of the *British and Colonial Druggist* thanking the Council for having given him permission to obtain the names of the successful candidates at the examinations.

Letters were received from Messrs. Lewis Murray, M.P.S.I.; John H. Shaw and Thomas Maxwell, A.D. and H. A. Kelso,

S. Robb, C. A. Wray, and E. L. Gilbert, L.P.S.I., notifying changes of address.

Letters from Messrs. William Alexander, J. J. McTighe, and J. Pelan requested that their names should be removed from the list of associate druggists.

A letter from Mr. S. Templeton, of 44 Dublin Road, Belfast, asked that certificates of attendance at his laboratory should be recognised as evidence of chemical training. Mr. Templeton stated that his laboratory was suitably furnished, and included special arrangements for pharmaceutical students, and had a library of five hundred volumes. It was open daily from 10 o'clock until 4 P.M., and in the evenings from 7 to 10. He was willing that it should be open for the inspection either of local members of the Society or of a committee appointed for the purpose.

Mr. LYONS (Belfast) said the opinion of the Belfast members of the Society was that another chemical school in that city should be recognised by the Council.

Mr. WELLS moved that Messrs. Payne, Montgomery, and Lyons be requested to visit and report to the Council on Mr. Templeton's chemical school.

Mr. GRINDLEY seconded the motion, which was unanimously agreed to.

THE NEW COUNCILLOR.

A letter from Mr. Samuel Turkington, of Cookstown, dated October 27, thanked the Council for having elected him one of its members.

The PRESIDENT read a telegram from Mr. Turkington stating that he was on his way to attend that meeting of the Council, but had been prevented from doing so by the railway line being blocked at Dungannon.

THE TRAVELLING EXPENSES OF COUNCILLORS.

Mr. WELLS moved, pursuant to notice, that a sum not exceeding 22*l.* be allotted for the current year for the part payment of the travelling expenses of members of the Council who had to come up from the country in order to attend its meetings. A careful estimate, based on the attendances of country members during the last twelve months, led him to believe that the sum he mentioned would suffice.

Mr. GRINDLEY seconded the motion, which, after a brief discussion, was unanimously agreed to.

THE ONE SHILLING FINE UNDER THE PHARMACY ACT.

The REGISTRAR read a correspondence which had taken place between himself and Sergeant Magan, R.I.C., Templemore, relative to the case of Mr. Samuel Rudd, who was prosecuted before one of the justices of that town, Mr. Cook J.P., on October 26, for having, on the 13th of the same month, sold Cooper's sheep-dip, he not being a lawfully registered person. The Magistrate imposed a fine of 1*l.* The Registrar wrote to the Sergeant expressing surprise at the amount of the fine, and pointing out that under section 3 of the Act of 1875 the Magistrate had no power to reduce the fine below 5*l.* No defence had been entered, and there were no mitigating details in the case. The attention of the Magistrate had been called to the provision of the section and he had been asked to alter his decision, but had declined to do so.

The Registrar was directed to write to Sergeant Magan stating that the Council were of opinion that the Magistrate had no power to reduce the penalty below 5*l.*; and it was also resolved that an appeal should be taken against his decision.

EXAMINERS.

Dr. E. MacDowel Cosgrave, Dr. Ninian Falkiner, and Dr. R. J. Montgomery were re-elected examiners of the Society.

MEMBERS AND ASSOCIATES.

The following gentlemen were, on the motion of Mr. BOY seconded by Mr. GIBSON, elected associate druggists: William Haslett, 8 Sandon Terrace, Ormeau Road, Belfast; Alfred C. Scott, Church Street, Portrush; and Herbert Webb Ballyglass.

The following were elected associate druggists on the motion of Mr. BAXTER, seconded by Mr. GIBSON:—Robt. Holmes, Ballymoney; and John Sanderson, Ballymoney.

The following were nominated for membership of the

Society:—Hugh Andrew Kelso, Wanganui, New Zealand, proposed by Mr. EVANS, and seconded by the PRESIDENT; Robert S. Chapman, Medical Hall, Donegal, and James Hill, Castle Street, Strabane, proposed by Mr. WELLS, seconded by Mr. GRINDLEY; and Samuel Lowry Cleland, 40 Eia Street, Antrim Road, Belfast.

Some financial and routine business having been disposed of, the Council adjourned.

Legal Reports.

A REMARKABLE CAREER OF CRIME.—HOW EASILY SITUATIONS CAN BE OBTAINED BY FORGED TESTIMONIALS.

At the Malling (Kent) Police Court on Monday, before the Hon. E. V. Bligh (Chairman), D. Macdonald, who is now known to the police under many different *aliases*, was charged on remand with stealing 5*l.* in money, and goods valued at 3*l.* 14*s.*, the property of his employer, Mr. Henry C. H. Oliver, chemist and druggist, West Malling, on October 22.

The prosecutor deposed that the prisoner entered his employ as an indoor assistant on October 18 last, under the name of Donald Macdonald. He gave his address as from 18 King William Street, Greenwich. A testimonial followed him, signed by a person named Chabot. On October 22, at 8 P.M., witness discovered that the prisoner had left the house, and on subsequently examining his cash-box, which had been broken open, he missed from it 5*l.* in gold and silver, and a franc piece, the whole of the contents. Witness also missed two cigar-cases, a purse, six pencil-cases, a diary, two prayer-books, a dressing-case, a case of mathematical instruments, and various other goods, of the total value of 3*l.* 14*s.* Information of the robbery was at once given to the police, and he (witness) afterwards proceeded with Superintendent Lane to Brighton, where the prisoner was found in possession of some of the stolen property.

The Magistrate (to the Witness): Did you identify the goods found on prisoner as among those you lost?—Yes, your Worship.

The prisoner was asked whether he wished to cross-examine the prosecutor.

Prisoner: Yes; I should like to ask him one question. (To Mr. Oliver): Why didn't you make inquiries to ascertain whether the recommendation which I sent you was a genuine one?

The Prosecutor: I thought from your appearance and your conversation that you were a gentleman and an honest man, and I did not, therefore, think it was necessary to ascertain whether your testimonial was a genuine one.

Superintendent Lane deposed that he went to Brighton on October 26 with the prosecutor, and there received the prisoner from the custody of the Brighton police. He said to the accused, "I find you are going by the names of Lewis and Smith at Brighton?" He replied, "Yes; I go by a good many names. Neither of these is my right name." One of the Brighton police handed to witness, in the prisoner's presence, a purse containing 15*s.* 4*d.* and a franc piece, a diary, a pencil-case, and several other articles, which had been found in the accused's possession. Witness asked prisoner whose goods these were, and he admitted that they belonged to the prosecutor, who had identified them as among those missed by him. While in the train from Brighton to London, witness said to prisoner, "I find you went in the names of Macdonald and Chabot at Greenwich, that you made an application for a situation in the name of Macdonald, and that you yourself wrote a reference in the name of Chabot." The prisoner answered, "Yes; and I posted the reference on my journey down to Mr. Oliver." The prisoner had since made a statement to him (witness) in writing, and the inquiries which had been made showed that it was a truthful one.

The Clerk then read the statement as follows:—

"William Shepperley is my name. I was born at Nottingham, and convicted there when a lad about 12 years of age, and sentenced to two months' imprisonment for false pretences. I was afterwards sent abroad, and remained abroad for many years. I came to England again about 1834, and

was convicted the same year at York Assizes, in the name of Count Antonio Rossetti, "for stealing," and sentenced to three months' hard labour. When liberated, I was re-arrested on another robbery that I had committed previous to the former conviction, and was tried at Scarborough Sessions, and sentenced to three months' hard labour. When liberated, I went abroad again, and subsequently returned to England. Having picked up a little knowledge of the chemist and druggist business during a stay with my brother, who is a chemist at Liverpool, I determined to make it my living, and forged my brother's name as references to obtain various situations. I charge myself with having robbed my employers, but I have not been convicted of these.

The first I robbed was a Mr. Smith, chemist, of Commercial Road, London, E., and of Hornchurch. At the latter place I was his branch manager. I robbed him of about 5*l.* I entered his employment in the name of Fraser by forging my brother's name to the reference. This was in November, 1831. The following month I went to Hull, with a forged reference to Mr. Foulstone, a chemist to manage a branch shop, and decamped, after a fortnight, with 9*l.* or 10*l.*

In August of the present year I went to Mr. Smith, chemist, of St. Leonard's-on-Sea, with a reference forged in the name of Mr. Walker, of Derby. I remained with Mr. Smith about two months, at the end of which time I robbed him of about 10*l.* and left.

I afterwards went to Brighton and London, obtained a situation, by another false reference, under the name of Tolett, from Mr. Taplin, chemist, of Harlesden, where I stayed two days, and stole 22*s.* I then left for Greenwich, and immediately obtained the situation at Mr. Oliver's by a false recommendation; and the present charge is the result. I was on the point of obtaining another post by false reference when arrested.

(Signed)

WILLIAM SHEPPERLEY.

The prisoner was asked if he had any questions to put to Superintendent Lane, and he replied in the negative.

The Magistrate: Have you anything to say—any statement to make—before being committed for trial?

Prisoner: No, sir. The statement which I have made is true.

The Magistrate: You will be committed for trial to the Kent Assizes, to be held at Maidstone on December 10 next.

The prisoner, it may be mentioned, is believed by the police to have committed many similar robberies in various parts



of England. A description of him has been repeatedly published in the *Police Gazette* during the past eighteen months, but his gentlemanly appearance and bearing tended to disprove any suspicion which one might have entertained as to his antecedents. The prisoner is about 35 years of age, and speaks both French and Italian fluently. The portrait of the prisoner which we print above is taken from a photograph by Batiste & Son, Oxford Street, London, lent to us by Superintendent Lane, of West-Malling. Chemists who may be able to give Mr. Lane any further information concerning the prisoner should address him promptly.

ACTION UNDER THE POISONED-GRAIN ACT.

AT Bungay Petty Sessions, on November 3, before Mr. H. Rider Haggard, chairman, and two other magistrates, Luke Hembling, labourer, of Ilketshall, was charged with distributing meal containing poison on ground at St. Andrews on October 12. Defendant pleaded not guilty. Mr. S. Linay defended. For the prosecution a neighbour and his wife said they had lost twelve chickens, and they gave reasons for believing that the defendant had thrown poisoned meal over the fence with the object of killing the chickens. Walter Plumley, chemist, of Beccles, said defendant called at his shop on October 12 and bought some poison, saying he wanted it for rats. He supplied defendant with half a pound of arsenic and half a dram of strychnine and sulphuric acid. He had known defendant some time. He produced his book signed by defendant. A policeman produced some of the meal taken from the fowls. Defendant told witness that he "had bought some poison at Beccles, but got drunk and lost it on the road." Mr. Linay briefly reviewed the evidence of the case, and deprecated that a chemist could sell to a promiscuous customer half a pound of arsenic and some strychnine. Mr. Linay further pointed out that arsenic was coloured with charcoal. The Chairman said they were agreed that the case should be adjourned to allow of an analytic examination of the contents of the tins containing the meal.

PEARS' MAGIC LANTERN.

ON behalf of Mr. Henry Glave, draper, of Oxford Street, W., Mr. Warmington, Q.C., applied on October 14 to Mr. Justice Kekewich, in the Chancery Division of the High Court, for an injunction to restrain Messrs. Pears from exhibiting on their premises, opposite those of the plaintiff, magic-lantern pictures or other devices so as to cause crowds to collect and obstruct the highway in front of plaintiff's premises, and to prevent the access of plaintiff's customers to his shop. The learned counsel put in a series of affidavits showing that for some time defendants had exhibited during the evenings, from about 6 to 9 or 10 o'clock, a series of pictures, some of them movable, from their windows, leading to the assemblage of crowds who filled the pavements and highway, and blocked the approach to plaintiff's shop, besides causing him annoyance by their cheering at intervals and general noise. Sir R. Webster, Q.C. (with him Mr. Renshaw, Q.C.), appearing for the defendants, said they had used these pictures for some four or five years. There was no evidence of crowds until recently, nor was complaint made until search-lights were turned on to obliterate the pictures. As the case would have to be tried, he was willing, on behalf of the defendants, to give an undertaking (which he understood plaintiff's counsel was willing to accept) to exhibit only one picture, instead of a series, until the plaintiff's shop was shut, leaving the movable pictures, which, it seemed, sometimes moved the risible faculties of the spectators, till the later part of the evening, the costs of this motion being costs in the action, which must be left to be tried. Mr. Justice Kekewich said that was a fair offer. Of the law in the case he had no doubt, but the question to be decided was one of fact.

THE PENNY-PILL TRADE.

AT the Chelmsford Petty Sessions, on November 4, Arthur Westrup, herbalist, of Cowper Street, St. John's, Ipswich, appeared on bail in answer to a charge of obtaining 3*l.* 15*s.* by means of false pretences from Charles Richard Stannard, grocer, of Danbury, on September 8 last.

Mr. Tanner, on behalf of the prosecution, said this was a case of systematic cheating of small tradesmen. The prisoner called on prosecutor and represented himself to be connected with the Herbal Company of Ipswich and Lynn, and produced some cards on which were boxes of pills. He told prosecutor that it did not pay him to send round travellers, so they had decided to appoint agents. He had no agent within ten miles of Mr. Stannard's shop, and, in fact, the nearest was at Colchester. The prosecutor, believing what was told him, consented to accept the agency. He would not have parted with his money had he not

believed he was sole agent. He also believed that prisoner was a partner of the Herbal Company of Ipswich and Lynn. The prisoner produced a list of customers, and said a printed list and written agreement would be sent him by post. Prisoner also told Mr. Stannard he would have a salary of 10*s.* per week and commission. Prisoner then said, "Of course you will have to take the usual agent's stock," and he paid 3*l.* 15*s.* for 12½ gross of pills. As no list of customers or agreement came, prosecutor wrote to the Herbal Company at Ipswich and Lynn, and received the letters back through the Dead-letter Office. He then sent another letter by hand, which was delivered personally to prisoner, and the latter replied, "There must have been some misunderstanding between you and my traveller." The letter then went on to say that he would be in Chelmsford on October 12, and would be willing to take back any stock if he wished to return it. Prisoner did not go, but wrote another letter of excuse, asking Mr. Stannard to let him know what amount of goods he had, what he wished to pay per gross, what was the amount he wished to return, and if he (prisoner) was unable to come he would send cash. After the summons had been taken out prisoner again wrote, appealing to the prosecutor to withdraw the proceedings, and he would let him have cash and pay all expenses. Other persons had been appointed agents in the same district, and prisoner signed the receipts in various names.

The prosecutor, in his evidence, bore out this statement, and other shopkeepers in the same district were called who said similar proposals had been made to them. The names of the other agents were given to Mr. Stannard as customers, and *vice versa*.

Mr. Moseley, on behalf of prisoner, urged that when the pills were sold there was no existing false pretence. Prosecutor got value for his money, and now he had got both pills and money.

Finally, the Bench committed prisoner for trial at the Quarter Sessions, bail being allowed, himself in 50*l.*, and two sureties of 25*l.* each. Prisoner was removed in custody.

Bankruptcy Reports.

Re GEORGE A. PARKIN, Blossom Street, York, Chemist.

AT the York Bankruptcy Court, on November 4, this debtor was examined. His deficiency was 1,201*l.* 18*s.* 5*d.* In answer to the Official Receiver, bankrupt said that he commenced business in 1884 in the Corn Market, at Halifax. He had about 400*l.* capital, which he had borrowed. About five and a half years ago he sold the Halifax business for a little over 700*l.*, and bought the business in 3 Blossom Street, York, for which he paid 886*l.* He had only 670*l.* in hand at the time, and he raised the balance by trading on his current account. He bought stock, and deferred payment beyond the usual terms. Practically he was 200*l.* to the bad at the start. The total amount of his indebtedness was over 2,000*l.* Examination adjourned.

Re R. M. JESSOP, Chemist and Druggist.

AT the Wakefield Bankruptcy Court, Robert Markham Jessop, lately carrying on business as a chemist and druggist at Swinefleet, near Goole, and now living at Grimsby, has appeared to pass his public examination. His unsecured liabilities amounted to 415*l.* 12*s.* 5*d.*, and his assets, which consisted almost exclusively of book-debts, amounted to 25*l.* 2*s.* 1*d.*, leaving a difference of 390*l.* 10*s.* 3*d.* He had an accident nearly two years ago by being thrown out of a trap, and he suffered for some time from concussion of the brain. He was attended by two doctors, whose bills amounted to 15*l.*, and he had to engage a porter to do his heavy work. He lost 96*l.* by being connected with a building society, and his business had suffered from severe competition. The total net sum realised by the sale of his effects was only 38*l.* His life was insured for 100*l.*, and his uncle held the policy as security for 120*l.* borrowed from the bank, to whom he now owed about 160*l.* The furniture belonged to his wife. A portion of it belonged to her when he married her, and the rest he settled upon her. The public examination was adjourned for a month.

Re JAMES WYLIE, sole partner of the firm of James Wylie & Co., 584 Govan Road, Glasgow, Manufacturing Chemist.

THIS debtor was examined in connection with an application for cessio before Sheriff Birnie, in Glasgow Sheriff Court, on Monday last. In reply to Mr. Dunlop, writer, the debtor stated that he had been in business for thirty years, and twelve years as a manufacturing chemist.

When did you start business first?—What is the use of going back to that time?

Mr. Dunlop: You will require to answer my questions, or I will bring in the Sheriff to you.

Debtor then said that he started as a storekeeper, with a partner, under the name of Wylie & Co. He had no capital; his partner had the money. He continued in that business for about seven years. When he left the business he had a little capital—200*l.* or 300*l.* He started then as an agent for brewers, carrying that on for six or seven years. He lost a lot of money in that. His next venture was in connection with a wool-mill at Cumnock. He had about 2,000*l.* when he started there, but lost the whole of it in the five years he had the mill. He left Cumnock about seventeen years ago, and was next in the commission line in Glasgow for two or three years. Then, twelve years ago, he started as a manufacturing chemist. He had no capital when he commenced. He got 700*l.* or 800*l.* capital from his uncle. That money had not been repaid. It was given him as a present. Within the last six months the business had been beginning to pay. Six months ago he had nearly 100*l.*, including stock, plant, &c., and was in a position then to pay all he was owing. Since then he had lost over 100*l.*, through a traveller swindling him. This man had been convicted. Debts amounting to 157*l.* 1*l.* 1*d.* had been incurred within the last six months. He kept two books—a sales-book and a cash-book. The house in which he resided in Queensberry Terrace, Langside, was his wife's, although it was taken in his name. By an ante-nuptial contract of marriage the furniture, which would not bring more than 45*l.*, was settled on his wife. He had no other assets than those he had detailed in his statement of affairs, amounting to 38*l.* 12*s.* His liabilities came to 274*l.* 1*l.* 3*d.* His books he undertook to hand to the trustee, and to give him all the information necessary concerning his estate. The following are creditors on the estate:—

	£	s.	d.
Baird, James, Glasgow	1	8	0
Carriek, James G., & Co.	7	13	3
Dalrymple, George, & Co.	23	10	0
Haldane, Robert, & Co.	22	16	0
Hutton, William Ross,	2	5	10
Moffat, James (Trustees)	28	10	7
Paterson, Daniel	24	14	10
Swan, J. M.	15	0	0
Tennant, Charles, & Co., Glasgow	12	16	5
Wardlaw, Henry	50	0	0

Recent Patent Specifications.

A Cholera-cure.

Mary Rendall, of 33 Warwick Road, Earl's Court, London makes the declaration in this instance (No. 13,922, 1892) She applies for a patent for "a new or improved medicinal compound for the cure of cholera, dysentery, and similar ailments." The following is the formula as given:—

	Oz.
Sol volatile	2
Peppermint	2
Spirits of camphor	2
Landanum	2

"The required dose to be taken in hot water sweetened with sugar, or, if hot water is not readily available, cold may be used."

Lanoline.

Wool-fat contains wax-like substances, which are produced by the splitting up of the cholesterin, isocholesterin, and higher alcohols. This wax detracts from the medicinal fitness of wool-fat, and Dr. Benno Jaffé and Dr. Ludwig

Darmstädter have devised a process for effecting an improvement (No. 14,114, 1892). This process consists in dissolving the wool-fat in benzol, toluol, ether, chloroform, or other suitable solvent, several of which are named, and adding to the solution ethyl or methyl alcohol, which has the effect of throwing out the wool-wax proportionately to the amount added. An alternative method is to dissolve the crude fat at its melting-point in fusel oil, and it is found, on cooling, that the wool-wax crystallises out. The result in either case is that the purified fat is much improved, especially in consistency, and it makes "an excellent lanoline" on further treatment by the applicants' well-known process.

Wool-fat.

Messrs. James Trent and George Henderson, New Zealand, gentlemen, propose (No. 15,012, 1892) to save and purify the fat of wool by soaking the wool in benzol or other suitable liquid, extracting the liquid, and distilling off the solvent.

Polishing paste.

This is the invention of Mr. Albert Morley, a Burslem auctioneer (No. 14,911, 1892). It is made by calcining flint and grinding the calcined material to a very fine powder, then mixing with fat, oil, or other such liquid to make a suitable paste, which "is put up or sold preferably in tins or boxes, and on the application of a little moisture is ready for use." For cleaning glass the levigated flint is sold dry to be used with water.

A New Beverage.

The berries of the ebony plant, preferably *Royena cuni-folia*, are suggested by Miss Sophia Donato as a suitable substitute for coffee and similar beverage-producing stuffs. Her specification (No. 14,788, 1892) is a description of the manner in which he prepares the berries. The object is to get the seeds, so the fruit is pulped, the seeds washed, and the skin removed, as it is possessed of toxic properties. The skinning process is similar to that used in barley-peeling. Next, the seeds are torried and ground, and a decoction or infusion made of the material in the same way as coffee. It may be used hot or cold, and combined, if thought fit, to make nice summer drinks.

Ether-engine.

Dr. Paul de Susini, of Paris, is applying for a patent (No. 14,711, 1892) for an engine which is to be worked with the vapour of ether or other volatile liquid. The machine which he constructs is lubricated with glycerine. Here is a possible outlet for two important chemical products. Patents 14,712 and 14,713 cover the same subject.

Liquid Glue.

Erich Brand, of Rostock, states in his complete specification (No. 15,630, 1892) that he makes an animal glue, which is always ready for use and keeps any length of time, by dissolving 60 kilos. of borax in 100 kilos. of water, adding to the solution when boiling 4 kilos. of 90-per-cent. calcined potash, and adding this mixture while boiling to 1,450 kilos. of hot glue liquor showing a density of 12° (Baume).

Asthma and Bronchitis Specific.

Eggs	4
Lemons	8
Rum	1 pint

Crush the eggs, and steep them in the juice of the lemons for twenty-four hours; add the Jamaica rum, and strain.

The inventor of this compound (Mr. A. C. Cohen, specification No. 13,687, 1892) says "the dose is one tablespoonful with one dessertspoonful of filtered water to be taken, preferably fasting, one hour before breakfast every morning until a cure is effected."

A Cerate

for wounds, cuts, sores, burns, scalds, and the like, invented by Messrs. Adam and Adolphe Roth, bakers (specification No. 13,277, 1892):—Resin, $\frac{1}{4}$ lb.; clarified beef-suet, 3 oz.; boil a quarter of an hour; add 2 oz. beeswax; boil for a half-hour longer, and allow to set.

Trade Notes.

HATRICK & CO. (LIMITED), 31 Snow Hill, E.C., have been appointed agents for all countries except America for the sale of Eavenson & Sons' (Philadelphia) soaps, &c.

We have received a catalogue of Spencer's magnetic filters from the Magnetic Filter Company, 32A Euston Square, N.W. It is beautifully printed in colours.

THE new number of Fallowfield's "Photographic Remembrancer" contains quite a number of job lines, and much useful matter besides. It may be obtained from the publisher, 146 Charing Cross Road, W.C.

MESSRS. C. CHANCELLOR & Co. are explaining, in a neat little price-list, the conditions on which their household specialities are sold. All who are interested in the "cutting" question should write for a copy of the list (3 Charterhouse Buildings, E.C.).

GUY'S TONIC COMPANY offer to send a copy of "Guy's Guide to Digestion" free to any chemist who will write for it. The book is not distributed generally, but only sent to applicants. It contains much useful information besides what is said regarding the tonic.

DR. MONROE's magnetic electric soles are a seasonable and moderate-priced speciality introduced by Messrs. Ayrton & Saunders, of Liverpool. They are said to "create heat through the inductive agency of magnetism," thus preventing chilblains, &c.—a good point to conjure with.

MESSRS. KROHNE & SESEMANN now make their modified Junker apparatus for the administration of chloroform, suitable for use in veterinary operations. This apparatus is worked either with hand or foot bellows. We understand from the makers that if any chemist or chemist's assistant would like to learn how to administer chloroform they have only to call at 8 Duke Street, Manchester Square, W., where the firm will impart the necessary instruction.

THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION (LIMITED) issue their fourteenth annual balance-sheet, and report a "satisfactory increase of business and profits for the year." A gross profit of 6,395*l.* is shown, the net profit being 2,086*l.* 10*s.* 9*d.* Out of this a dividend of 10 per cent., free of income-tax, will be paid, leaving 276*l.* 10*s.* 9*d.* to carry forward. The annual meeting is to be held on Thursday, November 17, at 3 P.M., at Anderton's Hotel.

Personalities.

WE omitted the name of Mr. N. H. Martin, of Newcastle-on-Tyne, from the list of those who attended the Pharmaceutical Council meeting last week.

THE Royal College of Physicians in Ireland have appointed Drs. Ninian Falkiner and F. J. Quinlan to be examiners in materia medica and pharmacy.

MR. E. J. PARRY, B.Sc., has been bracketed second with another in the first-class honours list of the organic chemistry examination of the Science and Art Department.

MR. E. D. JONES, manager of the Foregate Pharmacy Chester, who recently met with an alarming accident to his eyes while working in the shop, is rapidly recovering.

THE statement recently published to the effect that Sir Robert Micks, Secretary to the Inland Revenue, was to retire in a couple of months is not true. Sir Robert has no such intention.

MR. A. C. ABRAHAM, of Messrs. Clay & Abraham, Liverpool, was in a collision on the Wirral Railway on November 1. He sustained a shock to the nervous system, and has been confined to his bed since. He is slowly recovering.

MR. DARRELL, chemist and veterinary surgeon, of Clun, Shropshire, has been severely injured by his horse falling and rolling over him while he was on the way to a profes-

sional visit. His thigh was broken, but he is progressing fairly.

MR. J. MACDONALD CAMERON, whose appointment to the deputy-mastership of the Mint at Sydney has been announced, was formerly Liberal M.P. for the Wick Burghs, but was defeated at the late election by Sir John Pender. He is a native of Ayrshire, and commenced his career in the Inland Revenue, but developed into a scientific man with a business turn of mind. He was for a time in the Laboratory at Somerset House, and was afterwards in the Chemical Research Laboratory in the School of Mines. He has been a great traveller, and not very long ago returned from an expedition into the hitherto unexplored regions of Dutch Borneo.

MR. PETER VAN SCHAACK, one of the leading wholesale druggists in Chicago, has returned home from a visit to Europe, and a *Pharm. Era* man has extracted some quite remarkable information out of him regarding Mr. Whiteley's establishment at Westbourne Grove. "I was surprised," said Mr. van Schaack, "at the completeness of the drug department, in which 174 employes are on the jump, including seven prescription-clerks. While talking with the manager, one of his clerks reported being out of a certain patent medicine. He at once made an order on the manufacturer for half a gross and dispatched the clerk with it." There is evidence in the interview that Mr. van Schaack has mixed up Mr. Whiteley and the Army and Navy Stores, but at neither is there 174 men "on the jump" in the drug department. Mr. van Schaack also "visited the extensive laboratory of Messrs. Burroughs, Wellcome & Co., at Dartmouth. The proprietors are enterprising Americans who have startled the staid Britishers by their push and enterprise and grand success." Well, this gentleman's knowledge of London and its environs is like Sam Weller's, especially in peculiarity.

DEATHS.

ASH.—On October 28, S. Ley Ash, pharmaceutical chemist, Plymouth. Aged 69.

BENNETT.—On November 1, Richard Morison Bennett, son of the late R. M. Bennett, chemist, Union Street, Plymouth. Aged 33.

BERRY.—The death is announced of the wife of Mr. H. J. Berry, chemist, Montague Street, Worthing, which occurred after a lingering illness. The deceased lady was 52 years of age.

MANCHEE.—On September 16, Samuel Manchee, chemist and druggist, Bow. Aged 53.

MITCHELL.—At Newburgh, Foveran, on November 8, Thomas Mitchell, chemist. Aged 83 years.

MODLEN.—On October 15, Robert Modlen, pharmaceutical chemist, Thorpe. Aged 40.

STEEL.—Dr. J. C. Steel, superintendent of Guy's Hospital, died on Monday, November 7, somewhat suddenly. The deceased gentleman was in his seventy-first year, and had been superintendent of Guy's nearly forty years. Previously he had been medical officer of the Edinburgh infirmary.

TOWLE.—On November 3, Frances, wife of A. P. Towle, of 75 Back Piccadilly, Manchester, after a long illness. Aged 71.

TRIPP.—On October 20, Zeno Tripp, chemist and druggist, late of Hurlingham. Aged 40.

TURNER.—The death is announced, after a long illness, of Mr. J. C. Turner, who was for over half-a-century the dispenser of the North Devon Dispensary. Mr. Turner was respected and esteemed by all who knew him, and his devotion to the interests of the institution he so long served was fully recognised by the committee when he retired from the position a few weeks ago.

WE mentioned some time ago that pineapple-juice contains a digestive ferment. Now we notice that it is proposed to use the juice as a solvent of diphtheritic membranes.

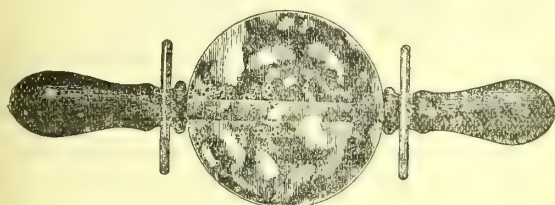
Notes of Novelties.

SANITAS-EUCALYPTUS DISINFECTOR.

THE Sanitas Company (Limited) have introduced a very useful novelty in the shape of the "Sanitas-eucalyptus Disinfector." This consists of a perforated tin cylinder, within which is securely fixed a porous-clay cylinder about two-thirds the diameter of the outer one. This clay cylinder is saturated with Sanitas-eucalyptus oil (there is a hole on the top of the capacity of about 3½j. for recharging), and the odour which is given off is exceedingly fragrant and powerful, enabling the disinfectant to be used in bedrooms or closets. The oil is put up in 2-oz. bottles, to retail at 1s. Should influenza become epidemic this winter, there will be a big demand for these articles for office use.

THE RAINBOW SOOTHER.

THIS article appears to be achieving a notable success among druggists' sundries. The ball centre is made of thin celluloid, and is practically unbreakable. The teats are fitted securely on the axis, and the balls being semi-transparent,



and tinted with varied lines, a curiously-attractive result is effected when a careful of them is exhibited in front of a light. These soothers are made by John Hall & Co., of Thorburn Square, Fort Road, Bermondsey.

AT THE COUNTER.

AN Isle of Man chemist sends us some specimens of native orthography. One customer with an evidently local mind, writes for "1d. of Isle of Mint." He also wants some "Ruebob" and "Lodnom." "Oxilet of Ido Gin" for the hair, is required for an island belle. "Alqunite Root," "Schwisar Chips," and "Porress Plaster" are also among the requirements.

THESE are a few comical specimens from the Black Country:—

- "A 3d. Box of Red Female Pills."
- "A Black Baby's Teat."
- "A Penorth of Flee Powder."
- "A Penorth of Pills, 2 of Beecham & 2 of Welpton a red un & a white un."j

AN interesting collection of originals reaches us from Loughborough. As novelties we quote:—"Gum Harrow Beck," "Glory of Potash," "Salvapney," "Epher," "Old delance" (eau de Cologne), "Harry Campaign," "Surrop tute and oil a varmint," "Enven seeds," "Happy dilldook." Then follows a more extensive order: "2 ounce tartar cased 2 ounce Creamtartar 2 ounce Boiling Manisher." This is the attempt of a local quack to deliver himself of a prescription: "3 ounce Kerpevey & qbec and please fill the Bottle with distilled water" (liq. copaibæ c. cubebâ was what he wanted). A patient expresses his requirements thus: "potash 2 Coups 1 stall dropes 2 bolsome 2 better attle 2 seet night hour 2."

WILLS OF DECEASED CHEMISTS.

The will of the late Mr. G. V. Ball, of Banbury, chemist and druggist, who died on March 23, 1892, has been proved at Oxford Probate Registry by Mr. James Luckett, the sole executor. The gross value of the personality amounted to 11,337*l.* 1*s.* 7*d.*, and the net to 10,999*l.* 17*s.* 6*d.* The testator directs that his body shall be in not less than three days after death conveyed by his carpenter in a plain coffin to Woking to be cremated, and that the ashes after the cremation shall be deposited in his family vault at Banbury. He bequeaths 100*l.* to his brother-in-law and executor, James Luckett, 150*l.* each to his assistant and to his housekeeper, and also two or three smaller legacies. The residue of his property, real and personal, he leaves in trust for his sister, Mrs. Luckett, for life. After her death the testator directs that the estate shall be vested in the Mayor, Aldermen, and Burgesses of Banbury for the purchase of a People's Park, to be kept open from sunrise to sunset all the year round. This bequest is subject to the provision that the family tomb of the testator shall be properly cleaned once a year, and kept in order by a "competent" man, the gilding and lettering being specially mentioned. If injured or destroyed, the said tomb is to be duly restored. Failing these conditions, the estate is to go to the Horton Infirmary, Banbury, subject to the payment of an annuity of 35*l.* to the testator's assistant, Mr. Watts.

The will of the late Mr. J. B. Crompton, chemist and druggist, of Bury, who died on June 6, 1892, has been proved at Manchester Probate Registry by the acting executors, Mr. Henry Crompton and Mrs. Wrigley, the deceased's son and daughter. The gross personality amounted to 13,830*l.* 9*s.*, and the net to 13,684*l.* 16*s.* 4*d.* The testator directs that his half-share in his shop fixtures and stock-in-trade shall be valued and offered to his son and partner, Henry, who is also to have the offer of the premises for 50*l.* rent. To his widow the testator leaves the use of the house and furniture and 250*l.* per annum, to be reduced to 100*l.* upon re-marriage. The residue of his estate, real and personal, the testator leaves to his executors in trust for the use and benefit of all his children.

The will of the late Mr. A. C. Finney, of Brigg, Lincolnshire, chemist and druggist, who died on May 10, 1892, has been proved at the Lincoln Probate Registry by Mrs. Finney, the widow and sole executrix, to whom the testator devises and bequeaths the whole of his estate, real and personal, absolutely should he leave no child, but only for her life should there be issue, to whom the property is ultimately to go. The gross personality amounted to 841*l.* 11*s.*

The will of the late Mr. Francis Williams, chemist and druggist, of Lichfield, who died on January 7, 1892, has been proved at the District Probate Registry by the executors, Messrs. A. T. Marston and Edwin Wall. The gross personality amounted to 3,363*l.* 14*s.* 8*d.*, and the net to 3,239*l.* 10*s.* 11*d.* The testator directs that his real estate shall be sold, and after payment of a legacy of 100*l.* to his brother and 20 guineas each to his executors, he leaves the whole of his property in equal shares between his eight nieces.

The will of the late Mr. T. B. Fletcher, chemist, of Nottingham, who died on January 9, 1892, has been proved at the District Probate Registry by Mrs. Fletcher, the deceased's widow. The gross personality amounted to 634*l.* 13*s.* 10*d.*, and the net to 284*l.* 15*s.* 10*d.* The testator bequeaths to his widow his furniture, plate, and all the household effects, together with a legacy of 200*l.* His freehold shop and premises in Melbourne Street, and all his other property he directs shall be realised and equally divided between his five children.

The will of the late Mr. William Chantler, chemist and druggist, of Newport Pagnell, who died on January 4, 1892 has been proved at Oxford Probate Registry by the executors, Messrs. R. P. and W. R. Chantler, the sons, and R. Littleboy. The gross value of the personality amounted to 1,837*l.* 5*s.* 9*d.* The testator directs that his son William Rogers shall have the offer of his freehold shop and premises for 550*l.* The residue of his estate, real and personal, he leaves in trust for the benefit of his sons and daughter.

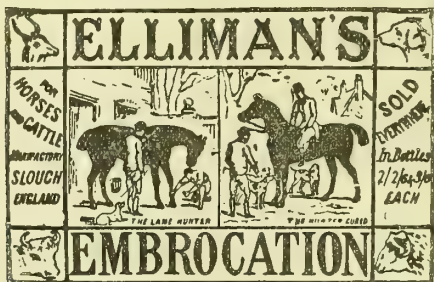
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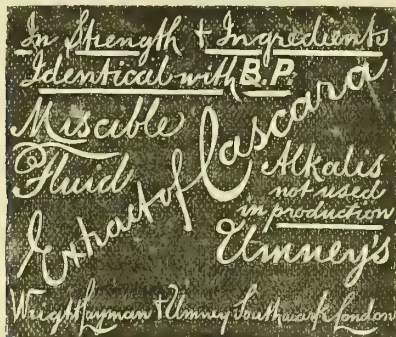
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HOW AUSTRALIAN TARIFFS AFFECT CHEMISTS.

WE shall never, perhaps, fully understand the mystery of the enjoyment which large numbers of people seem to derive from the punishment they inflict on themselves for the benefit of a very limited section of their fellow-countrymen by means of protective tariffs. Nowhere is this more

palpable—or seems so to those of us who have no experience of the condition—as in the Australasian colonies. There are, in that part of the world, seven distinct and mutually hostile tariffs dividing and enormously inconveniencing a population which, all told, is considerably smaller than that of London. There can be no doubt of the inconvenience and costliness resulting. We are willing to learn from any Australasian protectionist chemist what is the compensating benefit.

Chemists are not by any means a class which suffers exceptionally; but the literature which reaches us shows them constantly complaining about some detail or another of their precious tariffs which pinches some of them. Our space will not admit of anything like an exhaustive consideration of these complaints, and we confine ourselves to a series of ordinary paragraphs which we have picked out without any special searching from the last three issues of *The Chemist and Druggist of Australasia* which have reached us.

Taking the colonies in alphabetical order, we first find the chemists and druggists of New South Wales complaining bitterly of the new tariff now in operation there. Medicinal tinctures were formerly admitted free, or might be manufactured in bond. Now a duty of 14s. per proof gallon is imposed. To some establishments it is said this makes a difference of 3*l.* to 5*l.* a week. Moreover, the higher rate on spirit prevents the druggist competing with foreign perfumers, and renders practically valueless the privilege of importing crude drugs duty-free. Ten per cent. has been put on patent medicines, which the druggists say knocks a penny off their profits on every sale of these, and gives them no protection. They think if the duty had been 50 per cent. it might have done them some good. It is reported that as the tea-duty has been abolished in this colony, opium and other dutiable luxuries are being imported in tea-chests. This means that more Customs officers must be employed.

New Zealand chemists complain of a number of anomalies, the same article being tariffed at 25 per cent. if regarded from one point of view or at 15 per cent. from another. Decisions by the Commissioner of Trade and Customs are published regularly, and, as may be supposed, are perpetual sources of discontent and dispute.

Queensland chemists found it necessary to interview their Colonial Treasurer on the subject of a revised tariff with the hopeless purpose of adjusting it so as to balance the burden exactly on everybody's shoulders. The Treasurer's new proposals, it was said, would seriously affect the drug-trade. The tariff on a lot of druggists' goods has been raised, and the wholesale trade, with characteristic promptitude, united in making a pretty general advance of 10 per cent. on the goods they supply. In the interview the Treasurer was asked to let bottles for medicine in free, along with those for pickles, fruits, and sauces; also crude drugs, roots, barks, leaves, &c. A number of lines were suggested for addition to the meagre list proposed to be allowed at 15 per cent. *ad valorem*. These originally were alum, arsenic, ammonia, bluestone, cream of tartar, glacialine, glycerine, nux vomica, pearlash, phosphorus, quinine, citric acid, and strychnine. As the result of these representations, boric, benzoic, carbolic, oxalic, phosphoric, salicylic, tannic, and tartaric acids, borax, and nutgalls were added, but nothing else. The Treasurer does not seem to have been quite favourably impressed by his interviewers, for in reply to a member of the Legislative Assembly, who read a letter from a chemist objecting to certain duties, the Minister said he did not think that, so far as these articles were concerned, the tariff should be interfered with. He had received several letters from chemists and druggists who were very desirous for protection for their own business and objected to any other people's business being protected.

He must be very new to his business if this circumstance surprises him. The last report showed the chemists discussing whether it would be policy to pocket the loss resulting from the enhanced cost, or whether they could without a worse result transfer the tax to their customers.

The only immediate grievance we find in South Australia is that the tariff there distinguishes among what are generally known as surgical goods between those which require the skill of a surgeon to use—these being admitted free—and such articles as trusses, bougies, &c., which come in as druggists' wares at 10 per cent., and glassware, which is calculated at 20 per cent. It may be assumed that this rule ensures a lot of claims.

Tasmanian taxpayers have just successfully protested against the sweet simplicity of a proposal made by their Treasurer to increase duties all round by 2½ per cent. We cannot ourselves say why if a 10-per-cent. duty is good 12½ should not be better; but the Tasmanians did not seem to argue thus, and hence—exit Ministry.

In Victoria it has been discovered that the recent addition of 2s. per gallon to the Excise duty on colonial spirits is equivalent to increasing the duty on 60 o.p. spirit from 12s. 10*d.* per gallon to 16s., and that another 4s. per gallon must be placed on imported perfumed spirits, including essences for culinary purposes, in order to equalise matters, and to prevent unfair discrimination against colonial makers of perfumes. This will probably necessitate another adjustment somewhere else. In this colony it has also been found that the new duty of 3*d.* per dozen on filled bottles not otherwise dutiable is a serious addition in the case of such articles as penny inks and small phials of perfumes and patent medicines, and representations have been made to the Minister of Customs that the charge is too heavy. A protest has been lodged, among others, by a man who imports tiny bottles of perfume for "penny-in-the-slot" machines. He says the bottles filled with perfume cost him altogether 7½*d.* a dozen now, and that it will be impossible to continue importing them if an extra 3*d.* has to be added for duty on the bottles. The local manufacturers of bottles, of course, reply that the smaller-sized bottles can be made there, so that ink, perfume, and other liquids can be imported in bulk and bottled there.

These are specimens of complainings which in protectionist countries come to be regarded as being as inevitable as comments on the weather or the hay crop are here. Multiply them by pretty nearly the whole of the population and you get an estimate of the friction.

PHARMACEUTICAL ORPHAN FUND.

THE resolution came to by the Pharmaceutical Council last week to establish a fund for the education, relief, and up-bringing of the orphans of members and associates of the Society exclusively is surely a regrettable decision. From its inception the Benevolent Fund has been administered with commendable catholicity. Before 1868 the benefits of the fund were necessarily restricted to the adherents of the Society, because the charter of the Society so decreed, and it could not have been otherwise considering that then, as now, registration was the basis of relief. By section 22 of the Pharmacy Act of 1868, the Council was empowered to "make provision . . . for the relief of . . . all persons . . . who may be or have been duly registered as 'pharmaceutical chemists' or 'chemists and druggists,' and the widows and orphans of such persons." The direct result of that enactment has been an immense impetus to pharmaceutical benevolence, as shown in the augmented subscription and donation lists, and consequent greatly extended relief to

unfortunate persons. So much credit is due to the Pharmaceutical Council for its management of the fund on the broader basis, that it is all the more inexplicable that it should have sanctioned the shift to the narrower basis in instituting an orphan fund.

The occasion for the formation of this fund was, of course, the legacy of 1,000*l.* bequeathed by the late Mr. Hyde Hills. In the disposal of this legacy the Council appear to have had no option, the terms of the will requiring that it should be invested for the benefit of orphans of members and associates of the Society who had subscribed to the Benevolent Fund for three years. Mr. Hills does not appear to have contemplated the creation of a fund distinct from the Benevolent Fund, for he said in his will, "I give to the Benevolent Fund of the Pharmaceutical Society," &c., and his nephew expressly stated last week that he (Mr. Hyde Hills) "never contemplated that his name would be associated with a larger fund than that which he himself bequeathed." The action of the Pharmaceutical Council in extending Mr. Hill's reservation to a fund to be created as a part of the Benevolent Fund is, therefore, a gratuitous violation of the spirit of the Pharmacy Act in this matter.

Apart from the legal consideration, there are many other reasons why the Council should have behaved with full catholicity in creating a special department for the relief of orphans. Some members of the Council were under the supposition that there is special need for such a fund for the orphans of old members and associates of the Society. That may be the case; but there is at least no evidence in support of that view. There are comparatively few well-to-do members of the trade who do not subscribe to the Society, and it seems ridiculous to provide a charity for those only who are best off. Again, it was argued that the orphan fund would be a means of getting men to join the Society so that they might thus provide for their children. This argument is unhappily not unfamiliar; but it is a pitiful one, and it perverts the spirit of benevolence, turning a charity into an insurance. A further reason for restricting the benefits of the orphan branch to the Society's adherents was that it would be a sop to those of the Society who complained about the catholic manner in which it is administered. Who are these, and what is their value as subscribers? Whether many or few it were better that they should have a few lessons on the first principles of benevolence, instead of plying them with sops. Besides all this there is the fact that for many years the Benevolent Fund has derived a large revenue from persons and firms who have no other connection with the Society. Such subscriptions have been given on the basis of section 22 of the Pharmacy Act—the true charitable basis, which recognises only the honest distress or poverty of chemists and druggists, their widows or orphans, as the argument for assistance. Is it fair to such subscribers that a class distinction in the administration of the fund should now be created?

PUZZLE PRESCRIPTIONS.

IN our correspondence section to-day we give a summary of a hundred renderings of the Australian prescription which was printed in *fac simile* in THE CHEMIST AND DRUGGIST a fortnight ago. These exhibit such a diversity of interpretation, and, consequently, a probability of so material a difference in practice, that we may well consider whether this is likely to be the normal condition of things or not. Analysis of the hundred replies shows that it is possible to have the prescription dispensed in seventeen different ways, but sixty-five out of the hundred agree as to the ingredients of the

prescription—viz., 3 drachms of bismuth subnitrate, 3 grains of powdered opium, and $\frac{1}{2}$ drachm of pepsin, to be mixed and divided into twelve powders. It is when the directions have to be written that these two-thirds of the hundred sort themselves into three sections, and that is the difficulty which troubles all more or less. Considering the nature of the powders—a medicine to alleviate gastric pain and assist digestion—one of them three times a day certainly appears to be the most consistent rendering. Only one out of three seems to have thought of this not unimportant part of the prescription. But this is a trifling divergence compared with the possibility of getting at different pharmacies capsicum, ginger, gum, ipecacuanha, or liquorice instead of opium, and bryonia, hyacin, magnesia, or quinine in place of pepsin. It is a very poor look-out for the patient, and it does not appear to be much to the credit of pharmacy that such a condition should be possible. The fact need not be overlooked, however, that it is the prescriber who is directly responsible for the condition. He is one of many in his profession who impose upon the chemist, in addition to the exact pharmaceutical knowledge legally required of them, the necessity for expertness in solving puzzles for which they have neither credit nor recompense. It would be unprofitable to enlarge upon the difficulties which invest the dispenser on this account, and the solitary example before us shows us what may happen to patients, and it is deplorable that such difficulties are of daily occurrence. It is far more to the point that we should again insist upon the necessity for medical men writing their prescriptions with perfect legibility. It would be quite appropriate, and not invidious, if the General Medical Council were to circularise all registered medical practitioners regarding the matter. It would be no stretch of imagination to include puzzle prescriptions within "infamous conduct in a professional sense," for such prescriptions eminently endanger the lives of patients. At all events, if there is to be any reform it is with medical men that it must begin, and it would be more effective to appeal to them through their governing body than by a personal solicitude of their immediate victims—the chemists.

COMMENTARY.

THE CHOLERA BACILLUS is not fond alike of all kinds of beverages. According to *Pharmaceutische Zeitung* it does not live beyond three hours in Pilsener, Patzenhofer, or Munich beer; two hours in Berlin white beer; five minutes in white and fifteen in red wine; and twenty minutes in cider. Two hours in cold coffee decoction (6 per cent.) was too much for the bacillus; but it needed five hours of a rye-and-chicory imitation to kill it. In milk which had been boiled for an hour the bacilli lived for nine days, but the tenth brought them to the end of their career. Cold tea was much the same—i.e., a 1-per-cent. brew, but a 2-per-cent. tea cleared the field in four days, 3-per-cent. in one day, and 4-per-cent. in an hour. The bacilli were most partial to cocoa; they did not appear to die off in that at all. From these results we suppose the inference to be drawn is what we should drink while the cholera is on.

QUEER FRAUD.—The *Lancet* ventured a few weeks ago to express an opinion regarding the "ownership of prescriptions," saying, "It is obvious that a prescription belongs to the person who pays for it—viz., the patient." Thereupon a correspondent stated: "It is obvious that the F.R.C.P. is a tradesman and sells his prescription, and thus violates the by-law of that Society. It is a fraud on the part of the patient either to use the prescription for a longer time

himself than first prescribed or to give the same prescription to another person. It is a fraud also on the part of the apothecary to make up the prescription for any longer time than intended by the F.R.C.P. or for any other person." That is nice *fin-de siècle* logic, but it happens that the College of Physicians' by-law only binds the adviser so far as the fee is concerned. The patient and the apothecary are at liberty to treat the matter commercially.

New Companies.

HULL DRUG COMPANY (LIMITED).—Capital 2,000*l.*, in 1*l.* shares. Object: To acquire the business of dispensing chemists, patent-medicine vendors, drug merchants, &c., now carried on by the Hull Drug Company at 34 Whitefriargate, Hull, and 78A Newborough, Scarborough, and to carry on and extend the same in all its branches. The first subscribers (who take one share each) are:—T. G. Milburn, 27 Park Grove, Hull, druggist; Mary E. Milburn, 27 Park Grove, Hull; Sarah Thompson, 4 Field Terrace, Worcester, spinster; J. J. Adamson, 3 Junction Place, Hull, surveyor; George Ellidge, 47 Clarence Road, Leeds, manager; T. J. Pringle, 42 Grosvenor Place, Leeds, cashier; and K. McLean, 70 Station Parade, Harrogate, chemist. Managing director, T. G. Milburn. Registered office, 34 Whitefriargate, Hull.

C. S. POTTER (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Objects: To acquire the goodwill of the business of chemist and druggist, haberdasher, stationer, &c., carried on at 81 High Street, Plaistow, and to carry on business as wholesale and retail chemists, druggists, patent and proprietary medicine vendors, druggists' sundriesmen, drysalters, &c. The first subscribers (who take one share each) are:—W. Potter, 81 High Street, Plaistow, wholesale chemist; Augusta E. Potter, wife of W. Potter; A. Potter, 81 High Street, Plaistow, traveller; J. H. Anderson, 149 Windsor Road, Forest Gate; C. Howes, 76 Stratford Road, E., corn merchant; J. Rippin, 91 Forest Lane, E., druggists' sundriesman; and A. H. Atkins, 23 Bouverie Street, E.C., agent. Managing director, W. Potter. Qualification, 250*l.* Registered office, 81 High Street, Plaistow, Essex.

PATENT-MEDICINE VENDORS' DEFENCE ASSOCIATION (LIMITED).—This company was registered on November 3 by Messrs. Jordan & Sons, of 120 Chancery Lane, London, the object (as expressed in the memorandum of association) being "to associate, for the protection of their common interests, persons carrying on business as vendors of patent medicines, drugs, and chemicals, whether in connection with the business of grocers, general storekeepers, or otherwise; and especially for defence in prosecutions which may be instituted against any of them under the Pharmacy Act of 1868, or any other Act from time to time in force restricting or affecting the trade in patent medicines and chemicals." The nominal capital of the company is 525*l.*, divided into 1,000 shares of 10*s.* 6*d.* each. The first directors are Thomas Yardley, 180 Moss Lane East, Moss Side, Manchester, drysalter; William Green, 56 Deansgate, Bolton, grocer; William Adam Cartwright, 105 St. George's Road, Bolton, chemist; William Henry Deloe, 241 Stretford Road, Manchester, drysalter; John Frederic Todd, 212 Duke Street, Barrow-in-Furness, wholesale druggist; and Nabor Withnall, 85 Moss Lane West, Manchester, drysalter.

Gazette.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Aldridge, Henry Ernest, Derby and Nottingham, mineral-water manufacturer.

Steele, Warwick Charles, Ealing, surgeon and medical practitioner.

ADJUDICATIONS.

Aldridge, Henry Ernest, Derby and Nottingham, mineral-water manufacturer.

Steele, Warwick Charles, Ealing, surgeon and medical practitioner.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Levin, Julius, Hasley, Staffordshire, sponge merchant—discharge suspended for two years.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

WEDNESDAY, NOVEMBER 16.—*Royal Microscopical Society*, 20 Hanover Square, W., at 8. Mr. F. Chapman, "Foraminifera of the Gault of Folkestone"; Mr. C. Haughton Gill, "Fungoid Growths on Diatoms"; Mr. John Hood, "Notops Ruber: a new Rotifer."

WEDNESDAY, NOVEMBER 16.—*Society of Arts*, at 8 P.M. Opening address of the 139th Session by Sir Richard M. Webster, Q.C., M.P., Chairman of the Council.

THURSDAY, NOVEMBER 17.—*Chemists' Assistants' Association*, in Portland Rooms, at 8 P.M.

THURSDAY, NOVEMBER 17.—*Chemical Society*, at 8 P.M. Fluosulphonic Acid," by Professor Thorpe, F.R.S., and William Kirman, A.R.C.S.; "The Interaction of Iodine and Potassium Chlorate," by Professor Thorpe and George H. Perry, A.R.C.S.; "Magnetic Rotation of Sulphuric and Nitric Acids and their Solutions, also of Solutions of Sodium Sulphate and Lithium Nitrate," by W. H. Perkin, F.R.S.; "Note on the Refractive Indices and Magnetic Rotation of Sulphuric-acid Solutions," by S. U. Pickering, F.R.S.; "Hydrates of Alkylamines," by S. U. Pickering, F.R.S.; "The Atomic Weight of Boron," by Professor Ramsay, F.R.S., and Miss Emily Aston. Other papers.

THURSDAY, NOVEMBER 17.—*The Chemists' Airedale and Mineral Waters Association (Limited)*. Annual meeting at Anderton's Hotel, Fleet Street, at 3 P.M.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act making any of these arrangements binding upon dissenting creditors.

Hawkins, Henry, Rock House, Manchester Street, Heywood, and Victoria Street, Oldham, and Rose Vale Cottage, Cloughfold, Rawtenstall, patent medicine manufacturer and dealer. Trustee, James L. Crapper, York Street, Heywood, accountant. Dated, October 31; filed, November 2. Unsecured liabilities, 480*l.*; estimated net assets, 160*l.*; creditors fully secured, 1,930*l.* The following are scheduled as creditors:—

	£	s.	d.
Cook, R., Manchester	62	10	0
Crossley, James, Heywood	17	0	0
Fineberg & Co., Manchester	51	0	0
Finkleston & Co., Manchester	70	0	0
Greenhalgh, E., Market Place	10	6	0
Heywood Corporation, Heywood	16	0	0
Manchester and Liverpool Banking Co., Heywood	17	12	1
Marlor, David, Heywood	50	0	0
Standring, J., Manchester	20	12	6
Tattersall, John, Heywood	9	0	0
Tweedale, Son & Lees, Oldham	25	0	0
Wilkinson, J. T., Manchester	14	10	0

Secured Creditors.

Heywood Economic Building Society, Heywood..	940	0	0
Hunter, Samuel, Sheffield	303	0	0
Mayall, Alfred, Liverpool	450	0	0
Ogden, Samuel R., Blackburn	300	0	0

LANOLINE VACCINE.—Lanoline has proved wonderfully successful in India in preserving vaccine lymph. Surgeon-Major King has particulars of 138,435 cases in which such lymph was used, and the figure of success was 89.98 per cent.

The Winter Session.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

THE first scientific meeting of the present session was held on Wednesday evening, and, as is customary on such occasions, Mr. E. N. Holmes, the Curator, had a magnificent exhibition of drugs, &c., presented to the Museum since last session. These were the subject of a paper and remarks by Mr. Holmes, but before they came on Mr. J. C. SHENSTONE, of Colchester, was called upon to say something regarding

A MS. RECIPE-BOOK

which he has presented to the Library. This book appears, from entries made in it, to have belonged to Colchester apothecaries at the end of the seventeenth and the beginning of the eighteenth centuries. At all events, it belonged in 1713 to a John Richardson. It contains many orthodox formulæ, such as emp. plumbi, aq. carui co., &c. Sometimes signs are used, as in the case of salt of tartar. Household remedies, and counter specialities are well represented, and Mr. Shenstone stated that some of the recipes are suggestive, though most of them are old-fashioned. He quoted examples, and suggested that chemists having similar books in their possession should present them to the Library. The PRESIDENT thanked Mr. Shenstone for coming down from his country seat—(laughter)—he meant pharmacy, to bring this interesting book under their notice.

DRUGS FROM THE STRAITS SETTLEMENTS AND ELSEWHERE.

Mr. HOLMES then took up the description of his specimens. The first were samples of poisons called "Ipo," used by three tribes and Malays of Perak for poisoning darts and arrows. The poisons differ in the mode of preparation, hill tribes using different methods from the plain tribes. The essential ingredient is the juice of *Antiaris antioxiaria*. This is a very high tree, the nearest branches being 100 feet from the ground. The juice is obtained by making herring-bone or V-shaped incisions in the bark of the tree. The matter of 3 oz. of juice comes out in a day, and as much as 1 pint is altogether obtained. This juice is evaporated to a gummy consistence, and the darts or arrows rubbed upon it. Other poisons, as have been said, are mixed with the juice. These are grated tubers of *Strychnos*, *Wallachiana* a species which appears to be new to science, and Dr. Stockman has found that it differs in physiological action from *nux vomica*, a somewhat novel feature for an Oriental *Strychnos*. Mr. Holmes added some remarks regarding the darts and blowtubes with which they are used. He then spoke of an oil resembling wood oil, which is called "plang oil," and is used by the natives as a remedy for scaly skin-diseases. It is a dark-brown oil, is obtained from the trunk of the tree by incision, is soluble in rectified spirit, and is greasy but not sticky. The plant which yields the oil is of botanical interest, but is only known as of the *Anacardiaceæ*. Several other drugs were mentioned, amongst them the stem of *Sideroxylon malaccense*, which yields daroo oil, used in Bombay for making rum, although it does not possess the odour of that liquor.

Most of the specimens mentioned so far were presented by Mr. Wray. The Curator was now asked to refer to some others, and he did. First there was a nice collection of drugs from Afghanistan, presented by Mr. Schlesinger. These were sent by the Ameer for commercial purposes. Mr. Prebble, of Bombay, sent a specimen of the plant which yields sarcocolla—the first seen in Europe, said Mr. Holmes. Then there was a nice collection of drugs from Sierra Leone—Mr. Scott Elliot the donor. The Crown agents at Honduras sent specimens of the sponges which grow there—nice honeycombs, a trifle brittle; and Messrs. Cresswell Brothers & Schmitz sent some Cuban sponges. These are grass-sponges, and their peculiarity is that they have little tubes protruding from the surface, the smaller ones for taking in water, and the larger ones for letting it out. It looks a very queer sponge, but when these tubes are trimmed off and the sponge bleached it looks handsome indeed. Physiologically pure salicylic acid, the products of *Podophyllum Emodi* (from Mr. J. C. Umney), pseudotropeine and its hydrochloride,

Natal eucalyptus oil, and some other specimens were formally named.

The PRESIDENT, as Mr. Carteighe, read the next paper on

THE SALE OF POISONS BY PHARMACISTS TO MEDICAL MEN.

Premising that when a railway accident occurs the public naturally consider whether the driver or signalman is at fault, so they turn towards the chemist when a case of accidental poisoning is reported, the lecturer said that while he believed the general practice under circumstances of considerable difficulty was to take the utmost precautions, it was possible by carelessness to bring serious censure on the whole pharmaceutical body. In the sale of poisons he considered it to be the duty of chemists to take every precaution possible beyond the limitations of the law in order to prevent to the utmost of his power the abuse of such substances; and in referring to poisons he did not limit himself to the statutory poisons. The customs generally followed in regulating the sale of poisons had been the growth of time and the result of experience. It was assumed that suicides could not be prevented. If poisons could not be obtained there was generally at hand the rope, the razor, or the gently flowing river. Much the same might be said if the intention were to take the life of another. All that could be done was to ensure that a precise record of the sale of any poison should be kept so that the purchaser might be traced. The sale of poisons to medical men is generally regarded as a wholesale transaction. But is that view justifiable? Is it taking sufficient precaution if we allow any stranger calling himself Dr. A to have any poison he may ask for? He was disposed to think it the duty of chemists to refuse to supply poisons to any such customer unless he were properly introduced. And the same course should be pursued with written orders. In all cases a signed order should be obtained, and this should be preserved. It might be objected that adherence to this plan might in some cases imperil a life by preventing a doctor obtaining the remedy he required. But he thought medical men would adapt themselves to the rule when they knew of it. He would apply the same principle to sales of poison from one chemist to another. In such transactions the poison, if solid, should not be wrapped in the order and handed thus to the applicant—perhaps a diminutive messenger. If a liquid, it should not be supplied in a bottle with the order merely tied round the neck. If an extract it should not be transferred from the spatula to a piece of paper. The orders should always bear the signature of the purchaser or of his assistant. An order on a blank sheet of paper, with the dispensing-stamp of the firm was not sufficient. He did not suggest that practices such as he had suggested were common in our ranks. But they did exist and, perhaps, in the days before so many poisonous alkaloids were known. Now the responsibility thrown on the pharmacist is much greater than it was formerly. He had in these remarks intentionally made no allusion to parts 1 and 2 of the schedule of poisons. For his present purpose these should be regarded similarly. There was no reason why 5 grains of morphia should be refused and 2 oz. of the hypodermic solution of morphia should be supplied to a stranger. Nor did he refer to wholesale dealings. Wholesale druggists might or might not take more or less precautions. He was glad to notice that many of them do now put their name and address on poisons besides labelling them as the Acts require with the word poison and the name of the article. In other words, they think it wise to take particular precautions. It might be asked what is the definition of a wholesale transaction. He was not a lawyer, and if he were, he should not venture to give an opinion. Only a judge could give a decision. His object had been to urge that the requirements of the law in regard to poisons should not be all that a pharmacist should consider.

Mr. GILES thought the President's paper was a most important and valuable one. In his opinion the Pharmacy Act had tended rather to facilitate than to suppress the sale of poisons. Before it was passed he had never thought of selling such articles as prussic acid or arsenic; but when the conditions were definitely stated, he could not help feeling that he was almost required to do so. He knew that in the establishment in which he was then, but with which

to his sorrow he was no longer connected, the sales of poisons had considerably increased.

Mr. LONG thought the Act would not be necessary much longer as chemists would all be worried out of existence. Shakespeare told us of the poor apothecary whose poverty not his will consented to the sale of a poison. Pharmacy, he believed, had risen above that. He himself would not sell such poisons as prussic acid, strychnine, arsenic, to any one except medical men, nor to any stranger no matter how introduced. Mr. Long then wandered off on to the recent paregoric case, and from that to poisonous patent-medicines, but, being invited by the President to confine himself to the point raised, wound up by saying he should like to kick the whole lot (of poisons, presumably) into the gutter.

Mr. C. UMNEY agreed with Mr. Giles that the paper was a very important one. Wholesale druggists had been put on the alert especially since a famous case when a medical man went to an historic house and bought wholesale a poison which he used to kill a youth with. They were very careful in labelling poisons. They put their name and address on all they send out and, moreover, use distinguishing labels. He mentioned several instances of applicants for poisons at his warehouse who had been refused because they were unknown. There had been a question among shippers who had been in the habit of exporting casks of arsenic without any label on them. They said they had so shipped thousands of casks and had done it so for centuries, and it was not necessary to alter it. But recently some arsenic got mixed with some tapioca, some deaths resulted, and, as was known, an official intimation had been made that these must be labelled poison. He (the speaker) and Mr. David Howard had been almost alone in arguing before that that course should be taken. As secretary of a wholesale druggists' association, he could state that it was the general desire of the trade to take every possible precaution.

Mr. WALTER HILLS said the medical man referred to by Mr. Umney had been refused poison by another firm. The question of personal knowledge was a difficult one. He could hardly agree that it should be a rule that medical men were to be supplied with poisons only on the same terms as the general public. When a medical man who was not personally known to them applied for a poison, if it were not a case of extreme urgency, if it were, for instance, a dentist, who wanted some arsenic, they would agree to send the poison to his residence the next day, and there take his signature. But in cases of urgency this was not always possible. Country medical men who had accounts with them, but were not personally known, sometimes called in for a few grains of strychnine. They would propose in such cases to send it by post. As to supplying poisons to other chemists, while deprecating such carelessness as had been alluded to, he thought, if an order came from a chemist, and they knew there was such a chemist, even though they did not know his writing, they might supply it. At the same time, he hoped it always would become the custom of chemists to sign such orders. Further, he thought there might be often a distinction between poisons in the first and those in the second part of the schedule. They might, for instance, sometimes refuse to supply aconitine, but be willing to sell aconitine ointment.

Mr. SHENSTONE (Colchester) thought it would be desirable that discussions of this character should be extended to other difficulties of which they had many in the country. He instanced the sale of corrosive sublimate to carriers for the use of shepherds. Were they justified in selling this if they knew the carrier?

Mr. ALLEN (Kilburn), referring to Mr. Giles's remarks, said he knew an unregistered person who was asked for some cyanide of potassium, and refused to sell it, saying, "You can go to the chemist's, but he will not sell it to you." Ultimately the unregistered dealer gave to his customer about 2 oz. Orders from one chemist to another were very frequent. In future he would always insist on having these, if for poisons, signed.

Mr. HILLS said he should be glad if he might put a practical question. What were they to do if to-morrow they received in Oxford Street an order from Dinneford & Co. for some poison in a writing unknown to them?

The PRESIDENT said he would reply to questions altogether.

Mr. BRAXTON HICKS, who spoke on the invitation of the

President, said he had been trying to keep quiet, but the searching eye of the President had found him out. He had been brought to the meeting by his own pharmacist, who had not poisoned him yet. He believed he was looked upon by some chemists as an unnecessary worrier. In his office as coroner, he had to report some people. As a barrister he had to read Acts of Parliament. Sometimes he interpreted them rightly, sometimes wrongly. He appeared, from the result in the courts, to have read the Pharmacy Act correctly from beginning to end. He found the journals of the trade all seemed to agree with him, and the President's address was exactly in substance what he would have said himself, only he could not have expressed himself so well. In dealing with poisons chemists should always consider the public safety. They should follow the spirit and not the mere letter of the law, and for their own credit as common-sense people should not say, I will go just as far as the law allows. Coroners did not want to have cases of carelessness before them. They did not want to call chemists' assistants over the coals. He would much rather call a grocer's assistant over the coals. He thought they should make no distinction between strangers who said they were medical men and the rest of the public. Neill went to a very respectable chemist's shop and, because he said he was a medical man, he was supplied with strychnine.* If he (Mr. Hicks) went to a chemist's shop would they supply him with strychnine? Few of the chemists there knew him or had ever seen him, and he hoped they never would see him again—officially he meant, of course.

Mr. S. A. WALTON wanted to know what should be done if a medical purchaser presented his visiting-card, or if an American doctor was introduced by a doctor known to the seller, what then?

Mr. CARTEIGHE: In the latter case you may certainly supply a poison.

Mr. BURDEN said the sale of poisons was fraught with innumerable difficulties, and he gave two instances. A man comes rushing up in a hansom and wants 2 oz. of laudanum and 2 oz. of liquor ergotæ. Mr. Burden refuses to supply, and there is the usual scene. So also when the night-bell is rung by a medical stranger. Then there is the case of medicine-chests, which usually contain laudanum or morphia. They are open to all inmates of the house—even the coachman may carry a bottle of laudanum in his pocket and might administer it to anybody. There ought to be some restriction.

Mr. PICKARD said that pharmacists as such could do little to carry out Mr. Carteighe's suggestions without the aid of medical men, and he suggested that there should be a conference. He certainly thought that they should insist upon having the name and address of the doctor appended to dangerous prescriptions.

Mr. LEWIS OUGH (Leicester) asked the President to state what should be done in the case of pills containing small quantities of poison. Should they be so labelled?

Mr. JONES said this seemed to be a fitting opportunity for drawing up a code of pharmaceutical ethics, similar to what medical men had to guide them.

Mr. CARTEIGHE said that was exactly the point of his paper, and such a code would have to be formed. He warned his hearers not to depend upon what this or that historic house would do in certain circumstances. They must rely upon themselves, for an historic house would not save them. When an unknown doctor wanted poisons, they should not say to him, "I can't supply you," but "I won't." (Hear, hear.) He was not there to answer categorical questions, and would not as long as he was President of the Society. Mr. Ough was a pharmaceutical chemist, and could answer his own question himself, or ought to be able to, and that was the reply he would give to all such questions put to him that night. They would find that there was a good deal in the paper to think about; it was not the growth of a day, and he had made no allusion to cases for proper reasons. They could supply these themselves. He repeated some of the statements contained in the paper, and advised them to let the law go on one side and regard only what was for the safety of the public. All their safeguards must be real, and they must apply common sense to all poison transactions whether they were with medical men or

* Mr. Braxton Hicks prides himself on his accuracy. According to the evidence in the Neill case it appeared that he only bought tincture of nux vomica and opium from the chemist.

with the public. It was a piece of presumption on the part of doctors to regard pharmacists as their servants. (Applause.) They were simply associated with doctors in the treatment of disease. It was a mistake to regard a medical order as a fiat; it was wholly different from a prescription. Then, after referring to the practice which popular weeklies have of printing a medical column, and the familiarity with potent medicines thereby engendered, Mr. Carteighe replied to Mr. Hills who, he said, could get all the knowledge he needed regarding an order from Dinneford & Co. if he liked to put himself to the pains, and at the worst he could send the poison to Bond Street and get Michael Carteighe's signature for it. He did not think a conference with medical men would do any good. That must be between individuals.

On the motion of Mr. Giles, Mr. Carteighe was thanked, and the meeting closed.

NORTH BRITISH BRANCH.

A MEETING of the Executive of the North British Branch was held in Edinburgh on Thursday. Mr. J. Laidlaw Ewing, Chairman of the Executive, presided, and the following were also present, viz.:—Messrs. Kermath (St. Andrews), R. McAdam (Glasgow), C. Kerr (Dundee), J. M. Hardie (Dundee), A. Noble (Edinburgh), A. Kinninmont (Glasgow), J. W. Sutherland (Dumfries), D. Storrar (Kirkcaldy), J. B. Stephenson (Edinburgh), J. Nesbit (Portobello), A. Gibson (Edinburgh), J. H. Fisher (Dunfermline), J. Jack (Arbroath), and W. Johnston, A. Strachan and J. Paterson (Aberdeen). The Secretary intimated an apology for absence from Mr. Maben (Hawick).

The minutes of the previous meeting were read and approved of. The report of

THE GENERAL PURPOSES COMMITTEE

stated that Mr. E. C. C. Stanford had been asked to deliver the inaugural address of the session, but he had been unable to accept the invitation. He had, however, offered to contribute a paper on "Algin" at a later date. Several other papers had been promised. The meeting then considered in committee the report of the General Purposes Committee on the question of

LOCAL SECRETARIES.

After some discussion it was remitted back to the committee to further consider the matter and prepare a report to be printed and submitted at the next meeting of the executive. The report on the proposed

EXTENSION OF PREMISES

was next considered. This matter also was referred back to the committee with instructions to get plans and estimates prepared by an architect, and to submit these, with detailed report, to the next meeting.

EXAMINERS.

The CHAIRMAN moved that Messrs. Peter Boa, Edinburgh; David Brown Dott, Edinburgh; Adam Gibson, Edinburgh; James Jack, Arbroath; Alexander Kinninmont, Glasgow; Thomas Maben, Hawick; John Nesbit, Portobello; and John Bertram Stephenson, Edinburgh, be nominated for election by the Council as members of the Board of Examiners for Scotland for the year 1893. The motion was seconded by Mr. ROBERT MCADAM, Glasgow, and unanimously agreed to. On behalf of himself and his colleagues, Mr. STEPHENSON expressed thanks for nomination.

This was all the business brought before the meeting in a formal manner, but

The CHAIRMAN said that a good many who were present at the Pharmaceutical Conference had visited the rooms of the North British Branch, and had expressed great satisfaction with them, and with the arrangements made in connection with the Conference meetings. In regard to the Conference he thought everything had gone off well, and to the credit of the Society. (Applause.)

EVENING MEETING.

In the evening there was a good attendance of members, &c., on the occasion of the opening of the session by Dr. Matthew Charteris, Professor of Materia Medica in the

Glasgow University. Dr. Charteris laid before the meeting some of his views in regard to the revision of the British Pharmacopœia, which will be more fully referred to in our next issue.

CHEMISTS' ASSISTANTS' ASSOCIATION.

At the meeting of the Association on November 3, a paper was read on

THE PREVENTION OF VOICE TROUBLES AND SORE THROAT. By William Hill, M.D., London.

This paper took the form of a lecture with practical demonstrations. A large number of specimens, both human and animal, were exhibited. The throat was described in detail, and the pharynx and the larynx pointed out as the two most important parts. The nose has a very important connection with the throat and its disorders. It contains a series of bones called the turbinated bones, which expose a large surface of warm blood, and cause the air inhaled to be warmed ready for the lungs; moreover, the cilia of the nose cause the secretions to move and reject the solid particles it has collected. The nose is the proper organ for breathing, not the mouth. The larynx, which is the air-passage, is bounded at its upper extremity by the vocal cords, and has, therefore, the double function of breathing and of phonation. The epiglottis, by altering its form, causes the food to pass down the pharynx, and keeps it from the larynx. In speaking of proper breathing, the author pointed out that diaphragmatic breathing was the proper method, and not clavicular. It was reported that Rubini had broken his clavicle during singing, by persisting in this method of breathing. Throat-diseases are often caused by germs, by inhalation of sewer-gas, &c. Fortunately, there are other organisms in the throat always ready to attack these germs. The throat was well provided with tonsils, both faucial and lingual. The tonsils produce phagocytes, or leucocytes, amoeboid corpuscles which actually swallow up the germs. Why, then, should tonsils be cut out? Because when they become enlarged and horny, they lose this function; and by removing the horny surface, the new exposed portion can go on producing the corpuscles. The decay of teeth is largely due to germs: this shows the importance of keeping the teeth in order. Obstruction in the nose is the cause of many throat-disorders. Care must be exercised in the use of both alcohol and tobacco; many people can use these luxuries with impunity in moderation; others cannot. People liable to throat-disorders should be very chary of eating piquant or hot dishes. Irritating remedies, too, such as cayenne and (except in special cases) tannin lozenges or nitrate of silver, should be avoided. Hot tea, too, is bad.

Several members made comments on the lecture, and to these, and to questions put, Dr. HILL made a brief reply. He agreed with Mr. Rogers as to the desirability of discouraging counter-prescribing. He thought, as a simple remedy, menthol was one of the best; hazeline, too, was of great use. Glycerine should only be used where there was a very moist secretion. The dog only kept his mouth open at times, so that he did usually, especially at night, breathe through his nose. Sewer-gas might not be dangerous of itself; but houses where there was any leak in the sewers were always to be condemned.

A vote of thanks was passed to Dr. Hill.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

The opening meeting of the session of the Midland Counties Chemists' Association was held on November 3, at the Colonnade Hotel, New Street, Birmingham. Mr. C. Thompson (President) occupied the chair, and amongst those present were Councillors Barclay and Barrett (Leamington), Messrs. W. F. Wyley, F. Barlow, G. Thonger, C. J. Arblaster, J. Hinds (Coventry), G. E. Perry, Cattell, E. Ferriday, F. H. Prosser, Richards, M. Magor, Meggeson, Scott, Boucher, Featherstone, Perks, Lowther, T. Ground, Kneall, Chapman, Brunt, Spencer, R. D. Gibbs, Gibson, Onion, Prowse, Eley, Drew, Beech, W. Aster, Wakefield, R. Brown, F. H. Alcock (honorary secretary), &c. There were also present a large number of ladies.

THE PRESIDENT'S ADDRESS

took the form of the advocacy of a scheme of territorial representation on the Pharmaceutical Council. Mr. Thompson suggested that each councillor should be elected by a particular district; he should represent a certain definite body of pharmacists, and be responsible to that body for what he does and what he says. At least once a year he should meet his own constituents, at his own centre, and address them, whilst they in turn would address him. By that means he would get to know the views held in his district, he would receive fresh energy for work himself, and impart new life into the district over which he presides. We should have at the head of each centre, which would constitute a branch of the Pharmaceutical Society, a councillor, with the twenty or thirty local secretaries, as the case may be. These sections would each have its president, vice-president, secretary and treasurer, and in all large towns there would be no reason why a certain number of other members, according to the number of chemists residing in the district, should not join in these provincial councils. We should then have some direct interest in the work of the Society, some duty to perform, and by stimulating each other we should get rid of that monster—apathy—which has been the great incubus in the past, and which has so cramped and crippled the many individual efforts which have been made from time to time that all of these in turn have resulted in but little good being accomplished.

He illustrated his proposal by exhibiting the maps of Great Britain divided into districts which Mr. Greenish had shown when he gave his address as President of the British Pharmaceutical Conference, at Birmingham in 1886, on the organisation of provincial pharmaceutical education. Mr. Thompson thinks the Pharmaceutical Society might provide a room in each division, and give 20% to 30% a year to carry on the necessary work. He considers that the funds of the Society would not suffer in the long run, even supposing each centre cost the Society on an average 50% per annum—750% altogether. He believes that instead of 4,000 members and associates in business paying a guinea each, there would soon be 8,000. Referring to the maps he showed that at the present time No. 1 branch has Messrs. Harrison and Martin as its representatives; No. 2, Yorkshire, Mr. Newsholme; No. 3, Manchester district, is not represented; No. 4, Liverpool and North Wales, Mr. Abraham; No. 5, Leicester, Nottingham, Derby, and Lincoln, Mr. Richardson; No. 6, Midland Counties, Messrs. Cross and Southall; No. 7, South and Mid Wales, Mr. Grose; No. 8, Eastern Counties, no representative; No. 9, Kent and Sussex, Messrs. Bottle and Leigh; No. 10, Mr. Atkins; No. 11, Bristol, Mr. Schacht; No. 12, Cornwall and Devonshire, no representative; No. 13, Scotland (North), Mr. Johnston; No. 14, Scotland (South-East), Mr. Storrar; No. 15, Scotland (South-West), no representative.

It might be argued against this proposal that a district might be favoured with more than one capable man, while in another district it would be impossible to find one. He would get over that difficulty by accepting any really good and capable man whether he reside in the district or not, the only stipulation being that the district itself should have its choice. After expounding the educational advantages which might be expected to result from the adoption of his scheme, Mr. Thompson turned to matters of more business interest. Quite recently, he said, "the Pharmaceutical Society has claimed twenty-five penalties of 5% each in Birmingham, and still I find that small drug-stores are opening in all directions. I think it right that the fact should be made known that the public runs very great risk in trusting these pseudo chemists and druggists, who fit up shops exactly like a chemist's, put over their doors the words 'drug-store,' and sell almost anything they are asked for. These men, as a rule, are very ignorant. Some are oil and colour men, or members of other trades, who, having a little capital to spare, start on the 'store system.' Only one of these prosecutions has been reported in the daily press, the remainder having paid the fines rather than allow their names to appear in print. I wish there was sufficient *esprit de corps* among us to prevent any qualified man lending his qualification to these usurpers; our task would then be an easy one. I appeal to these men, if they have not lost all sense of decency and of unity, not to accept positions under any unqualified

master, or company of unqualified persons; depend upon it they will soon find situations equally as good under properly-qualified men; do not sell yourselves to these outsiders, but stick to your colours, and do not earn for yourselves the offensive name which is sometimes given to non-union men." After a brief allusion to the labelling of poisonous proprietary medicines, the President concluded his address by urging his hearers to leave occasionally their cares, worries, and anxieties, drown all petty jealousies, bury all cramped ideas, and come to the meetings. "There give us the benefit of your experience, and see if you cannot leave the trade or profession to which you belong in a better condition than you found it."

Councillor BARRETT, in proposing a vote of thanks to the President for his address, said he thought perhaps Mr. Thompson would admit that some of the ideas he had submitted had been already placed before pharmacists, but with the difference that he had elaborated and shown them how to carry a scheme that had been partially suggested to them by Jacob Bell, Mr. Stott, and Mr. Greenish. A sort of scheme could very easily be thought out by a man of imagination, but a man who could think out a scheme and reduce it into such a form that it would be workable was a man they rarely met. Mr. Thompson, however, had done this. (Hear, hear.) The scheme deserved their hearty support. There would doubtless be many difficulties, because they would have to go to Parliament for a Bill to alter the present Pharmacy Act before they could carry it through, and Parliament was very much overdone with business. But he thought they would be able to get passed such an amended Pharmacy Bill as would give them the power to return their members to Bloomsbury Square in the manner suggested by the President. Having obtained it, he believed they would almost immediately be brought into unity, that they would largely increase their members, and that the large increase in membership would more than repay the additional outlay which the President had urged would be necessary to carry out his scheme. It behoved pharmacists occasionally to lock around, and see what others were doing in the way of union. The licensed victuallers knew perfectly well that as soon as a local option measure or anything else likely to affect the licensed victuallers was brought into Parliament the members of the trade were able to bring immense influence to bear, so great was their power as the result of combination. If that was possible with the licensed victuallers, surely it was possible with chemists, who, at any rate, ought to be able to boast of as much education as the licensed victualler. They ought also to be able to boast of as much education as the doctor; and if the doctor, the clergyman, and the lawyer were examples of how people could get their rights, surely they, as chemists, who had to pass an examination insisted upon by Government, should combine more freely than they had done in times gone by for the realisation of their desires—and combination could only be brought about by a scheme such as their President had placed before them. It was only by meeting together constantly, and by being addressed by prominent men in their ranks, that the lethargic feeling that they as chemists were so plentifully blessed with would be taken away. He would go further than the President in regard to drug-stores, and strike off the rolls any man guilty of doing that which the Pharmacy Act said he was not allowed to do. (Hear, hear.) If a man was found guilty as a lawyer of doing something against his profession, he was struck off the rolls. Let pharmacists go in for power to strike chemists off the rolls who were guilty of improper conduct. (Hear, hear.) If the Government protected the lawyers, it should protect pharmacists in the same way. (Applause.)

Mr. PERRY, in seconding the motion, said Mr. Thompson had done yeoman service to that Association, and having been a little behind the scenes he knew the good service he had also given as local secretary for the Pharmaceutical Society. (Hear, hear.) Evidently his interest in pharmacy generally was far from waning. (Hear, hear.) He was not competent to discuss the scheme which Mr. Thompson had unfolded before them for the reorganisation of the Pharmaceutical Society. He looked upon it as a matter which would require serious thought. He did not know that there was any professional body which adopted such a mode of election of its representatives as the one Mr. Thompson considered it advisable the Pharmaceutical Society should

adopt. It seemed to him if such a scheme could be practicable with such a body as theirs, it could not fail to strengthen the Society. It certainly ought to create a great deal more enthusiasm and lead to more active work in the interests of pharmacy generally. Nearly every President of their Association within his recollection had had the same remark, or very nearly the same remark, to make as had been made by Mr. Thompson as to the state of pharmacy, and every President seemed to cast about for some remedy. So far as he could see, there were two things with which pharmacists should never rest satisfied until they were modified or altered. The one had been dealt with in the President's paper, and that was the practice of pharmacy and the selling of poisons by unqualified practitioners. (Hear, hear.) It was a most serious thing, and interfered greatly with the business of the pharmacist who had to undergo a rigorous examination before he was allowed to practise pharmacy. The other was the continuance of dispensing by medical men. He agreed with Mr. Barrett that the time was approaching when their rights as chemists would have to be pressed forward more than they had been in the past. He was not prepared to say in what particular direction, but he entirely agreed with Mr. Barrett that those rights were existent, and that an effort should be made to assert them. He meant particularly in the direction of the dispensing of medicines. There was no doubt that the separation of the practice of medicine and the practice of pharmacy would be conducive to the best interests of both professions, and in no sense injure financially the medical men. (Hear, hear.) Until this was brought about they would always hear from their Presidents year after year of the unsatisfactory condition of pharmacy. He thought Mr. Thompson had made a valuable contribution as to the reorganisation, consolidation, and unity of pharmacists. (Applause.)

Councillor BARCLAY, in supporting the proposition, said he considered the President had brought before them a very important question—one which every local Association ought to consider, and which ought to be considered also by the Council of the Pharmaceutical Society. (Hear, hear.) They were all aware that through one cause or another the Council had for many years been diffident in moving for the protection of chemists and druggists. They had always been fearful of taking a step in advance; but if they knew that they had behind them the public opinion of pharmacists in the country, they would be much more ready to undertake work which they had shrunk from in the past. It was of the utmost importance that pharmacists in the kingdom should be able to speak through their representatives more effectively than at present; and if a scheme something on the lines Mr. Thompson had suggested were pushed forward, he could see no reason why it should not be adopted. (Hear, hear.) As at present constituted, the Council lacked enthusiasm and force, and he believed if it had taken bolder steps long ago they would have had a much better Society and a better protection for the trade. In regard to chlorodyne and other poisons, they ought to have pushed the matter home. But the fact was they did not know how far to go, because they did not know whether they had the trade at their back or not. If they had such a scheme as that submitted they would be able to speak with a great deal more force than at present, and he trusted some practical measure would arise out of the discussion that evening. (Applause.)

Mr. W. F. WYLEY expressed his desire to assist in any movement having for its object the interests of pharmacists, and said he thought the scheme suggested would do a certain amount of good. (Hear, hear.) As to the question of the adulteration of drugs, he could not think, if a return were made of the number of prosecutions, that it would be found that they occurred amongst qualified chemists. (Hear, hear.) As a rule those prosecutions took place amongst village shopkeepers, who very likely adulterated their goods after receiving them from wholesale houses. Every chemist desired to sell drugs that were pure and above suspicion. (Hear, hear.) A resolution was then put and carried with acclamation.

The PRESIDENT, in acknowledgement, spoke of the pleasure it gave him to notice that all the speakers had approved of his scheme. What was now wanted was active support, and he felt sure they in Birmingham would keep up the reputation of the city in which they lived.

During the evening selections of vocal and instrumental music were given by several competent performers.

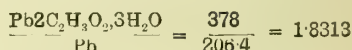
We understand that the Midland Counties Chemists' Association are arranging several Wednesday afternoon excursions to works in the neighbourhood of Birmingham, and that the Birmingham Small Arms Factory will be paid the first visit.

MANCHESTER PHARMACEUTICAL ASSOCIATION.

THIS Association met on Wednesday night (November 9) at the rooms of the Chemical Club, Victoria Hotel, under the presidency of Mr. Harry Kemp.

THE DETECTION OF POISONS.

Mr. CHARLES TURNER read a paper on "Poisons and their Detection." Beginning by giving an account of the presence of lead and copper in drinking-water and some metallic impurities in distilled water caused by faulty condensing arrangements, he went on to speak of crenic and apocrenic acids, which, he said, were probably allied to humic acid, a substance formed from decaying vegetable matter, and which had recently been shown to dissolve inorganic substances which were insoluble in ordinary reagents—the metallic compounds of this acid being more active than the substance itself in this respect. To detect these acids, metals and silica were first precipitated as usually directed; the remaining liquid was concentrated and acidified with acetic acid, when copper acetate gave a brownish precipitate, showing an apocrenate. To the filtrate ammonium carbonate was added till a blue colour was obtained. On warming, crenate of copper was deposited as a bluish-green precipitate. A piece of piping, which had been used for the Manchester water-supply, was shown, having a deposit of brownish material from the water. The subject of lead in citric and tartaric acid next received attention, the lead vessels used for crystallising imparting a small amount to the acid. It might be determined by neutralising about 15 grammes of the acid with caustic soda and adding water to the bulk of 50 c.c., and stirring with a glass rod moistened with ammonium sulphhydrate. A brown tint was produced, the intensity of which was equalled by water containing a known amount of a solution prepared by dissolving 1.831 gramme of crystallised lead acetate in 1,000 c.c. of water. This contained 1 milligramme of lead in 1 c.c. In Wanklyn's water-analysis the figure 1.66 was given.



Tartaric acid usually contained about 0.2 grain in 1 lb. This was not sufficient to cause any injury. It seemed to be impossible to obtain a commercial acid free from lead. The one used for comparison in the experiment shown by Mr. Turner was obtained from Messrs. Hopkins & Williams. The results were passed round to the members present. Arsenic, Mr. Turner proceeded to say, might be considered the typical poison. In the employment of Marsh's test for its detection certain precautions were necessary. It would be noticed in the tests for bismuthum purificatum in the 1885 Pharmacopœia that arsenium was directed to be tested for by dissolving the specimen in nitric acid. The bismuth nitrate separated by crystallisation, and the mother-liquor, which of course contained arsenic acid if arsenium were present, was evaporated with hydrochloric acid till all nitric acid was driven off. This was because the nitric acid prevented the arsenium uniting with the hydrogen in a great measure. Chloride of arsenium was not formed when arsenic acid was heated with hydrochloric acid, and no arsenic was lost by volatilisation. Pure zinc yielded hydrogen with difficulty. If chloro-platinic acid (the so-called platinum tetrachloride) or copper sulphate was added, metallic platinum or copper respectively was deposited and aided the action. The copper, however, acted as in Reinsch's test, and the hydrogen did not on that account combine with all the arsenium, though some was generally to be found in the flame. If nitric acid were present, the zinc might contain arsenium and yet show no signs of it if the ordinary mode of procedure were employed. Sugar and other organic bodies modified the action, so that arsenunretted

hydrogen was produced and the sugar might be said to contain arsenic when none was present. Wall-papers containing arsenic were not found so frequently as formerly. An excellent article on the subject was given in *THE CHEMIST AND DRUGGIST* early in 1890, and for this reason they were only shortly dealt with. The detection of arsenic was illustrated with a fly-paper which had been soaked in a strong solution of potassium nitrate and sodium carbonate. This was dried and burned. The ashes, on fusion with a little more nitrate and carbonate, yielded a residue which, when dissolved in water and neutralised with acetic acid, gave an abundant chocolate precipitate with silver nitrate. The detection of poisons in general was then discussed, phosphorus receiving special attention. Three match-heads were placed in a litre flask with water, sulphuric acid, and ferrous sulphate, which prevented the potassium chlorate supposed to be present acting on the phosphorus. These were distilled into an upright Liebig's condenser. The gas being turned down, a luminosity was seen to pass slowly across from the flask to the condenser, remaining visible at the surface of the water. The general treatment was summarised as follows: first, the distillation of the substance with acid and the examination for volatile poisons; next, the dialysis of the residue in the retort or a fresh portion and the examination of the diffusate for alkaloids, glucosides, and metallic poisons; and, lastly, the total destruction of organic matter by burning, and the examination of the ash. In conclusion a careful calculation of all results was enjoined. Mr. G. W. Overend, Ph.C., conducted the working of the experiments shown, which were much appreciated.

At the close of the paper there was a short discussion, which was taken part in by, amongst others, Mr. J. Carter Bell, analyst for Cheshire. The thanks of the meeting were accorded to Mr. Turner for his paper.

It may be added that the audience, which numbered about forty, included several of the students at the Manchester College of Pharmacy.

EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

THE opening meeting was held on Wednesday, November 2. Mr. JOHN LOTHIAN, President, delivered an address. In the course of this he stated that the membership of the Association last session had been the highest on record, although every year the Association suffers from the removal of some of its most active members. That the work done by the Association was good, he thought the testimony of Prof. Attfield, as British Pharmacopœia reporter, sufficed to show, and he urged the younger members to maintain the Association in the high place in the progress of pharmacy which it had attained of recent years. Mr. Lothian then commented upon the advantage of note-taking and the prospects of the session.

On the motion of Mr. COWIE (Vice-President), seconded by Mr. NESBIT (Portobello), a cordial vote of thanks was awarded to Mr. Lothian for his address.

The SECRETARY read the Prize Committee's report, from which it appeared that the first prize had been gained by Mr. George Scott Carmichael, 17 North Bridge, with 91 per cent. of marks; and the second prize by Mr. Donald S. Murray, 139 Princes Street, with 62 per cent. of marks. Mr. J. B. Stephenson presented the first prizeman with a class-ticket for Dr. Stevenson Macadam's lectures on chemistry, and the second prizeman with copies of Attfield's "Chemistry" and Macadam's "Practical Chemistry." In doing so Mr. STEPHENSON said the great interest attaching to such occasions was not because of the material gain in the prize, nor did it lie in the mere competition. The real motive was our natural admiration of excellence in the abstract which was common to them all. He earnestly and eloquently urged them to have faith in their work, for thus only could good work be done. They should also love their work, for by so doing would they have courage to persevere in face of difficulties. He might also say they should cultivate hope in their work, for he could assure them they would find ample opportunities for the exercise of that grace in their future experience of life. On the motion of the CHAIRMAN, a hearty vote of thanks was enthusiastically awarded to Mr. Stephenson for his interesting address.

The PRESIDENT then intimated that owing to business engagements he was reluctantly compelled to resign the office to which they had for a second time elected him. The following were then elected to fill vacancies:—W. B. Cowie President; A. J. Day, Vice-President; J. W. Simpson Secretary; Alex. Murray, Assistant Secretary; and as members of Committee, J. Lothian and W. Lyon.

DUNDEE CHEMISTS' ASSISTANTS' ASSOCIATION.

LAST week's meeting of the Association was devoted to "Short Papers." Mr. Paterson gave an account of "The Collection and Preservation of Marine Algæ" in which he detailed some amusing experiences. Mr. Mair reported on a sample of salicylate of soda which he had examined in which he found a trace of iron, introduced probably from the use of carbonate of soda in the manufacture not quite free from that impurity, or from some metallic vessel in which the salt may at some part of the process have been contained. The sample was sent out by a firm of chemical-manufacturers in Scotland. He read also a note on "Studies for Apprentices," in which he advocated a class in elementary theoretical pharmacy for young apprentices. There was some good discussion on the papers. Mr. Macdougald, the city analyst, was elected an honorary member.

SOCIETY OF CHEMICAL INDUSTRY.

GLASGOW AND SCOTTISH SECTION.

THE session was opened at Glasgow last week, Mr. C. A. FAWCITT, the Chairman, delivering an address on the chemical industries of Scotland, suggesting that more attention should be paid to the manufacture of aniline and alizarine dyes. Mr. Fawcitt also advocated that foreign patentees of such dyes should be compelled within a specified time to manufacture in this country.

Mr. D. R. STEWART, chemist to the Broxburn Oil Company, read a paper on "The Flash-point and Heat of Burning Mineral Oil." This was a criticism of the various standards which have been fixed or proposed from time to time, special attention being given to the effect which the introduction of petroleum oils had had on the older standards, the author advocating a high flash-point (100° F. as a minimum). He also spoke about the probable outlets of mineral oils in the near future—as for fuel and for gaseous illuminants—and advocated parliamentary inquiry regarding lamp accidents and fatalities.

In the course of the discussion Mr. W. IVison MACADAM, Edinburgh, said that with home oils there was not the least danger. He looked upon paraffin as one of the safest illuminants they had—safer even than gas. There was no doubt that the Scottish oils burned in the same character throughout, whilst with the American oils they frequently found that the lighter portions volatilised and the heavier residue was left. He strongly held with Mr. Stewart that the lowest flash-point should be 100°, though personally he favoured 120°.

Mr. J. STUART THOMSON, Uphall, said it was rather curious that the Government, which demanded a light with a flash-point of 105° for its own departments, should allow the public to get oil at a flash-point 7½ degrees lower. The discussion was adjourned.

LIVERPOOL SECTION.

Mr. HENRY BRUNNER, of Brunner, Mond & Co. (Limited) opened this section on Thursday, November 3, with an address on "The Use of Chemical Manures for the Production of Fruit." Mr. Brunner pointed out that one-fourth of the cost of production of the fruit is for manure, and that although he was uncertain whether natural manures could be completely replaced by chemical, he had no doubt that a large proportion of it could be with advantage to the crop and economy to the cultivator. The paper contained an interesting critique of the best forms of chemical manures to employ and their relative values. A hearty vote of thanks to Mr. Brunner, proposed by Mr. CAREY, and supported by Dr. HURTER and Dr. CAMPBELL BROWN, brought the meeting to a close.

MANCHESTER SECTION.

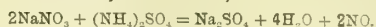
MR. IVAN LEVINSTEIN, Chairman of this section, opened the session last Friday evening with an address. At the outset he spoke of the weaknesses of our patenting system, and advocated a painstaking examination of the subject-matter and of the specification of every patent before it was granted, as was the case in America and Germany. Such an examination would protect genuine and honest inventors, and as for chemical patents, the necessity of distinguishing between them and mechanical patents was insisted upon. Mr. Levinstein also dealt with recent legislation affecting chemical industries, German competition, and the acquisition of the Manchester Technical School by the Corporation.

LONDON SECTION.

FOR the first, and probably the last, time in its history this section met on Monday night in the Royal Society's rooms at Burlington House, owing, as Mr. WILLIAM THORP explained in his maiden speech as Chairman, to the fact that the British workman has not yet finished the decoration of the Chemical Society's rooms. Having thanked the members for the honour done to him, Mr. Thorp got through other preliminaries expeditiously, and called upon Mr. Watson Smith to read a paper on

THE PREPARATION OF NITROUS OXIDE.

Mr. SMITH treated his subject in a large measure historically, mentioning the most important things that have been done chemically with the gas since the day that Priestley discovered it. Sir Humphrey Davy's experiments were specially referred to, as from them we really date our exact knowledge of laughing-gas. There are practically two groups of methods of preparing the gas—(1) those depending upon the reduction of nitric acid, and (2) those in which salts are decomposed. It is not possible to get a pure gas by the first methods, and of the second the decomposition of ammonium nitrate is the only one which is of industrial importance. There is considerable diversity of statement regarding the temperatures at which ammonium nitrate fuses and decomposes. Mr. Smith himself finds that 153°C . is the melting-point; incipient decomposition begins between 170° and 180°C ., nitrous oxide begins to come off at 203°C ., slowly at 210°C ., and at 240° an exothermic reaction appears, which results almost in an explosion. Once decomposition begins, it is possible to carry it on at about 180°C . The principal object of the paper was to introduce a new method of preparing the gas. This consists in heating a mixture of equal parts of dry ammonium sulphate and sodium nitrate. At a temperature not below 240°C . this mixture assumes a semi-fused state, and nitrous oxide comes off with great regularity and of notable purity. This was practically demonstrated, and Mr. Smith also showed by means of lead nitrate that the heating of a nitrate in the absence of ammonia results in orange-coloured vapours being given off. He proceeded to discuss the probable decomposition which occurs, and against the supposition that ammonium nitrate is formed he pointed to the high temperature at which the gas comes off. This was sufficient to explode ammonium nitrate. The reaction, he believed, was:—



The cost of the materials for the production of nitrous oxide by this process is 9% or 10% a ton, as compared with 40% per ton the price of ammonium nitrate.

SCHÜRMANN'S REACTIONS.

Mr. SMITH proceeded to read a second paper, on certain reactions on the sulphides of heavy metals, which have been worked on by Schürmann, a pupil of Victor Mayer. It was first observed by Anthon that if the sulphide of, say, copper be heated with a solution of a silver salt, the latter takes all the sulphur and the copper goes into solution. Schürmann carried the matter further, and was able to show that the affinity for sulphur diminishes as we go from palladium to manganese, and that the metals may be arranged in the following order:—

Pd, Hg, Ag, Cu, Bi, Cd, Sb, Sn, Pb, Zn, Ni, Co, Fe, As, Ti, Mn.

A soluble salt of any one of these takes the sulphur from the

sulphide of any one following it. This general statement was illustrated with various examples. Schürmann further determined that this sulphur affinity enabled him to arrange the metals in the periodic system, tin only being refractory to this arrangement. Mr. Smith thought that the reactions might be useful in the separation of metals, as well as of industrial importance, and as an example he showed that when galena is warmed with a solution of acetate of copper the lead is in the course of a day converted into a wonderfully pure acetate. Both these papers created considerable interest, and in the course of the

DISCUSSION

the CHAIRMAN said, in regard to the first, that he did not believe in two-stage reactions. He thought it quite possible that ammonium nitrate would be formed in the mixture of sodium nitrate and ammonium sulphate, but that it would be decomposed at once. This statement received startling confirmation from Mr. OSCAR GUTTMANN, who said that he had had on his writing-desk for several months past a sample of ammonium nitrate made by cooling a solution of ammonium sulphate and sodium nitrate to -15°C . At this temperature ammonium nitrate crystallised out, and it was so pure that it did not deliquesce. Mr. C. F. CROSS and Mr. CRESSWELL also spoke, and Mr. SMITH replied, defending his own theory regarding the reaction.

AN INTERLUDE

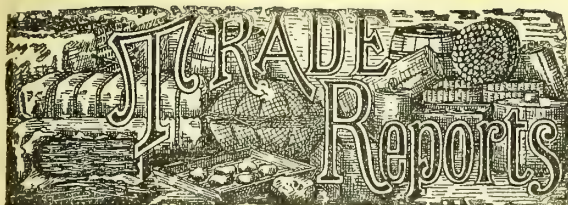
was provided to enable Mr. THOMAS TYRER to submit a statement regarding the recent annual meeting. The committee had estimated that the entertainments would cost 550*l.*, and 548*l.* 5*s.* 8*d.* was the figure actually reached. About 500 persons had the benefit of this. Privately, 230*l.* 1*s.* 6*d.* was subscribed, and there was in addition to that a guarantee of 520*l.*, of which $\frac{11}{20}$ ths was called up and 275*l.* had actually been received. The smoking-concert cost 72*l.* 9*s.* 6*d.*; trips and dinner on the second day, 228*l.*; the Windsor and Clevedon trip, 255*l.* 5*s.* 8*d.*; and incidental expenses, 35*l.* 8*s.* 6*d.*

The CHAIRMAN said that the annual meeting was an undoubted success from one end to the other, and, though they had been greatly favoured by the weather, their chief gratitude was due to Mr. Tyrer for his unceasing work.

DISTILLATION OF WOOD.

Professor RAMSAY now had an opportunity of giving the results of continued experiments by him and Mr. Chorley on the distillation of wood. Since last year they have worked on jute, impure cotton wadding, and the "medicated cotton wool" of the druggists. The lines adopted were similar to those previously laid down (THE CHEMIST AND DRUGGIST, xl. 677), and it was found that the yield of charcoal was higher; but the distillate was smaller, and it contained more methyl alcohol and less acetic acid. Jute yielded only 0.4 per cent. of the acid and cotton wool 2.5 per cent., whereas wood yields 6 per cent. The gases also differed, those from jute and impure cotton containing 70 per cent. of CO, and from absorbent cotton 50 per cent. of CO. In distilling jute the temperature remained at 100°C . for fifty minutes, then there was a sudden and rapid rise to 308°C ., at which decomposition was spontaneous. So also in the case of ordinary cotton wadding; but absorbent cotton distilled steadily. It was apparent from these results that the substance which yields acetic acid is not cellulose, but the substance which is extracted by solvents from cotton wool; and as this opens up a new field the authors had passed the investigation over to Messrs. Cross and Bevan, who are prosecuting it.

There was an attempt in the course of the discussion to get away from the practical bearings of the communication by a revival of the quibble as to "explosive" and "exothermic." Messrs. TYRER, BLOUNT, and others spoke about this. On the subject proper, Mr. A. H. MASON pointed out that the "medicated cotton" to which Professor Ramsay referred is made by removing fatty and other matters soluble in alkali from the cotton with caustic-soda solution. Professor RAMSAY indicated that that was what he meant. Mr. CROSS promised a paper to the Society on the research which he is now prosecuting. So far he was able to say that from the substance removed from cotton wool he had obtained from 33 to 43 per cent. of acetic acid. Professor RAMSAY briefly replied to his "explosive" critics.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

The London Markets.

42 CANNON STREET, E.C., November 9.

Japanese Opium.

Opium has been produced in Japan only since 1830, but since that time the production has been extended. In the province of Mije opium is produced containing more than 15 per cent. of morphine, and in the year 1886 the production amounted to 944 kilos., the greater part of which contained sufficient morphine to satisfy the requirements of the Japanese Pharmacopœia. Ueno has examined four samples of opium from that province, and gives the following data for the relative amounts of morphine and narcotine:—

	Morphine	Narcotine
1	11.727	9.258
2	0.713	9.250
3	10.044	11.055
4	12.942	7.294

The Projected Quinine Factory in Java.

We are indebted to one of our friends among the cinchona planters in Java for a copy of a small pamphlet which is being circulated to the bark-growers in that island by one of their number, and in which definite proposals are sketched for the establishment of a quinine factory in the Preanger district (Western Java). The pamphlet seems to us to contain many sound arguments, although the writer does not seem to give the difficulties in the way of the undertaking the same prominence as its advantages. Our correspondent tells us that the proposals are being discussed with much interest in the island. The chief features may be summarised as follows:—The total share capital is to be 800,000f., of which 200,000f. (to be represented by preference shares) are estimated to be required for the erection of the factory, with plant to manufacture quinine and other cinchona alkaloids, cocaine, caffeine (from tea refuse), theobromine, arrack, ether, hydrochloric and sulphuric acids, and sulphate of ammonia. The raw materials for the acids are obtainable in the island at very little cost, and arrack is, of course, obtainable very cheaply in a sugar-growing country. Petroleum is also obtainable cheaply, as it has recently been found in many parts of the Dutch colonies. All other chemicals that may be required must be brought from Europe. Another 400,000f. of the capital is to be subscribed among the planters, who must either pay their shares in cash or furnish their equivalent in cinchona for manufacturing purposes. The output of each separate bark plantation is to be ascertained by a commission, and no planter will be allowed to supply more bark than his proportionate share. The planters are to be repaid for their bark as soon as the quinine is sold. For every kilo of quinine sold a sum of 20 cents is to be placed to the credit of a fund for the payment of interest to the holders of the 200,000f. in preference shares. The factory is to be managed by a Board of seven members, elected from among the shareholders. The quinine is to be consigned for sale to two

chief agents, one in London and one in Hamburg. The profits of the factory are put down (on paper) at 17½ per cent. per annum, on an average price of 18f. per kilo (about 10d. per oz.) of sulphate of quinine, rising to 70 per cent. per annum with a quinine price of 24f. per kilo (or about 1s. 2d. per oz.).

ALCOHOL.—Slightly dearer. Best quality German potato spirit is now quoted at 8½d. per proof gallon, c.i.f. terms, naked, for 2,000-gallon contracts.

CAMPHOR (CRUDE).—The tendency of the market is decidedly firmer, although the only sale reported is one of 150 piculs *Japan* in a steamer nearly due, at 150s. per cwt., c.i.f. terms. On the spot nothing is available below 160s. per cwt. *China* is quoted at 142s. 6d. per cwt., c.i.f., for prompt shipment; and *Japan* at 145s. per cwt., c.i.f.

CAMPHOR (REFINED).—On Monday night the German refiners raised their price to 1s. 9d. per lb., net; there is nothing of this description offering now below that price. The price for *French* brands is 1s. 10d. per lb. *Japanese* has been sold privately at 1s. 7½d. per lb. this week, but holders will not now accept less than 1s. 8d. per lb. *English* unaltered at 1s. 9½d. per lb. for bells in 10-cwt. lots, usual terms.

CANARY-SEED continues to arrive in rather large quantities from the Moroccan ports.

CANTHARIDES.—This season's *Russian* flies are being offered at 2s. 10d. per lb., c.i.f., for natural, and 3s. 1d. per lb., c.i.f., for sifted quality.

CINCHONA.—The average test of the manufacturers' barks at last week's public sale in Amsterdam was 4.52 per cent. The total quantity of bark sold represented 14,577 kilos. sulphate of quinine, while the equivalent of 4,056 kilos. was bought in. The buyers were Mr. J. J. Louët Feisser, 3,508 kilos.; Mr. Hugo Wischerhoff, about 3,365; the Pharmaceutical Trading Association, about 2,063; the Amsterdam Quinine-works, about 1,679; Mr. H. A. van Overzee, about 1,321; Mr. G. Briegleb, about 1,152 kilos. Of pharmaceutical barks very little was offered, but what there was of these more than sufficed to fill the slight demand, druggists' cinchonas being quite neglected, notwithstanding the reduced prices which would be accepted for them. The two richest parcels sold consisted respectively of 48 and 8 bales *Ledgeriana* from the Government plantations. The larger lot (stem chips), representing 10.71 per cent. of sulphate of quinine, sold at the rate of from 10½d. to 11½d. per lb., the smaller (broken quills), analysing 10.39 per cent. sulphate at 12d. The next Amsterdam auctions will take place on December 8 next. The Ceylon exports from January 1 to October 17 are returned as follows:—1892, 5,290,557 lbs.; 1891, 4,499,322 lbs.; 1890, 7,055,145 lbs.; 1889, 7,461,044 lbs.

CREAM OF TARTAR.—Crystals are again lower (best white French may now be bought at 82s. per cwt.), but powder maintains its price a little better, and for good quality 84s. per cwt. must be paid.

GALLS.—*Turkey* galls are very quiet. The following are the present quotations:—*Smyrna*: blue, 52s. 6d. to 55s.; *Bassorah*: blue, good to fine, 57s. to 58s.; green, from 47s. 6d. to 50s.; white, fair to good, 42s. 6d. to 44s. per cwt.

GENTIAN.—Good French root is very firmly held at 19s. 6d. to 20s. per cwt. The Leghorn market is bare.

GLYCERINE.—In some quarters the prospect of a genuine advance is considered very remote. In support of this view it is pointed out that for many purposes (especially in pharmacy) the consumption of glycerine is declining, while the sources of supply are constantly being added to, not only among the soapmakers here and abroad, but also from other countries, such as Brazil (which now exports glycerine of excellent quality from Rio) and Australia, whence consignments have been received for the last two or three years.

GOA POWDER has been inquired for, and is found to be very scarce. From 1s. 3d. to 1s. 6d. per lb. is now asked for good quality—an advance of quite 3d. per lb. This will affect the price of *chrysarobin*.

GUM ACACIA.—About 70 serons of hard glassy *Soudan* sorts have been sold in Liverpool at 62s. 6d. to 65s. per cwt.,

and good pale friable descriptions are held firmly at 70s. per cwt. About 250 bags *Brazilian* gum have recently been sold in Liverpool at from 37s. 6d. to 38s. per cwt.

GUM TRAGACANTH.—The demand for this drug still continues, and a considerable amount of business has been done, both for home trade and export, at from 11l. 10s. to 12l. per cwt. for good Bagdad (Bushire) seconds, 9l. 15s. to 10l. for thirds, and up to 9l. per cwt. for fourths. For good to fine *Hog* gum 70s. to 80s. per cwt. has been paid. Our stock here is now very small, and holders ask higher rates after every transaction, which has the effect of restricting business. For Smyrna (Anatolian) gum from 11l. to 13l. per cwt. is asked for firsts. The stock of this description also is very small. It is reported from Bushire that the Persian crop this year is very small; but the same news has been put forth every season for many years, and has generally been found to have originated only in the imagination of the writers. They are very busy shipping the date crop just now in the Persian Gulf ports, and it is very likely that the tragacanth is simply being held back till after Christmas.

IODINE.—Our article on the doubts which are entertained in Chili of the renewal of the iodine convention at the close of this year has excited a good deal of attention, and the manufacturers of iodides seem mostly inclined to disbelieve the correctness of our informant's statement. Messrs. Schering's agents tell us that they have received a telegram from Berlin to the effect that the iodine convention is not coming to an end at the close of the present year. It is also added that the orders from Japan (the largest consumer of iodide of potash) have been fully up to the level of previous seasons, and this is looked upon as a favourable sign, as it was generally expected some time ago that Japan would soon cease to buy in the European markets, iodides being now manufactured in that country from iodine obtained locally from seaweed.

IPECACUANHA.—The expected parcel of 200 packages *Rio* root has not yet arrived. It is reported, however, to be waiting trans-shipment in Antwerp, and 20 bales of it were actually printed for sale in the broker's catalogue, but not offered. When this shipment arrives, our stock will consist of 600 packages *Rio* and about 60 packages *Cartagena* and *East Indian* root. (See later paragraph in page 720.)

JUNIPER-BERRIES.—In Italy prices have risen, because the gatherers ceased collecting when the crop was at its height as they could not obtain remunerative prices. When this came to be realised by the dealers they showed more readiness to pay higher rates; but most of that which has been gathered has now, it is said, gone into the second-hand, and good quality is worth 5s. 6d. per cwt., f.o.b. Leghorn.

LIQUORICE-ROOT.—There is no demand. Decorticated root is held at from 25s. to 30s. per cwt., according to quality.

LITHIA SALTS.—The makers are not offering at present. It is reported that from 7s. 6d. to 8s. per lb. has been paid, but these quotations (certainly the latter) seem exaggerated.

LYCOPodium.—Best sifted *Russian* lycopodium is scarce and advancing. At present 1s. 8½d. per lb., c.i.f. terms, is asked.

ORRIS.—Under date of November 1 we hear from Leghorn that there is a good demand for *Verona* root, which is thought comparatively cheaper than *Florentine*. The latter is neglected at the parity of 85s. to 94s. per cwt. f.o.b., according to quality; *Verona* being held at 60s. to 65s. per cwt. f.o.b. for good to fine selected, and 47s. per cwt. f.o.b. for ordinary dark root.

SAFFRON.—The new crop is now being brought to market in Spain. It is of excellent quality so far, and the yield appears to be a pretty heavy one. The prices have opened without alteration, but the general opinion is that they will decline a little later on.

SALEP is nominally quoted at 140s. to 160s. per cwt., but the demand is exceedingly limited.

SCAMMONY.—There has recently been an arrival of fine quality, which will shortly be offered. Medium and common kinds are neglected.

SENEGA-ROOT is quiet but firm. There are still a few packages to be had at 2s. 9d. per lb. for fine bright quality.

TEA.—The Congou market is quiet this week, with moderate offerings and but little demand for lower grades at the advance. Teas over 7d. are, however, cheap enough, and a fair trade is being done in the country with good leaf Ningchows from 8d. upwards, and with Panyongs. Packings are not so plentiful, and show an advance of fully 1d. per lb. on the very low rates that were recently prevailing for really fine teas from 7d. to 10d. Monday's Assam sale was a "record" for quantity, and lasted from noon till about 5 30 P.M. Broken Pekoes are cheaper, especially under 1s., and as these are badly wanted in Ireland they will go readily into consumption. The Ceylon sales for the week are light, and prices very firm, scarcely anything selling below 8d. per lb.

TEREBENE.—The price for pure terebene has recently been reduced.

VANILLA.—Writing under date of October 12, a Mauritius house states: "This year's production is in course of preparation, and small parcels will soon be available."

WAX (JAPAN) remains firm, with small sales of good pale suares at 38s. to 39s. per cwt.

WORM-SEED.—A good demand prevails; ordinary brown to good green *Levantine* are quoted at from 8s. 3d. to 17s. per cwt., good to fine pale green at 26s. to 29s. 6d. per cwt., all c.i.f. terms.

Thursday's Market News.

42 CANNON STREET, E.C., November 10.

London.

Business in the drug-market still continues very good, although to-day's auctions did not go off on the whole quite so well as the preceding ones. The principal alterations of the week may be summed up as follows: Higher—buchu-leaves, fair cardamoms, civet, tolu balsam, tonquin-beans, vanilla, gum tragacanth, lycopodium, Goa powder, honey, Siam gum benzoin, insect-flowers, beeswax, and senna. There has been quite a run on opium, which is considerably dearer. *Ipecacuanha* is neglected and lower; *Alexandrian* senna may also be had at lower prices. *China* cantharides and ergot of rye are easier; *Mitcham* oil of pepper-mint offering lower. In chemicals the chief alterations have been the advance of codeia and morphia, and a run on chlorate of potassium. *Lithia* salts are also higher, quinine and quicksilver neglected. Glycerine is dearer, and the price of German refined camphor has been raised. In outside articles there is not much alteration: alcohol is just a little higher, nitrate of soda and cutch are easier, and for juniper-berries higher prices are asked. Shellac is irregular, but generally lower. Gambier, indiarubber and linseed oil are also cheaper. There is no change in the Bank-rate, and the price of bar-silver to-day is 38½d. The following are the Eastern exchanges: Bombay, 1s. 2¾d.; Calcutta, 1s. 2½d.; Hong-Kong, 2s. 9½d.; Shanghai, 3s. 9¾d.

Under date of November 2, our correspondent *New York* writes from New York as follows:—"The volume of trade in general is satisfactory, though not above the average for the season, taking all the various lines into account. Such changes as have occurred—and they are not numerous—have for the most part been toward a higher plane of values, though one or two exceptions may be noted to this. Of the American products, *Senega* and *Cascara sagrada* attract the most attention just now. *Senega* is firmly held at the advance mentioned in my last, to 55c. to 60c. as to holder and quality, but no large business is reported. Of *Cascara sagrada*, however, some 20,000 lbs. having sold at 10c. for December-January arrival, while 11c. is wanted for spot stock of good thin bark. One lot of 38 cases of Central American *Balsam copaiba* is offering at 35c., which is above buyers' views, as jobbing quantities of cleaned balsam may be had at that figure. *Canada Balsam* is well sustained in price, but not active. *Vanilla* beans: Mexican are active and prices tend upward still. *Angostura tonquin* beans are firm but quiet, at \$2.50 to \$2.75, as to quality and holder. *Jalap* is dull,

and some is to be had as low as 23c., though in some quarters the quality is questioned. *Mexican sarsaparilla* is heavy and rather unsettled at 8½c. to 9c., the future of the market depending, of course, on the receipts, concerning which prognostications are a vain thing. *California Yellow mustard seed* continues to advance and \$6 is now wanted. *Soda nitrate* is firm and active at \$2.10 to \$2.15 spot, and \$2.5 to \$2.10 to arrive. It is reported that the Pacific coast is very nearly cleared of stocks. *Ipecacuanha* has advanced in sympathy with London advices. A sale of 1,500 lbs. is reported at \$2.10, and \$2.20 is asked for further supplies. *Rhubarb* chips are higher. *Quinine* is higher and active in sympathy with the London market. *Opium* is dull, and does not respond to the favourable cables from Smyrna. *Cod-liver oil* is firmer, as is also *Oil of cloves*."

ALOES.—A parcel of 20 boxes *Cape aloes* sold at a slight decline of 6d. to 1s. per cwt., good bright hard at 22s., medium at 21s., and drossy at 19s. per cwt. A parcel of 30 boxes and 327 gourds *Curacao aloes* was also sold at easier prices—good fair orange (in boxes) at 56s.; fair bright mixed, but mostly brown gourds 30s. to 34s.; brown ditto, turning capey, 27s. to 29s.; ordinary dull, 19s. (subject) to 21s. per cwt. It should be noted that in New York prices are at present much higher, 75s. per cwt. being asked there for good orange *Curacao*. Of East Indian aloes several lots of *Socotrine* were offered, but only six cases, very ordinary in, skin of little colour and flavour, sold at 52s. 6d. per cwt., good but rather soft brown was bought in at 51. 5s.

AMBERGRIS.—Fine qualities are now becoming rather cheap. At to-day's auctions about 15 cases of medium grade were offered but mostly bought in, only a small quantity selling at 102s. 6d. per oz. for slightly dark.

ANISE (STAR).—From China the quotation for shipment is 86s. per cwt. c.i.f. terms, but offers are being solicited by London brokers at 85s. per cwt., c.i.f., for October-November shipment.

ANNATTO.—The demand has given way, but holders are still fairly firm. Good bright but somewhat damp Ceylon seeds were bought in at 2½d. per lb. to-day, and for a lot of rather dark Madras a bid of 2½d. was refused.

ARECA.—10 bags fair quality from Colombo were bought in at 32s. per cwt. nominally, but they might probably be bought several shillings under that figure.

BALSAM (CANADA).—Three barrels good bright yellow sold very cheaply at 1s. 2d. to 1s. 3d.

BALSAM (COPAIBA).—Several lots were offered to-day, but no sales were made: 49 tins, cloudy and thick brown to red *Bahia* were bought in at 1s. 6d. to 1s. 7d., and for good bright reddish *Maranham*, 1s. 8d. per lb. is asked.

BALSAM (TOLU) is firmer. Sales have been made privately at 1s. 2d. per lb., but nothing is now available below 1s. 4d. per lb.

BUCHU.—Only two bales were shown to-day; these brought an advance of about 1d. per lb., namely from 9½d. to 10½d. for round, very brown of slight flavour to fair greenish. There have been no arrivals this week.

CALUMBA.—In demand at a slight advance. Of 115 bags offered to-day 65 sold at 20s. for ordinary small and dark to 23s. 6d. for fair sorts. For a parcel of small to bold good pale mixed a bid of 27s. 6d. was refused.

CAMPHOR (CRUDE).—Fifteen tubs Japan were offered to-day and bought in at 8l. per cwt. There were no bids, but 155s. was suggested as the price.

CAMPHOR (REFINED).—Three cases Japanese refined imported *via* Hamburg were bought in at 1s. 9d. per lb. to-day.

CANTHARIDES.—Chinese flies are a good deal cheaper, 6 cases rather damp and wormy from Hong Kong being sold without reserve at from 9d. to 11½d. per lb.; another lot of good quality was bought in at 1s. 5d. This shows a decline of about 4d. to 5d. per lb.

CARDAMOMS.—In good demand, at a slight advance for medium qualities, while fine also brought full prices. Of 153 cases offered, 63 sold as follows:—*Ceylon-Mysore*: Fine

medium to bold pale heavy, 3s. 8d.; good ditto, long and brown mixed, 3s. 1d.; medium pale round, 2s. 9d.; fair medium yellow, 1s. 10d. to 1s. 11d.; small ditto, 1s. 8d. to 1s. 9d.; very small, 1s. 6d.; partly split and brown to small long brown, from 1s. down to 1s. 1d. per lb. *Ceylon-Malabar*: Medium round brownish, 1s. 5d.; small lean brown, 1s. 2d. per lb. Small pale *Seed* sold at 1s. 4d., but for good quality bids of 1s. 5d. were refused. The following figures relate to the exports of cardamoms from Ceylon from January 1 to October 17: 1892, 275,272 lbs.; 1891, 234,506 lbs.; 1890, 252,940 lbs.; 1889, 214,754 lbs.

CASCARILLA.—A parcel of 55 bales from New York sold rather cheaply, at from 19s. 6d. to 22s. for thin brown partly woody and all damaged bark.

CASTORUM.—Very firmly held. A bid of 41s. was refused for two bags unsorted small, skinny and lean, slightly damp pods.

CHLORATE OF POTASH.—There is a regular boom in this article. On the spot 8½d. per lb. has already been paid, and 9d. per lb. is now talked of as the price. There is no quotation for the whole of next year, and 6½d. per lb. is, we believe, the highest price paid in that position. The following are to-day's prices for delivery:—December, 8d. paid; January, 7½d. paid; January-March, 7½d. per lb. asked; January-June, 7½d. per lb. asked.

CINCHONA.—Of 40 bales *Crown bark* offered to-day, only a very small proportion sold; fair *Guayaquil* in quills at 9d. per lb. Of flat *Calisaya*, 2 serons good genuine bright realised 1s. 7d.; and 29 bags of hard, spurious, flat bark, all damaged, sold at from 5½d. to 7d. per lb. Two bales dull *Maracaibo* also sold at 2½d. per lb.

CIVET is dearer, and holders are now asking 8s. for good quality.

CODEIA has been raised in price again. A considerable quantity has been sold at 11s. 9d. per oz., and since then small sales have been made at 12s. per oz. The continental markets have raised their price to 12s. 9d.

CUBEBS.—Several lots are reported to be sold privately at 5l. 15s. per cwt. for fair quality brown berries with little stalk. At to-day's auctions from 5l. 10s. to 5l. 12s. 6d. was bid for smaller quality, and the broker said he would submit the offer. It seems likely, however, that prices will still further decline.

CUMIN SEED remains firm. For fair quality *Greek* 25s. was asked to-day, a bid of 21s. being refused. *East Indian* is held at 21s. per cwt.

DRAGON'S BLOOD.—In demand at full prices, especially for good qualities. Three cases rather damp but dried saucers sold at from 9l. 10s. to 9l. 17s. 6d. A parcel of ordinary *Zanzibar* drop was bought in at 60s. per cwt.

ERGOT OF RYE.—Several small lots of ordinary description were sold to-day, partly at a decline of about 2d. to 3d. per lb., but anything of good sound quality is still firmly held; wormy ergot of mixed description realised from 1s. 6d. to 1s. 9½d.; good sound French, 2s. 4d. per lb.

GAMBOGE.—None was sold to-day, although several lots were offered; fair loose Saigon pipe, partly ricey in fracture, was bought in at 13l.; ordinary pickings at 10l. 15s. per cwt. On October 8 there was a small stock of gamboge in Saigon, and ordinary kinds were much inquired for.

GLYCERINE.—German double-distilled s.g. 1.260 has been sold at 46l. per ton this week; but for contracts a little less might still be accepted.

GUARANA.—Four shillings per lb. would be accepted for good quality.

GUM ACACIA.—The only package sold at to-day's auction was one of small pale grey picked *Turkey* drop, at 7l. 2s. 6d. per cwt. Hard glassy to reddish Soudan sorts were bought in at 72s. 6d.

GUM BENZOIN.—*Siam* gum is generally slightly dearer for ordinary qualities. Of 93 packages, 59 sold to-day. There was one lot of 2 cases, all very bold brown almonds, in block, of very fine appearance, but rather weak flavour and somewhat hard. This kind has not been offered for many years. It was valued at from 14l. to 16l. per cwt., but

sold with good competition at 19l. to 20l. Dust and small siftings in block, rather grey, realised from 65s. to 70s.; and ordinary sandy grey dust in block from 55s. to 62s. per cwt. *Palembang* gum sold at irregular prices; ordinary earthy to fair gum, mixed, mostly without reserve at 21s. to 25s. per cwt. Of *Sumatra* gum only a few lots were offered, and 10 cases were sold at 6l. 15s. to 6l. 17s. 6d. for good seconds, small to medium bright almonds, rather false-packed, showing a steady market.

GUM GUAIACUM.—Of 20 boxes offered to-day half was sold: partly slaty and stony block, at 11½d. to 1s. 1d.; ordinary woody dusty and low, at 6d. per lb.

GUM MYRRH.—For good pale picked gum 7l. 10s. must still be paid, and one lot sold to-day at that price. Six cases of clean very small siftings, with dust, realised 59s. per cwt.

HONEY.—*Jamaica* is in demand at an advance of about 2s. 6d. to 3s. per cwt., but only 24 packages were offered to-day, all of which sold at 31s. to 32s. 6d. for brown to good orange candied. A small parcel of *Chilian* and *Australian* honey was all bought in.

INSECT-FLOWERS.—Owing to the execution of American orders and the consequent diminution of the stock, the prices in Trieste have advanced very considerably lately—the last quotation for open flowers from that port was 45s. per cwt., f.o.b.

IPECACUANHA.—The long-expected parcel has at last arrived. It consists of 199 serons, direct from Buenos Ayres, and came by the *Wordsworth*. Only 31 packages *Rio* offered to-day, but buyers are not disposed to pay anything like the prices that have recently prevailed. Only 2 lots sold at 7s. 11d. to 8s. for fair sound quality, and we hear that several serons have since been sold privately at 8s. This is rather a better price than was expected, but it shows a decline of 1s. 3d. to 1s. 6d. per lb. from the highest rates. Of *Cartagena* root 9 bags very fine bold stout grey and brown root were offered, and bought in at 6s. 6d. per lb.

JALAP.—Firmly held and little offering of good quality; of 7 bales very old partly very small mixed wormy root and trimmings 2 bales sold at 1s. 3d. to 1s. 5d. per lb.; better quality was bought in at 1s. 9d. to 1s. 10d.

KOLA sells steadily at 5½d. to 7d. per lb. for rather mouldy fair to bright chocolate-coloured dry *West Indian* nuts; 8 packages at auction to-day were all sold.

LIME JUICE is again dearer, and 1s. 3d. was asked to-day for one puncheon of good pale juice from Trinidad. Some sales have been made privately at 1s. 1d. to 1s. 2d. per gall.

MORPHIA was advanced yesterday in consequence of the rise in opium. Powder is now held by one of the makers at 3s. 6d. per oz., but we believe that it is still possible to buy somewhat below that price elsewhere.

MUSK.—The stock of *Tonquin* is said to be now very small, and sales have been made privately at steady prices. At to-day's auctions there was no demand for this kind, and 4 caddies of first pile were bought in at nominal rates. Two caddies *Yunnan*, small to bold pods fairly dry, are held for 33s., and 2 tins of rather skinny *Russian Cabardine* at 17s. per oz. Of so-called *Grain musk* 20 bottles of very common description sold at from 6s. 6d. down to 1s. 6d. per oz.

OILS (ESSENTIAL).—Some business in *Star-anise* oil was reported at the end of last week at the comparatively low price of 5s. 6d. per lb. c.i.f. terms. On the spot, however, none is to be had for less than 6s. 2d. per lb., and 6s. 3d. per lb. is asked in many quarters. It is expected, say those interested in the article, that the pinch of scarcity will be felt here about the middle of next month, as little or nothing is due until well in January next. Japanese *Oil of peppermint* is now held for 7s. to 7s. 3d. per lb.; *Menthol* for 11s. per lb., at which figure it is exceedingly firm. The quotation for forward delivery is now 10s. 6d. to 10s. 9d. per lb., c.i.f. terms. Of Japanese *Oil of camphor* 20 cases are held at 22s. 6d. per cwt. Of oil of *Lemongrass* 30 cases (in bottles) were mostly bought in at 1½d. per oz.; but we believe that it is possible to buy in the open market at 1½d. per oz. For a parcel of *Eucalyptus oil* from Adelaide 3s. 2d. per lb. is asked; while for another lot from Melbourne there were no bids when 2s. 10d. per lb. was mentioned. For *Spanish*

globulus oil 4s. per lb. is now required by holders. English oil of *Peppermint* is very dull of sale and tendency easier; best Cambridge oil nominally 26s.; Mitcham, 27s. to 28s. per lb. Mitcham *Lavender* is held for very high prices; some owners ask 52s., others 55s. per lb. American oil of *Peppermint* (HGH) offers at 12s. per lb. on the spot. The shipments of oils of *Citronella* and *Lemongrass* from Ceylon are larger this season than ever before. The figures from January 1 to October 17 are the following:—1892, 11,004,962 oz.; 1891, 9,511,473 oz.; 1890, 10,067,223 cz.; 1889, 6,371,574 cz.

OPIMUM.—In the opium-market great excitement has prevailed this week, principally on account of the alarming reports with regard to the winter sowings that are given in telegrams from Smyrna and Constantinople. In London the stock is said to be very small, and the druggists have bought freely during the last few days. Prices close at an advance of from 6d. to 1s. per lb. on the week, and are generally expected to rise still further. The price for fine druggists' opium to-day is 7s. 9d. to 8s.; *Karahissar* being quoted at 8s., with very little offering, nearly all of what was available of this kind having been bought up by speculators at prices ranging up to 7s. 6d. per lb. Druggists' seconds are quoted at 7s. to 7s. 3d. per lb. Sales of *Tokat* opium have been made at 8s. to 9s. per lb., according to quantity, but these prices have been refused by holders to-day. This is what we hear from Smyrna, under date of October 29:—"The market is exceedingly firm, and holders refuse to sell except at higher prices. Their conviction of the favourable position of the drug appears to be based upon the reports relating to the winter sowings. It is said that the long-continued drought over the greater part of the area of the growing districts shows no signs of abating, but that, even if the rains were now to set in, the season is now too far advanced to admit of successful sowing. The Dutch Government buyers, moreover, who were very difficult to please in the earlier part of the season, but who have still a very large quantity to buy in order to complete their requirements, have now modified their rigour a little, and are buying fine druggists' kinds more freely. The total sales for October amount to about 360 cases, exclusive of 150 cases accepted by the Dutch Government judges. The arrivals up to date are 3,220 cases, against 2,653 cases last year."

ORANGE-PEEL.—Firmly held for good thin cut *Malta*; 1 bag of fair quality sold to-day at 1s. 6d. per lb.

QUININE is very quiet and the only business traceable this week is the sale of 1,000 cz. of *Whiffen's* in tins at 10½d. per oz. at to-day's sales. This is a very good price, considering that before the auctions 9½d. per oz. would have been accepted for this lot. Of *Brunswick* quinine 5,000 oz. was bought in at 9½d. per oz. nominally.

RHUBARB.—The importers are not willing to give way, as they expect higher prices. It is said that privately about 50 cases of flat *High-dried* have been sold this week at 1s. 4d. per lb. At auction 124 cases were offered, of which only 24 sold at unaltered rates. *Shensi*, bold flat, three-fourths pinky-grey fracture, 2s. 2d. to 2s. 4d.; medium to bold, fair coat ditto, round, 2s. 2d.; medium flat, fair fracture, rather rough coat, 1s. 5d. to 1s. 6d.; round and flat mixed, 1s. 3d. *Canton*, bold fair coat, grey loose fracture, flat, 1s. 5d.; good round and flat mixed pickings, 1s. *High-dried*, bold flat, fair coat, three-fourths pinky fracture, held for 1s. 5d. to 1s. 6d. per lb.; small to medium fair coat three-fourths pinky fracture, 9½d. refused; small sold at 9½d. per lb.

SARSAPARILLA.—Of 26 bales *grey Jamaica*, all damaged, 19 were sold at from 11½d. to 1s. 1d. per lb.

SENNA.—*Alexandrian* senna is slow of sale at rather lower rates: 2½d. per lb. was accepted for siftings to-day, and 6d. refused for fair small leaf (held for 8d. per lb.). Good bright pods are limited, at 8d. per lb. There have been no further arrivals of *Tinevelly* leaves, though the next steamer due is said to bring 30 bales, the reputed "end of the crop." Of the small quantity of 210 bales offered to-day, about one-third was in second hands. The standard of quality was decidedly above the average, and practically the whole parcel sold, opening at slightly lower rates, but closing at firm prices for fine and dearer rates for medium grades. The following are the quotations:—Fine bold green leaf, 13½d. to 1s. 4½d. per lb.; medium, partly specky and

yellowish to bold, 7d. to 10d.; small greenish to fair medium, 4d. to 6½d.; ordinary dull small and specky from 3½d. down to 2½d. per lb.

SPICES.—The usual weekly auctions have not been held this time, on account of the dislocation of business caused by the Lord Mayor's procession on Wednesday. Privately *Cloves* have been lower, with sales of Zanzibar for January-March delivery, at 2½d. to 2¾d. per lb. *White pepper* is also weaker—Penang having sold at 3½d. per lb. for December-February, 3½d. for January-March, and 3½d. per lb. for October shipment. *Black pepper* slightly steadier for delivery, with sales at 3½d. per lb. for January-March shipment. *Ginger* is firm, with sales of fine cut Cochin (C), at 6½s. per cwt.

STORAX.—Fair quality liquid is said to be selling privately at 85s. per cwt.

TONQUIN BEANS are rather dearer and but little is offering, although at the auctions no great demand was shown, and everything offered was bought in at nominal prices. *Pará* are held as follows:—Foxy, 1s. 6d. to 1s. 9d.; fair black, 2s.; small frosted (Surinam), 2s. 5d. to 2s. 9d.; good frosted, 3s. 6d. *Angostura*, 9s. to 10s. per lb.

VANILLA.—Only a small quantity was offered to-day, which sold at higher prices. Fine chocolate, 5½ in. to 6 in., 12s. 6d.; 7½ in. to 8 in., 17s. to 18s.; fair crystallised, 6½ in. to 8½ in., 11s. 6d. to 14s. 6d.; small and lean, 3½ in. to 5 in., 7s. 3d. to 9s. 3d. per lb. Two tins from Ceylon were offered, but bought in, and 3 tins, together about 200 lbs., rather mouldy, 4½ in. to 6½ in., from New Zealand, sold at from 5s. to 6s. 3d. per lb. It is said that there is very little stock left here, and the arrivals which ought to have been coming in for some time, are exceedingly small; higher prices are therefore expected.

WAX (BEES).—In strong demand at an advance of about 5s. to 7s. 6d. for Mauritius, and fully 10s. for Madagascar wax. *Australian* sold at 5l. 17s. 6d. to 6l. for good quality; fair bleached *East Indian* at 7l. to 7l. 2s. 6d.; fine yellow to fair red *Jamaica*, 7l. 7s. 6d. to 7l. 17s. 6d.; and *Madagascar* at 105s. to 107s. 6d. for good bright orange, and from 90s. to 102s. 6d. for common to good grey. It is said that privately 115s. has been paid for a fine lot, and at to-day's auctions 110s. was refused for that quality.

THE LIVERPOOL MARKET.

CALABAR BEANS.—Small sales continue to be made at 1½d. per lb.

CREAM OF TARTAR.—This is very firmly held at 84s. to 86s. for first white crystal *French* and *Spanish*.

GUM ACACIA.—In consequence of reports of troubles in the Soudan prices have hardened, and considerable parcels have changed hands at advanced rates; good sorts are held for 75s.

HONEY.—The *Californian* market has been practically cleared, the last sale of fair yellow being at 45s. Holders are very firm in their views, and there is every prospect of higher prices. *Chilian* is also in better demand, and prices are tending upwards.

OIL (CASTOR).—This has again experienced a relapse. In consequence of large arrivals and competition between sellers, the price has fallen to 2½d. per lb. for good seconds *Calcutta*. *French* first pressure is held firmly at 2½d.; second pressure at 2½d.

WAX (BEES').—Although no change has taken place in values, the position is much stronger. *Chilian* is held for 6l. 10s. for grey, to 9l. 12s. 6d. for fine pale yellow. African beeswax is 2s. 6d. to 5s. per cwt. higher.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

OUR market has been exceedingly active this week, and the total sales amount to 180 cases since last Thursday, at the parities of 6s. 10d. per lb., f.o.b., for *Yerli* manufacturing, and 6s. 6d. per lb. for usual kind of manufacturing opium. The market closes very firm indeed.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of drugs in the port of London on October 31, 1892 and 1891, and to the imports and deliveries during the first ten months of the years 1892 and 1891.

Article	Stocks		Imported		Delivered	
	1892	1891	1892	1891	1892	1891
Aloes ..os & pkgs	6,271	7,546	2,239	1,982	3,100	4,171
" ..gourds	1,117	1,300	277	425	235	200
Anise , star....chts	162	66	304	425	184	416
Arrowroot ....oks	5,962	4,329	15,110	11,257	12,076	13,812
" ..bxs & tins	553	1,381	1,675	793	2,075	1,547
Balaams ..cks, &c.	1,543	2,188	1,103	1,140	1,112	1,121
Bark (Cinchona), S. American cases	84	379	71	21	359	50
" ..bls, &c.	23,533	26,562	10,696	9,768	13,602	9,357
B.I. , Ceylon, and Java .....os	210	245	242	503	280	540
" ..bls, &c.	17,233	23,818	23,527	33,953	33,336	34,408
Borax .....pkgs	261	261	—	55	—	55
Calumba	591	593	900	163	955	861
Camphor	3,018	5,422	7,322	7,980	8,631	8,160
Cardamoms ..chts	799	404	2,661	1,636	2,309	1,883
Coco , Ind. bgs, &c.	767	507	1,098	433	821	211
Creom of Tartar cks	10	10	5	16	5	29
Cubebs .....bgs	97	128	477	178	451	293
Dragon's Blood cks	142	147	234	125	191	142
Galls , China, &c. os	833	1,779	1,994	1,231	2,784	2,073
Trky & Persn ..cks	2,712	2,962	3,180	8,412	2,762	8,964
Gums — Ammoniac pkgs	167	43	279	15	194	35
Animi & Copal pkgs	10,260	4,410	16,792	9,672	12,507	13,721
Acac	12,421	16,003	19,618	21,581	24,619	22,013
Asafetida	223	640	276	33	168	228
Benzoin	2,076	2,938	2,103	2,795	3,056	2,727
Damar	4,033	5,103	3,123	3,393	3,659	4,812
Galbanum	32	36	1	45	6	57
Gamboge	208	37	433	207	260	200
Guaiacum	278	161	24	566	123	236
Kino	5	15	10	33	22	51
Kowrie .....tms	1,250	1,105	2,851	2,895	2,606	2,528
Mastic	12	34	—	40	19	27
Myrrh	271	369	309	554	398	607
Olibanum	3,077	4,990	6,823	7,030	7,944	6,432
Sandarac	965	395	1,611	1,172	1,078	917
Tragacanth	1,247	3,934	4,118	4,813	6,100	6,373
Guttapercha ..tms	2,685	2,635	1,733	2,119	1,676	1,577
Indiarubber , B.I., Madagascar	242	339	680	904	719	762
S. American	69	68	266	369	292	304
African , &c.	231	300	373	399	377	389
Ipecac ..cks & bgs	480	286	1,677	941	1,512	855
Jalap .....bls	34	58	319	196	324	248
Nux Vomica ..pkgs	652	493	3,048	1,369	2,861	1,514
Oils — Castor .....cks	149	98	578	595	507	654
"os	1,832	3,974	2,610	7,198	4,176	5,081
Cocoa-nut .....tms	1,240	2,224	2,705	5,078	3,450	4,017
Olive ..cks, &c.	613	976	2,222	3,549	2,425	3,218
Palm	5	4	73	55	85	58
Rhubarb .....chts	1,094	473	1,766	843	1,079	1,210
Safflower .....pkgs	120	249	52	—	153	102
Sarsaparilla ..bls	361	252	1,004	888	910	943
Senna .....bls, &c.	1,860	2,816	2,350	2,730	3,676	3,825
Shellac , Orange chts, &c.	21,715	23,825	22,477	19,896	27,523	32,069
Garnet	5,240	2,153	11,673	5,445	8,368	7,334
Buttong	4,760	5,974	7,126	9,112	8,893	8,634
Total cchts, &c.	31,715	31,952	41,276	34,454	44,742	48,057
Sticklac cchts, &c.	396	463	849	344	805	2,148
Gambier .....tms	260	1,500	9,057	9,306	10,291	8,721
Outch .....tms	2,428	2,532	2,510	1,672	2,455	2,056
Turmeric , Beng. tms	34	527	27	—	418	626
Other kinds	274	94	667	60	510	460
Total .....tms	338	621	694	60	948	1,088
Vermilion , cchts, &c.	43	23	56	120	39	127
Wax , bees' ..bls & os	1,794	1,030	4,207	2,902	3,259	2,716
" ..cks & os	1,601	1,050	2,654	1,022	2,024	1,457
" ..cakes	42	14	28	6	—	16
Japan ..pkgs	494	422	791	202	975	962

* Liverpool stock: Pará 647 tons, other sorts 724 tons; total 1,371 tons, against 1,273 tons last year and 814 tons in 1890.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

Longevity of Chemists.

SIR,—Referring to Mr. Bell's note published last week may I point out that in a recently-published work on "Diseases of Occupation," by Dr. J. T. Arlidge, there is a short section referring to retail chemists and druggists (excluding manufacturing chemists, many of whom are dealt with separately)? It is stated that the principal incident connected with the health of chemists is confinement on the premises. "As it is a 'genteel' business, and ambitious of being reckoned a profession," says the author somewhat sneeringly, "it will attract a certain ratio of lives of the weaker sort, which have been pronounced unfitted for occupations imposing physical toil. There are usually much standing, long hours, and but few holidays to be had." According to Dr. Ogle's tables the rate of mortality among chemists is 1,015 as compared with the standard—1,000—for all males.

National Liberal Club,

Whitehall Place, S.W.

Yours faithfully,

F. S. (159/80)

Stock Talk.

SIR,—The Midland Chemists' Association held its annual meeting—or shall I say annual farce?—in our city this morning. I have attended some six or seven of these, and every year it is the same old twaddle. I went with the hope of learning something, but half the talk was utterly impracticable, and the other half utter rot. The first half was to the effect that we want an alteration in the Pharmacy Act. A fine chance of getting it, indeed! What sort of answer could be given to the first question that would arise in Parliament—viz., what about the Pharmacy Act of 1868? How have you been carrying that out? What is the use of wasting our time legislating for you, and when you have got a law you let it remain a dead letter for twenty years? The second part was the annual wail about the stores, and doctors dispensing; and then followed appeals to qualified men not to barter their services to these unholy stores, but to remember the honour of their profession. If the stores want a qualified dispenser and offer him 3*l.* a week, while the best offer he can get from a chemist is 2*l.*, is he to throw a pound a week into the street for the sake of the honour of the trade, or will these gentlemen who advocate this procedure reimburse such a man for what he has lost? I could not help noticing, too, that the representatives of the wholesale trade who were present were precious quiet on this stores question. The whole crux of the question lies in this—that the Pharmaceutical Society consists of professors, members of the wholesale houses, and a few of the independent well-to-do chemists who are doing a first-class trade, and none of them have any idea of the daily wants of the thousands of chemists who are struggling to make a living out of their profession, and therefore they are not supported, and never will be, by the majority of the trade throughout the country. I am afraid I have trespassed a great deal upon your space, and I will keep till a future time an account of what, in my humble opinion, the Society has done for the trade during the last ten years. Don't be frightened, Mr. Editor—it will go in a very small space.

Yours truly,

Birmingham,

November 3.

PRACTICE v. THEORY. (159/19.)

Sale of Poisons in Birmingham.

SIR,—In the Birmingham daily papers this week a case is reported of a young man who obtained laudanum at three different shops, but no mention is made as to who supplied the same. Why are the names suppressed? My object in bringing this matter forward is to show that in face of the stringent law (as explained by Mr. Justice Hawkins) the sale of poisons daily takes place here by unqualified persons and the Pharmacy Act is openly set at defiance.

Poisons are dispensed daily by unqualified assistants—in fact, there are establishments here without a single qualified assistant in the employ. How long is this to continue? The trade here is done largely by apprentices, junior assistants (who have not even passed the Preliminary), and the wives of the owners. There are numbers of qualified assistants here unemployed in consequence of the low salaries accepted by incompetent unqualified men, who ignore the risk they run, feeling certain that no action by the Pharmaceutical Society will be taken against them.

I am, yours respectfully,

NEMO. (157/48.)

[That the law should be steadily enforced most of us admit, and we are confident it will be for the benefit of the trade generally when it is found to be dangerous to disobey it. But the experience of other chemists is that there are not enough qualified assistants to be had. If "Nemo" knows of "numbers" of them in Birmingham unemployed he would do a good many people a service by referring them to THE CHEMIST AND DRUGGIST Supplement.]

Glasgow Pharmaceutical Association.—A Correction.

SIR,—I notice in your issue of November 5 a report of the Glasgow Pharmaceutical Association's meeting, held on October 27, and would like you to correct what the Chairman and Mr. Moir are reported to have said with reference to Mr. Cartelghe's Glasgow meeting. Not only was I at that meeting, but I have before me a list of those present, and find only one "outside the drug trade"; and as for the proportion of unqualified assistants, these were under one-fourth of the number present at the meeting, and not half of them (the unqualified assistants) took part in the vote, so that it is not correct to say "the meeting was swamped by unqualified men and others outside the drug trade altogether."

Anyone with a correct account of that meeting before him cannot but come to the conclusion that the vote taken at the Cartelghe meeting was the expression of the majority of the qualified men present.

Glasgow,

November 3.

Yours, &c.,

PHARMACIST.

The October Examinations.

Mr. T. S. Wokes, of Grassendale, who wrote last week about the unfairness of beginning the October Major Examination in September, writes to say that an official intimation has been made that "in future some weeks' notice shall be given."

Count Mattei's Remedies.

The manager of the Central Dépôt for these remedies writes to inform us that they "are taking proceedings against the proprietors, &c., of the *Medical Press* because they accuse Count Mattei of fraud, and describe his commercial transactions as swindling. The *Medical Press* did not speak about the purpose for which Count Mattei's remedy is recommended, but the purposes for which it is recommended. The dépôt have over thirty preparations on their price list, every one of which is recommended for more than one purpose."

Using a Chemist's Name.

Mr. R. F. Reynolds, Leeds, states that a man called at Messrs. Reynolds & Branson's, Leeds, and got some assistance, as he said he was, or had been, a chemist, gave his name as Robert William Mascen, 2 Hebron Road, The Grove,

Hammersmith, and was on his way to his daughter, who, he said, lived at Scotswood Road, Newcastle, her name being Mrs. Mackley. The name was found in the Register, but an express letter to the alleged daughter brought back an official postal document saying there is no such address. The right Mr. Mason may have something to say in regard to this note.

The following note has been received since Mr. Reynolds's letter:—

SIR,—A person is going about the country using my name for the purpose of fraudulently obtaining money. He also gives an address of 2 Hebron Road, Hammersmith, being that of a private house I left some two years since. As the only Robert William Mason on the Register, I wish to caution the trade. I am, dear sir, yours truly,

Putney, 4 Clarendon Road, R. W. MASON.
November 9.

Natural versus Artificial Water.

SIR,—The question of artificial *versus* natural mineral waters crops up from time to time in your columns, and it appears to me important and interesting enough to merit attention.

It never occurred to me that there would be any noteworthy difference in the effects produced by the natural solution and those following the administration of solutions based on chemical analysis until I came across a passage in Sir Henry Thompson's work on "Diseases of the Urinary Organs," in which he points out that it takes three times the quantity of the salts obtained by the careful evaporation of Hunyadi Janos water to produce the effect of an average dose of this popular purgative.

Since then I have taken the trouble to repeat the experiment a number of times, with results that, in the main, confirm this assertion.

It is evident, says the author, that there is some essential difference between solutions of salts from the chemists' laboratory and the same as they occur in natural solution. What this difference is owing to he does not state—neither can I; but I have satisfied myself that it exists.

I am, Sir, yours faithfully,
M.D. (155/62)

The Conditions of Labour in Pharmacy.

Several chemists write to us respecting the conditions of labour in pharmacy, which we are obliged to reserve.

LEGAL QUERIES.

156/20. *Rheum*.—If the chlorodyne lozenges contain appreciable doses of morphia or other poison the law requires that they should be labelled "poison," and only sold by registered chemists. If they contain no poison, they can be sold by anyone, and without a poison-label. We understand it is open to anybody to make chlorodyne lozenges. We cannot say whether lozenges so-called, but containing no morphia, would render the vendor liable to a penalty under the Sale of Food and Drugs Act. We have not heard of any such case. It would be possible to prove that lozenges so-called usually contained morphia; but the defendant could easily get evidence to show that it is better to make them without morphia, and we do not know that the magistrate could be referred to any authoritative standard.

154/74. *Patent*.—Licensed vendors of stamped medicines may open stamped packets and sell small quantities of the contents from them, provided that the portions thus sold are not re-made into a packet. Pills thus sold may be wrapped in paper not fastened. They must not be boxed. See "Alpe's Handy-book," page 29, and Supplement.

157/7. *Inquirer*.—We do not consider that either syr. pruni virg. or aq. lauro cerasi is a poison within the meaning of the Pharmacy Act. Both contain some prussic acid, it is true, but this is a natural constituent, and we cannot see how

the substances can be properly termed preparations of prussic acid. In the case of essential oil of almonds which also contains some prussic acid similarly formed, the legislators have thought fit to expressly name the substance. Evidently they did not regard that as "a preparation of prussic acid."

155/7. *Tonic*.—We cannot undertake to make trade searches. See answer to "P. S. I.," page 661 (October 29, 1892).

156/50. *Liniment*.—The Board of Inland Revenue allows the use of lin. saponis made with methylated spirit. You may make lin. opii with it as far as they are concerned. But you might be liable to a penalty of 5*l*. under the Pharmacy Act (Ireland), sec. 30, for compounding a medicine of the British Pharmacopœia not in accordance with the formulary of the said Pharmacopœia.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

The Australian Prescription.

These Australian problems are taken up with astonishing rapidity by subscribers on this side. We have had a very large number of replies to the facsimile prescription which was given a fortnight ago, and which was written by a Dr. Paoli. It was—

Magister bismuthi 3iij.
Opil pulv. gr. iij.
Pepsinæ puræ 5ss.
Divid. in pulv. eq. no. xij.
8-8-92. 1 to 3 every day.

To this we have the following replies:—

SIR,—The "puzzle prescription" from Australia, reproduced in last week's issue, is not difficult compared with some of the undecipherables constantly being received by us from chemists all over Great Britain. In this particular instance the difficulty is not very marked, except, perhaps, in respect to the third line, which might be taken to mean magnesiae pond. We read it as follows:—

Magister. bismuth. 3iij.
Opil pulv. gr. iij.
Pepsinæ puræ 5ss.

Divid. in pulv. eq. no. xij.
8/8/92. 1 to 3 every day.

We frequently receive prescriptions which would make the hair curl even of the examiners of the Pharmaceutical Society. One such sent to us to dispense a short time since turned out to be verses of a foreign popular comic song. This is on a par with the well-known story of a prescription which was ultimately deciphered to be an order for stalls at a

theatre, given by an actor whose caligraphy was not equal to his histrionic accomplishments.

We pride ourselves on being able to make out the most troublesome pharmaceutical hieroglyphics, the only real difficulty met with being when a physician orders a foreign unknown speciality.

Thanks, however, to advertisements in your much-read journal, Vin Mariani, Hunyadi Janos, Cigares de Joy, Morrhuol, Apoline, and other specialities, of which we are the importers, are now seldom obstacles.

We are, yours faithfully,
239 Oxford Street, November 2. WILCOX & Co.

Magister [subnit.] bismuthi 3iij.
Opil pulv. gr. iij.
Pepsinæ porci 3ss.

Divide in pulv. æquales No. xij.

Sig.: Three every day.

I should like to see every prescription which we have to dispense here in Paris written in such a way that I should not have more difficulty in deciphering them than in the one submitted to day in your journal. Many German ones are almost illegible, and I have seen several in your paper which to me were much more difficult than this one.

Yours truly,
Paris, October 23. E. DE FRANCIOSI.

With the latter rendering the following exactly agree:—

Bates, W., King's Cross Road, W.O.
G. F. B., London, W.
Beattie, J. B., Bayswater
Cook, W. R., Faringdon
Duncan, H., Glasgow
Essery, W. G., Plymouth
Forrester, E., Gravesend
Funnell, R., Tanbridge Wells
Goodall, H. C., London, W.
Hesilton, C. J., Leeds
Kingston, W. R., Malta
Krause, A. von C. C., Otterup
Kunz, Dr. H., Wiesbaden
D. M., Glasgow
W. MacE., Dundee

MacGregor, J., Florence
Main, John, South Kensington
Marsden, P. H., Boulogne
Mason, A. J., Bexley Heath
Masters, H. G., Bath
Moore, John, Milan
O'Donnell, D. E., Brompton
Parker, C., Kirkby Lonsdale
Stewart, J. F., Brompton
Sutherland, A. G., Glasgow
Thorpe, A., East Dulwich
Tompsett, L., Anerley
Tozer, R. M., Brighton
Tragacanth, Runcorn
Trew, H. E., Plymouth

The following make the directions "one every day":—

Aitkin, T. G., Poole
Allaway, E., Richmond
W. J. B., Inverness
Barrett, W., Newton Abbot
Codex, Halesworth
Dunalba, Prestonkirk
H. A. G., Eastbourne
W. G., London, W.C.
Holmes, Margate

Hornsby, J. W., Gainsford
Hughes, E. G., Gloucester
Jackson, W. J. T., Preston
Johnson, F. E., Halesworth
"Leominster"
A. N., Nice
Polaris, Carlisle
Rohami, Liverpool
Spratt, G. W., Nottingham

Some would have it "one to three every day." Of such are:—

Ashton, C. S., Brighton
"Exemplime," Belfast
Fagan, A. E., Brussels
Fallon, P. B., Brighton
Horst, P., Geneva
T. K., Heymarket, W.
Keen, W. H., Oork
C. A. M., Edinburgh

Maxwell, J., Londonderry
"Monte Carlo"
"Nice la Belle" (156/33)
Ough, L., Leicester
Purvis, J. B., Bridlington Quay
Stuckey, W. G., Paris
Tesch, M., Vienna
West, T., Manchester

We think the first lot clearly have it. "S. 3 evy day" appears very plain and reasonable. Only one gives the quantity of the second ingredient differently—viz, *Lincoln*, who says, "Opil pulv., gr. viij." The following think the third ingredient is "magnesiæ pond." viz:—

Andrew, O. W., Fulham
Blinkhoolie, Southsea
Coles, C. N., Beeston
Cox, Cheltenham
Davies, D. S., Morson's, W.C.
Galen, Lowestoft
Hamilton, T., Crieff

J. M. H., Salop
Johnson, H. E., Guy's Hospital
Mair, A., Leith
Sin Ceart, Edinburgh
Thompson, Regent's Park
A. S. W., Aberdeen

Instead of 3 grains of opium, *E. H. D.*, *J. Ellerington*, and *H. N.* would give "pulv. cayenne" or "caps. pulv.;" *A. Anning*, *A. S. W.*, *R. G. (Cardiff)*, *J. Hooper* (Peckham Rye), *J. Jewell* (Lancaster), and *W. Bowness* (Wokington)

would give "glycy. pulv.;" *J. C. (Antwerp)*, "gummi" pulv.; *C. K. Bransby*, *F. A.*, *G. W. J.*, *H. P.*, and *H. E. Johnson* "zing. pulv.;" *E. J. H.*, "ip pulv." For the third ingredient *J. T.* would give "bryoniæ puræ," and *T. B. S.*, "myricinæ puræ." We have also the following curious renderings:—

Magister. bism 3iij.
Eryngo pulv. gr. viij.
Bryoniæ puræ 3ss.
Iridin pulv. gr. xij.
3j. "sanni" every day.

E. C. ANGEL (Barnstaple).

Magistry or tris. bismuth. 3iij.
Cypripedin pulv. gr. viij.
Magnesiæ pur. 3ss.
Divid. in pulv. æquales xij. jentaculum.
Sum. every day, or one to be taken at breakfast every day.

D. G. DOUTHWAITE.

Magister. bismuth 3iij.
Glyc. pulv. gr. viij.
P. quiniæ puræ 3ss.
Divide in pulv. equal. xij.
Sig.: Three every day.

R. E. WILLIAMS (Cardiff).

Magister. bism. 3iij.
Oryza rice. gr. iij.
Pepsin. puræ 3ss.
Divide in pulv. eq. xij.
j. s. every day.

J. MOUNT (Dorking).

Magister. bism. 3iij.
Gly. pulv. gr. viij.
Brynin. pur. 3ss.
Div. in pulv. oct. v. xij.
j. sd. every day.

A woful admixture even for an aboriginal. C. M., JUN.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

156/56. *A. S.*—Yes. Indian Brandy.—THE CHEMIST AND DRUGGIST, April 16, 1892, page 571.

156/58. *Scientia*.—It is contrary to our rules to report upon such samples, but, judging by its appearance, we agree with you. (2) J. F. Macfarlan & Co. and T. & H. Smith & Co., of Edinburgh.

159/72. *G. C.*—We had the statement from a good authority, but cannot personally vouch for it.

160/41. *Nibas*.—We gave a formula last week.

157/13. *J. B.*—Surfeit Water is now liq. ammon. acet. Originally there were a white and a red surfeit water. The former was a distillate, the ingredients being marigold-flowers, mint, centaury, rosemary, scordium, mugwort, carduus, rue, St. John's wort, balm, and dragons, of each seven handfuls; roots of piony, viper-grass, butter-burr, and angelica, of each 1½ lb.; galangal, *Calamus aromaticus*, and angelica and caraway seeds, of each 4 oz.; ten handfuls of red-poppy flowers; proof spirit, 10 gallons; water, 2 gallons. Digest for twenty-four hours; distil 10 gallons and sweeten with sugar. The red water was a similar preparation undistilled.

150/8. We get some strange questions put to us from week to week; many of them startle us, and here is a good example, which *Argentum* is the author of:—

Please let me know through your next issue what caused my lime-lights to explode? I packed them in dry powdered lime and put in an air-tight bottle in a dry room where I live.

Naturally we want to know what those lime-lights were made of; were they damp or dry; was the "dry powdered lime" slaked or "quick," and what time elapsed between the packing and the explosion?

E90/22. *Arbutin*.—(1) Tinct. Rhei Co. P.L. :—

Rhubarb ..	..	..	..	..	3iiss.
Saffron ..	..	..	..	..	3iij.
Liquorice-root ..	..	..	..	..	3vj.
Ginger ..	..	..	..	..	3vj.
Proof spirit ..	..	..	..	..	Oij.

Macerate fourteen days, and filter.

Latterly the P.L. formula was nearly similar to the B.P. one. (2) A sweets-licence would be required. (3) The B.P. tincture of capsicum is a sufficiently soluble essence considering the quantity which may be used. But if you really desire a Soluble Essence of Capsicum make the tincture double strength. Take 10 oz. of it and pour into a mixture of light carbonate of magnesia $\frac{1}{2}$ oz. and water 10 oz. Shake occasionally during a day, and filter. (4) Spt. Æther. Nit. 900 is a mixture of sweet spirit of nitre and water. It is illegal to sell such a preparation as spt. æther. nit., or as sweet spirit of nitre.

150/30. *Welshman*.—We are sorry we that cannot advise you in the matter without further details. We have already published the formula which you send.

152/72. *Soc.*—For Brown Leather Shoe Dressing see THE CHEMIST AND DRUGGIST, July 18, 1891, page 96.

152/61. *Bert.*—Consult the DIARY book-list.

152/42. *J. Watt*.—To make the Clear Lead Hair dye, dissolve $\frac{1}{2}$ oz. of a soluble lead salt (the nitrate and acetate are equally suitable) in 8 oz. of water, and add a saturated solution of sodium hyposulphite until the precipitate formed is redissolved. The preparation is more dangerous than that made with milk of sulphur.

152/6. *Cymro*.—The cough-mixture is certainly a complex one, and not such as we should recommend, but complexity is the fault of nearly all cough-mixtures. Thirty grains of benzoic acid will give you flavour enough. We can neither say whether "Pectoraline" is a registered title or would be accepted for registration. You can ascertain that by making application in the usual way. This would cost you only 5s.

111/92. *D. (Zurich)*.—(1) A new United States Pharmacopœia is in preparation. This work is re-edited every ten years, and in regard to fluid extracts the editors have to recognise the fact that these are the most popular form for administering medicine there. (2) Methylated Spirit is purified sufficiently by adding to each gallon 4 oz. of slaked lime and 3 oz. of animal charcoal. After digesting for a day or two it is (without filtration) distilled. Such treatment is illegal in this country.

155/51. *J. W. J.*—We cannot invite opinions concerning the manufacture of a particular firm. Ask the firm to send you one of their articles on approval.

152/1. *Coil*.—Ergot-of-Rye Imports.—No official statistics of the imports of special drugs (excepting one or two) are published in this country. The total Russian crop (Russia is the largest producer) is estimated to average

about 75 tons. Spain comes next in point of production. The average total output of the drug is probably 120 tons a year.

148/2. *H. C. S.*—*Spiritus Ophthalmicus*, Pagenstecker —

Spirit. melissæ ..	..	..	..	..	760
" lavandulæ ..	..	..	..	..	200
" camphor. ..	..	..	..	..	25
Mix. " aether. nitrosi ..	..	..	..	..	15

147/40. *John Alexander*.—See reply 126/11, in last week's issue.

157/7. *Inquirer*.—Respecting chemists' window-fittings, see advertisements. Fine-art jewellery is out of our line.

151/29. *A. S.*—*Manufacture of Lime juice*.—West Indian lime juice is mostly exported in the raw state, the limes being picked in dry weather, the damaged or rotten fruit eliminated, and the remainder cut up and pressed in any simple press. The exuding juice is collected, strained, and put up in air-tight casks. The addition of about 1 oz. of salicylic acid to every 15 or 20 gallons of juice will serve to keep it from decomposing. We are not aware of any special machinery being manufactured for the pressing of the juice, but if you will consult our advertisements (or those in the DIARY) you will find the names of several engineering houses who make machinery suitable for such purposes. Concentrated juice (for citric-acid making) is prepared from all kinds of limes, good and bad. The juice is pressed and strained in the same way as the raw, and then boiled in copper kettles on a slow fire until it has reached a density of 60° Twaddle, or about 52° Baume. Great care should be taken not to scorch the juice when boiling it. There are no exact statistics regarding the production of West Indian lime-juice. The raw juice comes mostly from Jamaica and Montserrat, the concentrated from Dominica, Trinidad, and other islands. The exports probably do not exceed 100 pipes (of 50 gallons each) a year from all sources. The West Indian concentrated juice is much stronger than the Messina lemon-juice which forms the staple raw material of the citric-acid makers, and is not so well liked by them. The value is usually about 10 per cent. lower than that of the Messina juice. Concentrated juice is sold by the proportion of citric acid it contains. The Messina juice yields usually 64 oz. of citric acid per gallon, the West Indian from 90 to 100 oz. The price of Messina concentrated juice is generally given in our Trade Report under Acid (Citric). The raw West Indian juice is also regularly quoted, but the concentrated juice is not of sufficient commercial importance or regularity of supply for frequent mention.

156/37. *Digitalis* asks "what is the correct plural of M.P.S.? Should it appear as Smith & Jones, M.P.S. or Smith & Jones, Ms.P.S.?" Following the analogy of MM. for Messieurs we should write MM.P.S.

152/23. *W. B.*—It is quite obvious that some mould-spores have got into the Ginger-beer Brew. Probably these may be in the brewing-house, if all the vessels have been scalded, or they may come in the sugar. Your customer should clear the brewing-house, and fumigate it thoroughly with sulphur. Afterwards air it well. The sugar should also be changed.

153/1. *T. H. M.*—Sulphocyanide of mercury is mixed with 5 per cent. of nitre, and this mixture is made into a paste with mucilage of tragacanth, in order to produce Pharaoh's Serpents, or pythons' nests.

154/11. *Perplexed*.—If the red colouring-matter in the spirit of camphor is of vegetable origin, you can remove it by treating with animal charcoal, and filtering.

152/5. *Peppermint* says he finds that "Ol. Ment. Pip. Ang. on the addition of rectified spirit in making B.P. essence becomes very cloudy. This has only occurred during the last twelve months, but he has had the same result several times with different samples." Has anyone else the same experience? If so, how does the oil compare in specific gravity, &c., with the oils of previous seasons?

153/47. *J. Snowdon*.—Bronzing for Gun barrels:—

Spirit of wine	3v.
Sweet spirit of nitre	3viij.
Tincture of steel	3viij.
Nitric acid	3iv.
Sulphuric acid	3iij.
Sulphate of copper	3iv.
Water	1 gallon

After scalding the barrels in hot solution of soda for twenty minutes they are washed with water and the above solution applied. The barrels are then placed in a damp heat for an hour and a half, scalded again, and when cold the rust is scraped off. This process is repeated four times, and finally the barrels are cleaned and oiled.

154/65. *Amæba* (Cardiff).—The surest means of preventing the spirituous lotion coming out of the bottles is to put a layer of paraffin round the neck, just on the top where the cork meets the bottle. The glass should be warmed first.

154/69. *A Student* (Belfast).—To ascertain the alcoholic strength of a tincture, you must take, say, 4 oz. of it, and distil 2½ oz. Make this up to 4 oz. with distilled water, and from the specific gravity of the mixture and reference to an alcohol-table you will get the strength of the spirit. But first see Mr. Fletcher's papers on this subject in THE CHEMIST AND DRUGGIST, January 5 and 26 and February 16, 1889.

154/71. *A. Burns*.—(1) Chilblain-liniment.—See THE CHEMIST AND DRUGGIST, December 12, 1891, page 862. (2) Camphor-julep is camphor-water. Camphor-syrup, or syr. camph. co., is a mixture sought for in some parts of England; it consists of—

Tr. camph. co. (sine opio)	3ij.
Oxymel. scillæ	3vj.
Syrupi opii	3j.

M.

The syrup of opium is a solution of 12 gallons of an infusion containing 4 oz. of opium (in the 12 gallons). (3) Leeming's Essence.—The following is one of two formulæ given by Mr. Alpe in the supplement to the "Handy-book of Medicine-stamp Duty" as a preparation which the Commissioners of Inland Revenue would allow to be made with methylated spirit:—

	Parts
Pulv. canthar.	1
" euphorbii	1
Meth. spt.	20

(4) Hoose, &c., powders.—See "Veterinary Counter Practice."

160/52. *C. N.*—We cannot reprint bits from the Educational Number because you have mislaid it. The loss is not irreparable: you can get another copy for 4d.

155/64. *Lucie*.—Glycerine Jelly.—The very best transparent and colourless gelatine should be used for this. Take 1 oz. of it and immerse in 12 oz. of water, contained in a covered vessel, overnight. Next day add 8 oz. of glycerine and heat on a water-bath until dissolved; then add ½ oz. of spirit of rose (otto m.x. to 3j.) or any other suitable perfume, and pour into bottles. You may colour with tincture of cudbear, cochineal, or saffron; but it is best white or tinged of a pale green with chlorophyll.

203/18. *Zemo*.—(1) We are inquiring. (2) The diastase of malt digests starch, so that there is little use in adding anything else to malted food. (3) Food is peptonised with pancreatin or pepsin, according to its nature. What food do you mean? (4) Ginger Wine Essence:—

Tartaric acid	3vj.
Tincture of ginger (1 in 4)	3ss.
Tincture of capsicum	3iij.
Caramel	3ij.
Water to	3iv.

Mix.

To be added to a syrup of 4 lbs. of sugar in 5 winebottlefuls of water.

Another:—

Tartaric acid	3j.
Soluble essence of ginger	3j.
Tincture of capsicum	3ij.
Tincture of orange	3j.
Essence of raspberry	℥xx.
Caramel	3iv.
Water to	3xij.

Mix, and allow to stand till bright.

Put up in 3 oz. bottles. The contents of a bottle to be added to a syrup of 1½ lb. of sugar in 2 imperial pints of water.

155/61. *Inquirer*.—Shaving-paste for Barbers' Use.—If a low-priced article is wanted, we should feel inclined to try something such as the following:—Take 4 oz. of curd soap, shred it, dry and reduce to fine powder; with this mix intimately in a mortar 1 oz. of benzoated lard and 19 oz. of the best soft soap, perfuming with spirit of almonds (3iij. to the pint). It should be triturated in the mortar until pearly white, and a drop or two of solution of aniline violet may be added to give it an agreeable colour.

155/58. *Somerseset*.—A few drops of solution of ammonium sulphide spread in a room will soon put away the smell of sulphur fumigation, but do not overdo it. We should prefer ventilation.

155/53. *Leo*.—The green deposit from your gold solution comes from the copper in the coin, which is an alloy. Probably you will find the supernatant solution now alkaline. Filter it from the green deposit.

156/18. *Paw Cum Honore*.—(1) Quinine and Iron Tonic.—THE CHEMIST AND DRUGGIST, July 25, 1891, page 123; January 30, 1892, page 146. (2) See reply to "Zemo," also January 30, page 147. (3) Cough-syrup for Children.—Same number, page 186. (4) Reply given last week. Our space is so much taken up with current and other important matters that we cannot repeat formulæ which have already been printed and are readily available. It generally saves much time to consult our indexes.

195/10. *T. B. J.*—We should think that the provincial firm must have used the old form of lin. pot. iod. c. sapone.

157/21. *B. & P.*—The crimson marking-ink is one which has a crimson appearance, but which turns black on heating. That is the intention, as you may judge from the presence of silver in it.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

203/18. Maker of non-starchy food for infants.

158/32. Who manufactures tooth-paste in bulk?

158/10. Who makes circular window-tickets—chocolate ground and gold letters?



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Summary.

C.A.M.W.A.L. SHAREHOLDERS met on Thursday, and we report the proceedings.

MR. MOSS reports very satisfactorily on the analytical competition. The last of the series for the special prize is now announced.

WE give a dozen portraits of pharmaceutical mayors. To these we add further particulars of municipal honours conferred on members of the drug-trade.

MR. JOHN SILVER, the patent-medicine proprietor who mysteriously disappeared some time ago, has now turned up, and there was a meeting of his creditors on Thursday.

THE Oldham Coroner has made some pertinent remarks regarding the sale and use of infants' cordial, his remarks being based on a case before him in which cordial was sold by a grocer.

PROFESSOR CHARTERIS, of Glasgow, has laid before the North British Branch his views regarding the revision of the British Pharmacopœia. He advocates a large number of deletions, but the meeting was not quite in sympathy with him.

THE REGISTERS of pharmaceutical chemists and chemists and druggists are being revised, and we give three pages of names which will be struck off unless the persons named, or

any who know them, inform Mr. Bremridge where they reside, if alive. The list should be carefully scrutinised by all.

"PYN-KA" has been in Court on a motion to restrain W. B. Fordham & Son (Limited) from selling as "Pyn-Ka" any article not made by the Pyn-Ka Syndicate (Limited). This the defendants agreed to do, and it appeared that only in one instance had a clerk of Messrs. Fordham's used the word "Pyn-Ka" on an invoice.—The Court of Appeal has decided against the Apothecaries' Society in the Derby case. In this the Society sought to have imposed upon an unregistered person who acted as an apothecary a fine for each time he prescribed, but the County Court Judge inflicted only one fine, and the Court of Appeal holds that acting as an apothecary is a continuous course of conduct, requiring only one fine.—The Pharmaceutical Society have recovered six fines of 5l each from an unqualified person for keeping open-shop for the sale of poisons. This being the Judge's first case, he took Mr. Flux's word for it that the whole of the penalties could be imposed. The defendant did not appear, but it was stated that he was an old offender. The decision is noteworthy in view of the preceding case.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, by Wednesday of the week before.

MONDAY, NOVEMBER 21.—*Society of Arts, John Street, Adelphi, W.C.*, at 8 P.M. "The Generation of Light from Coal-gas," by Professor Vivian B. Lewes.

WEDNESDAY, NOVEMBER 23.—*Society of Arts, John Street, Adelphi, W.C.*, at 8 P.M. "Cremation as an Incentive to Crime," by Mr. F. Seymour Haden, F.R.C.S.

THURSDAY, NOVEMBER 24.—*Dundee Chemists' Assistants' Association*, at 9 15. Mr. Wm. Mair on "The Botany of the Minor Schedule."

THURSDAY, NOVEMBER 24.—*Liverpool Chemists' Association, Royal Institution*, at 7 P.M. "Photography, Past and Present," by Mr. E. Colley.

THURSDAY, NOVEMBER 24.—*Chemists' Assistants' Association, 103 Great Russell Street, W.C.*, at 9. "The Pharmacy of the Minor Syllabus," by Mr. Joseph Ince.

THURSDAY, NOVEMBER 24.—*Liverpool Pharmaceutical Students' Society*, at 8.30 P.M. Dr. J. R. Logan on "Cells and Protoplasm," with lime-light illustrations.

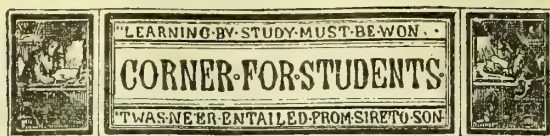
"The Pharmacy and Poison Laws of the United Kingdom."

2s. 6d.; post free, 2s. 9d.

This book is now ready. It is thoroughly valuable to all connected with pharmacy, and we have received highly complimentary notes regarding it from several gentlemen who take a special interest in pharmacy. The following reviews have appeared:—

From the office in London of THE CHEMIST AND DRUGGIST comes a handbook of "The Pharmacy and Poison Laws of the United Kingdom." The book, which has no author's name attached to it, gives the statutes, the parliamentary discussions on the Acts of 1868 and 1869, and notes of the decisions. It will thus meet all the necessities of students preparing for the examinations of the Pharmaceutical Societies, for which purpose it appears to have been designed. But there is no reason why, convenient and comprehensive as it is, the book should not prove useful to a wider body.—*Scotsman*.

This work supplies an admirable summary of the history of legislation in regard to the practice of pharmacy in the United Kingdom, together with a record of the interpretations of the statutes which have been arrived at in the Courts and by other means. It is excellent in plan and well written.—*Freeman's Journal*.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.O.

QUALITATIVE ANALYSIS.

WE shall revert again to the examination of salts, and the subject of the next analysis will be a mixture of not more than three salts. The mixture must be submitted to a thorough systematic examination, and the reports sent in must show, not only that certain substances are present, but that they are the only constituents of the mixture.

Students' applications for portions of the mixture will be received up to Wednesday, November 23, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, December 3. Each report should contain a concise account of the work done, and should include a list of the constituents detected; in this list any substance regarded as an impurity should be distinguished from the chief constituents of the salts present in the mixture.

REPORTS.

The subject of the last exercise was an alloy, or, rather, amalgam, the composition of which, omitting fractions, was—

Hg	..	..	..	..	..	..	64
Zn	..	..	..	..	..	..	32
Cu	..	..	..	..	..	..
Ag	..	..	..	..	..	..	2
							100

The only impurity present in notable quantity was iron. The number of packets sent to applicants was sixty-five, and the number of reports received was forty-four. The failures in the detection of the several constituents were:—Copper, 18; silver, 16; zinc, 8; mercury, 1.

In the analysis of any substance containing metals precipitated from an acid solution by sulphuretted hydrogen, it is always important to ascertain whether copper is present before the sulphates are treated with ammonium sulphide. As a general rule copper, even in small quantities, reveals itself at an early stage in the analysis. The colour of the compound, the coloration of a bead before the blowpipe or the coloration of the flame, the production of a coloured metallic bead by ignition with a reducing agent on charcoal, or the colour of the solution of the substance under examination, are amongst the chief indications of its presence which copper is likely to afford. In the present case it was the green colour of the nitric-acid solution of the amalgam that first suggested the probable presence of copper. Knowing that this metal was likely to be present, the sulphides should not have been treated with ammonium sulphide, as copper sulphide is by no means insoluble in that reagent. The best reagent to employ as a solvent of the sulphides of arsenic, antimony, and tin was sodium sulphide. But now another difficulty arises. That mercury was present was obvious from the very beginning, as the metal was easily obtained as a sublimate when the amalgam was heated in a tube. Mercuric sulphide is somewhat soluble in sodium sulphide, so this solvent was also open to objection. Further difficulties arose from the presence of mercury: several of its salts interfere with the precipitation of silver as chloride. Under these circumstances the best way of

proceeding was to get rid of the mercury altogether by strongly heating the amalgam. When the residue left after the mercury was expelled was dissolved in nitric acid, the solution diluted, and hydrochloric acid added, the precipitate produced was easily recognised as silver chloride. The only metal to be precipitated by sulphuretted hydrogen was copper, and then the solution contained only zinc and a trace of iron—two metals widely distinct in their analytical reactions. The only objection to this mode of procedure was the possibility of overlooking arsenic; but it was evident from the preliminary examination that arsenic was not present in notable quantity, and it was easy to make a special search for it by submitting a small portion of the amalgam to any of the tests depending upon the production of arseniuretted hydrogen.

Last month we had an illustration of the advantage to be derived in the analysis of an alloy from the production of insoluble oxides by the action of nitric acid; this month we see that an analysis may be greatly simplified by taking advantage of the volatility of a constituent.

PRIZES.

The first prize for the best analysis has been awarded to GEORGE VOGT, 8 Serpentine Terrace, Kendal, Westmoreland.

The second prize has been awarded to S. STEPHENS, Milnsbridge.

Marks Awarded for Analyses:—

Geo. Vogt (1st prize)	..	..	100	Cogito	..	..	..	75
S. Stephens (2nd prize)	..	..	99	Danwer	..	..	..	75
H. Bowden	..	..	98	Ozone	..	..	..	75
KCy	..	..	97	A. Bunsen	..	..	..	75
Acidulous	..	..	97	Pepsine	..	..	..	74
R. B. Carnegie	..	..	93	Moyhitt	..	..	..	73
Bee Gee	..	..	86	Percy Harris	..	..	..	70
Walton Porter	..	..	95	G. H. H.	..	..	..	70
Bynol	..	..	93	Flamma	..	..	..	68
A. Lander	..	..	93	J. Rose	..	..	..	65
Cynuro	..	..	90	Tyro	..	..	..	63
Belladonna	..	..	90	C. E. Ashby	..	..	..	60
Zirconium	..	..	90	M. M.	..	..	..	60
A. Howard	..	..	90	Phenol Phthalein	..	..	..	5
Ornum	..	..	88	Sunland	..	..	..	5
F. F. A. Tunbridge	..	..	85	Schizocarp	..	..	..	50
J. A. Hare	..	..	85	H. F.	..	..	..	45
Ulexine	..	..	80	Anonymous	..	..	..	30
Wales	..	..	79	W. Hood	..	..	..	30
Verax	..	..	78	Sapientia	..	..	..	30
H. McL. R.	..	..	77	Victory	..	..	..	25
Excelsior	..	..	76	F. W. G.	..	..	..	25

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

S. STEPHENS.—There is not much gained by determining the specific gravity, especially when the alloy is not quite homogeneous, and contains cavities.

H. BOWDEN.—Lead might have been present in notable quantity, and yet escape precipitation as chloride.

ACIDULOUS.—The character of the sublimate formed when the alloy was heated in a tube should have been noted.

BEE GEE.—It is better to arrange your notes in a tabular form. Without such an arrangement it is difficult to tell what solution and what precipitate you refer to.

BYNOL.—Unless special precautions are taken to employ pure reagents you cannot attach much importance to the detection of minute traces of arsenic.

A. LANDER.—See remarks to "Bynol."

CYMO.—If the precipitations had been complete in the early stages of the analysis, there would not have been the slightest precipitate with sodium phosphate.

ULEXINE.—It was important to observe the colour of the nitric-acid solution of the alloy. The blue colour of the solution obtained by treating the sulphides with nitric acid and adding ammonia in excess was quite conspicuous.

WALES.—It is not improbable that you failed to precipitate the copper as sulphide. Owing to the large quantity of mercury present a good deal of sulphuretted hydrogen was required.

H. McL. R.—If much ammonium sulphide were used as a solvent, the copper sulphide might have been completely dissolved, as it is by no means insoluble in that reagent. On adding hydrochloric acid to the solution, the sulphur which separated would be orange coloured from the presence of copper sulphide.

VERAX.—A considerable excess of ammonium hydrate was required to dissolve the zinc hydrate. You did not employ a sufficiency, hence the white precipitate which you took for aluminium hydrate.

EXCELSIOR.—Owing to the presence of mercury, it is quite possible that you failed to precipitate the silver as chloride.

COGITO.—We tried the experiment you made for the detection of silver and obtained a copious precipitate of silver chloride.

A. BUNSEN.—See remarks to "Ulexine." If your work was done by artificial light the colour might have escaped observation.

PEPSINE.—The presence of mercury explains the complete solution of the alloy in nitrohydrochloric acid; with less nitric acid the silver chloride would have remained undissolved. The transition of colour from orange to black is characteristic of the action of sulphuretted hydrogen on the solution of a mercuric salt. The orange-coloured precipitate at first produced consists of a compound of mercuric chloride with mercuric sulphide.

MOYHITT.—Your report did not give a sufficiently clear account of the work done. It does not seem to have occurred to you that the white precipitate insoluble in nitric or hydrochloric acids might have been silver chloride.

G. H. H.—Your analysis was not systematic, though your results were not far astray in this case. The method you employed—or rather absence of method—could not be successfully applied to the analysis of alloys generally. You omitted a most important part of the analysis—proof that the metals detected were the only metals in the alloy.

FLAMMA.—Your report was very incomplete; you should have stated the inference drawn from each reaction you observed. A tabular statement of results has many advantages.

J. ROSE.—If you had dissolved in nitric acid the residue left from the ignition of the alloy in a crucible, you would have found that the solution was green, thus pointing to copper; and it gave a precipitate with hydrochloric acid, soluble in ammonium hydrate, thus indicating silver.

TYRO.—If you had passed a sufficiency of sulphuretted hydrogen through the solution, the precipitate would have become quite black. See remarks to "Pepsine."

M. M.—There must have been free hydrochloric acid in the solution from which you failed to precipitate the zinc as sulphide. The supposed manganese sulphide ought to have been tested for manganese by fusion in a bead of sodium carbonate and nitrate.

PHENOL PHTHALEIN.—It is better to draw up your report in a tabular form. When describing the results obtained with a group reagent, rule off a narrow column to the left for notes about the precipitate, or the inferences drawn if there is none, and a wide column to the right for notes about the treatment of the filtrate. When the next group reagent is added, the latter column should be subdivided in the same way. The composition you assigned to the alloy would not account for the green solution obtained with nitric acid.

SUNLAND.—In latter part of remarks to M. M.

SCHIZOCARP.—Do you not think the occurrence of a nitrite and a sulphide in a metallic alloy extremely unlikely? When you were doubtful as to whether the coloration you observed on heating the supposed zinc oxide with cobalt nitrate corresponded with that given by a zinc compound, your proper course was to prepare some zinc oxide and try the same experiment with it.

ANONYMOUS.—Next time you must not forget to sign your report and give your address.

W. HOOD.—The precipitate which you mistook for manganese hydrate consisted of zinc hydrate, and if it did not dissolve in solution of sodium hydrate it was because you did not use enough of the reagent.

SAPIENTIA.—It would appear that you did not use enough sulphuretted hydrogen to precipitate the heavy metals as sulphides. The only way to insure that you have used enough of the gas is to filter a portion of the solution, dilute it, warm, and pass more gas through it for a short time. The dilution is important, as sometimes (with antimony, for example) an excess of free acid will seriously interfere with the production of the sulphide.

VICTORY.—It is difficult to understand how you could have heated the alloy in a test-tube without noticing that mercury sublimed.

F. W. G.—You will probably be more successful the next time, as the exercise will not be quite so difficult.

HALF-YEARLY PRIZE.

The following are the first *twelve* competitors in the special prize competition. It will thus be seen that W. Hood and H. F. on the monthly returns give place to A. Howard and "Ornum."

Walton Porter	471	Bee Gee	448
A. Lander	466	H. Bowden	441
Belladonna	462	Danwer	424
Zirconium	460	Ulexine	421
J. A. Hare	458	A. Howard	420
John	456	Ornum	417

English News.

Notts Chemists Preparing.

Under the auspices of the local Chemists' Association a very successful soirée and smoking-concert was held last Friday evening at the Eagle Restaurant, Nottingham. Mr. W. H. Parker presided, Mr. R. H. Beverley was in the vice-chair, and Mr. E. E. H. Turton, who acted as honorary secretary *pro tem.*, had provided an exceptionally good entertainment contributed to by amateurs and professionals. With a few more evenings of the same kind before next August, Notts chemists will beat the record in B.P.C. smoking-concerts.

Carbolic-acid Poisoning.

William Brown, a Troutbeck labourer, aged 44, reached home drunk, one night recently, went to bed, and during the night got up and drank some carbolic acid. He died, but the coroner's jury could not decide whether by accident or not.

An Explosion.

By an explosion of a bottle in Mr. Gouldbourne's pharmacy, Pridehill, Shrewsbury, a young lad employed in the shop has been rather badly injured about the head and face, and an assistant also slightly injured.

Not the Right Oil.

At the South Shields Police Court, last week, Mr. John B. Hudson, chemist and oilman, Hebburn was charged and fined 10s. and costs, under the Food and Drugs Act, for selling olive oil which Mr. Stock, the county analyst, proved to be cotton-seed oil. For the defence it was stated that the whole thing was a mistake on the part of the importers, a letter from whom to that effect was produced. The Bench said they were of opinion that it was not Mr. Hudson who was most to blame.

The "American Doctors."

William H. Hale, whose achievements as a doctor, in Dublin, Liverpool, and elsewhere, have already been referred to in this journal, came before the Liverpool Magistrate on Friday last week, on a charge of fraud, and the case occupied the whole day. The witnesses examined were chiefly "patients," who had paid fees of 10s. to 5l. 5s. Hale professes to be a diplomate of the Eclectic Medical College, Cincinnati. One of the "patients" was Mr. Alexander Smith, physician and surgeon, 12 Parliament Street, Dublin, who passed himself off as a farmer, and in whom Hale diagnosed catarrhal deafness, thickening of the drum of the ear, and congestion of the middle ear. Hale also placed a Hollis speculum on Mr. Smith's tongue, looked down his throat, and said he had acute laryngitis. He also put his hand to his eye, looked at it, and exclaimed, "Wasted." There was nothing the matter with Mr. Smith; but he paid 10s. 6d. for the consultation. Mr. Edward Davies, analytical chemist, Liverpool, let some light into the medicine which Hale gave his patients. A mixture given to Mr. Smith was little else besides water. There was a small quantity of morphia, and a little yellow vegetable substance. In a bottle supplied to another "patient" was a small quantity of an alkaline carbonate, and a trace of arsenic. A third bottle contained a yellow turbid liquid leaving about 1½ grain of residue per oz, and was an infusion of some drug. The bottle which a Mrs. Davies received was strongly acid, the residue being nearly 1½ grain to the fluid ounce. There was a very minute quantity of sulphate of magnesia, and a

trace of a bitter alkaloid. Hale was committed for trial, and was allowed bail in two sureties of 1,000*l.* each, and prisoner himself in 1,000*l.*

A Doctor's Suicide.

Dr. H. G. B. Harris, who attended "Ruby Russell," the mistress of Dr. Heron, in her last illness, was formerly in practice in Scarborough, but lately he has been acting as a *locum-tenens*, and it was in that capacity that he attended Ruby Russell. She was his last patient. The poor man, thoroughly broken down and impecunious, committed suicide in a West Croydon temperance hotel on Thursday last week. In a letter addressed to the Coroner he said, "I have taken my life by hypodermic injection of morphia. . . . I had 2 drachms in a bottle, so I hope you will not order a *post-mortem*." He was 54.

Disturbing a Frontage.

An inspector of the Local Government Board has been making inquiries at Abingdon regarding a proposed exchange with Mr. W. F. Smith, chemist and druggist there, of certain corporate land. The proposal is to widen the High Street by 9 feet, to which extent Mr. Smith has agreed to set back his frontage, he getting a corresponding advantage and 150*l.*

The Sale of Infants' Cordial.

Dr. Thomson, the Coroner for Oldham, held an inquest on Tuesday and Thursday last week regarding the death of the 4-days-old illegitimate child of a cardroom worker, to whom infants' cordial had been administered, and which the doctor called in said had caused death. In opening the case, the Coroner stated that the cordial appeared to be retailed in considerable quantities by a shopkeeper in Ripponden Road, and at the adjourned inquiry he added that the mixture was not a patent medicine. If it contained poison it could only be sold by registered chemists and druggists. His own experience of these infants' cordials—which were very much alike—was that all of them contained narcotics, chiefly laudanum in small quantities. He had spoken about the matter with a well-known chemist in the town, and he assured him that the mixture was valued for its soothing properties. He thought this subject was an important one, and in his own opinion he did not think the sale of these things should be left in the hands of people who knew nothing about drugs. He did not blame the shopkeeper in this instance, because he believed that he and others were acting innocently in the matter, and did not know that they were doing wrong. He thought they would all agree that if there was a narcotic in this mixture, and it was the habit for unskilled people to sell pennyworths in cups and glasses, without any label or instructions whatever, of these most dangerous drugs, that something should be done to check the practice. In the course of the evidence it transpired that a teaspoonful of the cordial had been given to the infant. John Greaves, 107A Ripponden Road, who sold it, said that he was a grocer, but had previously been a minder and overlooker in a mill. The quart bottle of mixture produced was the bottle from which he sold a pennyworth to a married sister of the infant's mother about five weeks ago. He gave $\frac{1}{2}$ oz. for 1*d.*, and put it into a cup or glass which she brought. He never labelled the cordial, and knew of the dose from experience with his own children, and from what the man who sold it to him told him. He had sold this mixture for the last fourteen years at the rate of about 1 lb. in five years. He produced a letter from the vendor saying that the mixture contained no opium or preparation of opium in the least degree.

William Bowker, Yew Tree House, Radcliffe, stated that he was a registered chemist and druggist, and was also in the wholesale trade. He admitted selling the cordial to the last witness. The chief ingredient was oil of aniseed, together with treacle, sugar, saffras, and boiling water. There was no preparation of opium or other narcotic in the cordial. He did not sell very much of it, and the trade in this line had greatly decreased during late years.

The Coroner, on hearing this evidence, suggested, and the jury concurred, that the inquest should be adjourned for a week, the mixture in the meantime to be submitted to Mr. Escourt for analysis.

Theft of Cond's Fluid.

At the Clerkenwell Police Court on Monday, William Brown, 30, a packer, was charged with being concerned with another man, not in custody, in stealing, on July 28, ten gross of Cond's Fluid, value 50*l.*, from 67 Turnmill Street, the property of Messrs. Cond & Mitchell (Limited). John Dare, 32, provision dealer, 47 Spencer Street, Goswell Road, was charged with feloniously receiving, between October, 1891, and September last, eighty gross of Cond's Fluid, value 400*l.* For the prosecution it was stated that Brown had been a packer with the prosecutors for the past eleven years, and great confidence had been reposed in him. He had sometimes worked till late at night, and had on those occasions been allowed charge of the keys of the warehouse, and the sole custody of the premises. Since September, 1891, the firm had lost 600*l.* worth of Cond's Fluid, eighty gross of which had, it was alleged, been traced to the premises occupied by the prisoner Dare. In September a man named Gillies was sentenced to penal servitude for robberies, and during his trial it was ascertained that he had sold ten gross of Cond's Fluid, which he had feloniously obtained, though he was not convicted on that charge. Brown, in the same month, was suspected by the prosecutors of implication in the robberies and was discharged by them. Gillies since then had given some information which led to the arrest of the prisoners. It was further alleged that Dare had sold to London and provincial druggists Cond's Fluid at 5*s.* 6*d.* to 6*s.* a dozen, whereas the lowest wholesale price charged by the prosecutors was 7*s.* 4*d.* per dozen. Mr. Mitchell, partner in the firm, and Detective Inspector Davidson having given evidence, the prisoners were remanded.

Was it 900 Nitre?

A quarryman was found in the streets of Llanllyfni the other day hopelessly intoxicated. He had imbibed rather freely of spirits of nitre, which he had purchased from a chemist. When taken before the Magistrates he was cautioned and ordered to pay costs.

A Dishonest Assistant.

At the Accrington Police Court last week, William Cox, a chemist's assistant, was charged with stealing, in January last, 36*l.* from Mr. Parkinson, chemist, Nelson, with whom he was then employed. Since that time he had been to Scotland and other parts of the country. He was apprehended in the Accrington neighbourhood, and at first gave the name of Harrison. Prisoner admitted the theft, and said he intended paying his master back. The Nelson police now have him.

Sale of Patent Medicines.

The first general meeting of the members of the Patent Medicine Vendors' Defence Association (Limited) was held at Manchester on Thursday evening, November 10. The balance-sheet was read, and auditors elected for the ensuing year. Progress was also reported, and future procedure decided upon.

Mr. W. J. Leggett, of Liverpool, read a paper of interest on the above question, and put in several letters received by him from the manufacturers of these medicines, the tenor of which brought forth spontaneously a guarantee of further substantial financial assistance from the members present.

Festive.

The employes of Messrs. W. Kemp & Son, wholesale druggists, Horncastle, dined together at the Rodney Hotel in that town on Monday evening. Mr. H. W. Kemp presided, and in the course of the evening, when responding to the toast of the firm, he mentioned that the volume of increased trade done since the last annual dinner had been exceedingly satisfactory. There were several other toasts. The evening was a very pleasant one.

The Western Chemists' Association (of London) is a model organisation in some respects. The members had a dinner on Wednesday night in the Queen's Saloon of the Holborn Restaurant, and a CHEMIST AND DRUGGIST man went to see what he could pick up, but he was not long there when he found that the social element was the strong feature of the Association. In the circumstances he settled down to enjoy himself, and succeeded in forgetting that the morrow was

publishing-day. Mr. Martindale is President of the Association, but he has been recruiting in the sunny South this past month, and as the members hoped to peptonise before he came back, Mr. H. Long took his place as chairman. Mr. John Mathews, Mr. Frederick Andrews, and Mr. Arkinstall were at the spur tables. There were over sixty present. Even when the speeches came on it was difficult to recognise the fact that this was a public dinner, for Mr. F. Andrews, the treasurer of the Association, in responding to the toast of the evening, said that people wondered why they saw so little about the Association in the public Press, but the fact was that they were a social body; they liked to meet and discuss things quietly, without fuss, but with much pleasure and profit. And they had succeeded in that, for the Association was prospering well. Next came the "Medical Profession," to which Dr. A. P. Luff responded—his time was worth a guinea a minute, said Mr. Long; we had three guineas' worth, and it was worth the money—bright, sparkling, and deprecatory of the *noli me tangere* feeling which is too common in the drug-trade. The chairman also gave the "Pharmaceutical Society"—our *alma mater*, said he—with a special compliment to Mr. Brembridge, who, with Mr. E. N. Butt, responded. Then he himself was toasted by Mr. Urwick. There were some good songs by M. Emile Déplanche, Mr. Charles Peerless, and Mr. Arthur Wilson.

A New York Chemist in Trouble.

At the Marylebone Police Court on Thursday, Arthur Lincoln, aged 29, a chemist, who said he came from Broadway, New York, was charged with stealing a handbag and its contents, worth 21. 10s., from a second-class railway carriage at Euston station the previous day. A railway detective saw him hovering about, and take the bag. He asked him to explain, when prisoner stated that he was waiting for a gentleman. But as the bag turned out to be quite another person's, Mr. Lincoln had to face the magistrate. To him he protested against the great indignity to which he was put, and the Magistrate responded by remanding him.

Profits on a Chemical Invention.

In the Westminster County Court on Tuesday, the case of Bowles v. Terret was before his Honour Judge Bayley on a judgment summons applying for the committal of the defendant for non-payment of a judgment debt of 21l. for goods supplied to him. The plaintiff's representative stated that the defendant Mr. Richard Terret was the proprietor of a very successful chemical preparation which was very largely advertised and out of which he no doubt made a considerable sum of money. He had a place of business at 9 Hills Place, Oxford Street, and judging from outward appearances he could very well afford to pay this judgment debt. He had been frequently applied to for the money but all to no purpose. For the defence it was contended that the defendant had not been able to pay the money, owing to the slackness of trade, and an offer was made of 1l. a month. His Honour said he thought the defendant ought to pay more than that, and made an order for payment of 5l. a month.

Society of Arts.

The 139th session of this Society was opened on Wednesday evening with an address from Sir Richard Webster, Q.C., M.P., Chairman of the Council, who spoke of the prospects of the session, and of the part which the British Empire is to take at the Chicago Exhibition. Thereafter Sir Richard distributed the Society's silver medals, amongst the recipients, being the following gentlemen, for the papers of which the titles are appended to their names:—Professor Silvanus P. Thompson, F.R.S., "Measurement of Lenses"; G. H. Robertson, F.C.S., "Secondary Batteries"; Professor Vivian B. Lewes, "Spontaneous Ignition of Coal, and its Prevention"; Captain W. de W. Abney, C.B., F.R.S., "Colour Blindness"; F. E. Ives, "Composite Heliochromy"; Dr. J. Augustus Voelcker, "The Agricultural Needs of India."

Bristol Medical School.

On Wednesday Sir Andrew Clark, President of the Royal College of Physicians, opened the new buildings of the Bristol Medical School, and in the course of his address mentioned some of the possibilities of experimental research on living animals (for which there is no provision in the

school). By experimental research, he said, they had discovered the conditions for using, in efficiency and safety, almost all the stronger and more useful drugs, and by experiments upon animals they had discovered the nature and relations of infectious diseases, and they had learned how, in some measure, to prevent the development and to control the spread of fevers, cholera, and anthrax. And yet, with all these services before them, they could not scratch the neck of a rabbit for the advancement of knowledge without becoming legal criminals.

A Silver Circular.

In connection with the bankruptcy of Mr. John Silver, a chemist and druggist, who some time ago floated a patent medicine, and mysteriously disappeared when he got into financial difficulties, a circular has been issued which announces Mr. Silver's return, and invites his creditors to rely upon his honour for future payment. The following is a copy of the circular:—

20 Bridge Road, Croydon, November 12, 1892.

A second meeting of the creditors of John Silver, of Croydon, patent medicine proprietor, will be held at the offices of Messrs. Attwood, Bin, sted & Co., 171 Queen Victoria Street, E.C., on Thursday, November 17 at 3 P.M. precisely.

Messrs. Attwood, Binsted & Co. have realised the estate and investigated the accounts; but owing to the peculiar nature of the business, the assets (although costing a large sum) have not realised sufficient to pay the costs of realisation.

John Silver has returned, and after satisfactorily explaining his conduct, he has offered to pay his creditors in full, with interest, at some future time as soon as he is in a position to do so. His largest creditors, representing three-fourths of his liabilities (and seeing no better way), have already consented to accept this offer, and to give him a formal promise to allow their claim to stand over for the present. Should you be willing to fall in with this arrangement, please sign the enclosed slip, and return on or before Wednesday, November 16.

Yours faithfully,

JOHN SILVER.

To John Silver.

1892.

In reply to your circular of November 12, I accept your offer, and hereby state that I will not press nor harass you for the amount of my claim....., and herewith have pleasure in giving you a full discharge of all claims, relying entirely upon your honour to pay me at some future time, as soon as you are in a position to do so, wishing you every success,

I remain, yours truly,

£.....

Poor-law Dispensers.

The Holborn Board of Guardians having recommended that the salary of Mr. Hewett, dispenser to the Board at their central offices, be increased from 100% to 125% per annum, the formal sanction of the Local Government Board was asked. On Wednesday, at the ordinary meeting of the Guardians, the Clerk read a letter from the Local Government Board, in which they stated "that Mr. Hewett appears from the records, to be assistant dispenser, and not dispenser, as stated, and that, under the circumstances, they see no sufficient reasons to justify them in sanctioning the increase." The Clerk added that it was a fact that the word "assistant" had been inserted in the records. The matter was referred to the Dispensary Committee. The Clerk further stated that he had looked up the originals of the appointment of dispensers at the Infirmary of the Union, and it appeared to have arisen entirely at the instructions of the Local Government Board. It was resolved to send the records of the appointment to the Board.

Irish News.

A Piece of "Divarshion."

A drover was charged at the Armagh Petty Sessions on Thursday, November 10, with attempting to commit suicide, and, in the course of the hearing, Mr. William Orr, an assistant to Mr. James Hillock, druggist, stated that on the Saturday evening previous the prisoner went into the shop, shouting for a penn'orth of strychnine to poison himself. There were several people in the shop at the time, and, in order to get rid of the accused, he gave him 10 grs. of Epsom salts. Prisoner now said that it was all a piece of "divarshion," and although he had not taken the pseudo-

poison, he was bound over to keep the peace for twelve months.

A Tender Point.

The Glennamaddy Board of Guardians were considering some drug tenders the other day, and the Clerk said there was one from Leslie, who had been contractor for the last twenty years, and there was also one from Dr. Macnamara, of Tuam. A Mr. Morgan said if his tender was as cheap as any other one, he would give Dr. Macnamara the contract, as he was a local man. But there came a difficulty, the tenders were in Latin, and, said Mr. Morgan, only the doctors could decide the matter. The Chairman: Can't we compare the prices for each item? The Clerk: Yes; here now is an item which is charged 1s. 6d. in one tender, and the price put on in another is 1s. 10d. Mr. Morgan: But we don't know what it is. The Master: Send for a Latin dictionary, as a gentleman here suggests. It is the prices of the medicines most in use you ought to compare. The medicines not much ordered are usually put down at a very low price. Mr. Morgan: Only the doctors know what medicines are most in consumption. Finally, the Board decided to refer the tenders to the medical officers of the Union.

Tenders Wanted.

The Board of Guardians of Killarney Union invite tenders for supply of medicines and medical appliances to the workhouse and dispensaries. Tenders will be received up to November 23, on which day they will be considered.

Abolition of Christmas Presents.

This forms the striking heading to an advertisement in the Dublin papers, in which the undermentioned firms notify that they have decided to discontinue the practice of sending Christmas gifts for the future. They say that the old custom of giving Christmas presents has reached such formidable proportions as to become so embarrassing and unbusinesslike that they have agreed to abolish it altogether. The signatories are:—Alexanders & Co., Boileau & Boyd, William Hayes & Co., M'Master, Hodgson & Co., Hugh Moore & Co., and Woods, Webb & Co.

Scotch News.

Edinburgh Conference.

A meeting of the Edinburgh local committee of the British Pharmaceutical Conference was held on Wednesday evening, to receive the report and statement of accounts by the executive, and to decide as to the disposal of the balance of 29l. 2s. 3d. in the treasurer's hands. The report showed that 216l. 2s. 6d. had been subscribed by the local committee and wholesale firms, and 193l. 13s. had been contributed by those who attended the Conference—viz., 57l. from the five-shilling books of tickets, and 135l. 9s. for the excursion-tickets. The expenditure was 380l. 13s. 3d., of which the greater part was in connection with the Killin excursion. It was decided to dispose of the surplus as follows:—Five guineas to the Benevolent Fund of the Pharmaceutical Society; a like sum to the new Orphans' Fund of the Society; and the balance to the Edinburgh Chemists' Assistants' and Apprentices' Association, as a Conference Prize Fund.

Christopher Glaser.

Professor Ferguson opened the session of the Glasgow University Chemical Society last week with a lecture on "Christopher Glaser," who was appointed in succession to a Scotchman, Dr. Davidson or Davison, lecturer in the Jardin du Roi at Paris, and apothecary to Louis XIV. While occupying this position he became implicated in the crimes of the Marchioness de Brinvilliers and Sainte-Croix, the latter of whom experimented on poisons in Glaser's laboratory. From an examination of Glaser's works—especially the clearness with which Glaser described processes and explained reactions many of which have since been verified—Professor Ferguson considered that the too prevalent notion that scientific chemistry dates from Lavosier's time is wrong.

A Kola Collation.

During their visit to Edinburgh last week the Princess Louise and the Marquis of Lorne paid a visit of nearly half an hour's duration to Mr. J. C. Pottage, homeopathic chemist, Princes Street, and had the history and characteristics of kola explained to them by that gentleman.

Glasgow Personalities.

Mr. John Neil, who for the past seven years has managed Mr. John McMillan's Hillhead branch, was on Wednesday of last week presented [by his fellow-assistants with a microscope and a case of razors. Mr. Neil has purchased the business of Mr. D. L. Dick, Charing Cross, Sauchiehall Street.

At the Pharmaceutical Association social meeting last week, Dr. David Lees, pharmaceutical chemist, was presented with a handsome silver inkstand by the members of the ambulance class, which he recently taught. Mr. Laing made the presentation, and in the course of his reply Dr. Lees said he hoped to follow up the lectures with a course on minor ailments.

Dental Instruction.

suitable for chemists or dentists, is now provided in connection with the dispensary department of the Dundee Royal Infirmary.

Limited Company Druggists.

As a direct result of the chlorodyne case, it is reported from Glasgow that several large dealers in patent medicines mean to shelter themselves behind the Joint-stock Companies Act and qualified assistants. Already one grocery firm (limited) is now opening drug departments in connection with its branch shops, while another large grocer has taken steps to place himself in consonance with the law, and others are expected to follow. It is said that a knowledge of this move on the part of the grocers had a considerable influence on the resuscitation of the Glasgow Pharmaceutical Association, which will probably become a militant body.

A Druggists' Sundries Company.

A movement is said to be on foot for the formation of a limited company, having its headquarters in Edinburgh, to deal in druggists' sundries, and several chemists in the south-east of Scotland are named as having been selected provisionally to form the directorate. The capital required is given as 5,000l., which it is proposed to raise by the issue of 1l. shares.

French Pharmaceutical News.

(From our Paris Correspondent.)

THE PARIS SCHOOL OF PHARMACY.—M. Planchon, professor of natural history of medicaments at the Paris Superior School of Pharmacy, has been nominated director of the School for a term of three years.

THE BEAUVAIS PRISON PHARMACY.—The case of poisoning at this prison has already been noticed in THE CHEMIST AND DRUGGIST. It will be remembered that on September 17 last some of the prisoners exhibited symptoms of poisoning, and Dr. Lesage endeavoured to trace the inexplicable malady from which the prisoners were suffering. It was attributed by public rumour to cholera or to an excess of carboic acid having been thrown on the rags which the prisoners had to sort. Dr. Lesage discovered the cause by tasting the extract of walnut-leaves with which the drinking-water of the prison was mixed. The experiment nearly cost him his life. His sufferings were immediate, and have led to a searching inquiry, as a result of which it has been found that the wholesale druggists delivered extract of belladonna instead of extract of walnut-leaves. The day the extract was delivered the prison pharmacist, M. François, was absent and it was given out by his assistant. It spite of M. François' apparent immunity from blame, he has been prosecuted before the Beauvais Correctional Tribunal and sentenced to six days' imprisonment and a fine of 100f. But profiting by the Berenger Law, the unlucky pharmacist's sentence will not be applied.

Foreign and Colonial News.

DRUGS FOR CAPE COLONY.—Among the imports into the Cape Colony in the year ending June 30, 1892, were 111,243*l*. worth of drugs and chemicals, and 64,456*l*. worth (8,505,296 lbs. weight) of soaps.

AN APOTHEKER FINED FOR SELLING PATENTS.—For advertising various patent medicines (among them Warner's Safe Cure) as specifics against numerous diseases, and for selling these medicaments, a Cologne apotheker has just been fined 1,500*m*. (= 75*l*.).

GERMAN CHEMICAL SOCIETY.—The twenty-fifth anniversary of the foundation of this Society was celebrated last Saturday in the Banquet Hall of the Berlin Town Hall. The arrangements had also special reference to the memory of the late Professor von Hofmann, through whose instrumentality the Society was founded.

DRUG FIRE IN NEW YORK.—A fire broke out in the rear of the store of Peek & Velsor, wholesale dealers in crude drugs and drug millers, Gold Street, New York City, early in the morning of November 7. The flames spread to the rear of Dodge & Olcott's premises, which abut on those of Peek & Velsor. The loss is estimated at \$25,000, and is fully covered by insurance. Neither firm will be seriously inconvenienced.

CONDY'S FLUID IN AUSTRALIA.—At the Sydney Supreme Court, on October 7, the case of Condy & Mitchell (Limited) v. Henry was decided by Mr. Justice Simpson. The plaintiffs sought by injunction to restrain the defendant, a Sydney chemist, from applying to any preparation, not being of the plaintiffs' manufacture, the term Condy's fluid; and from supplying to persons asking for Condy's fluid any preparation or disinfectant not being of the plaintiffs' manufacture. The plaintiffs alleged that the defendant was selling a preparation labelled "Permanganate of potash, or crimson fluid," and supplying the same to persons asking for "Condy's fluid." The injunction was granted.

SUSPECTED BOGUS PHARMACEUTICAL EXHIBITION.—An individual in Vienna is, it appears, circularising manufacturers and traders on the Continent asking them to exhibit at an International Exhibition for Hygiene, Alimentary Substances and Pharmaceutical Products, to be held at the Champ de Mars, in Paris, in January and February next, under the patronage of the Ministers for Education, Public Works, Commerce, and Industries. The gentleman in question offers his services as an exhibition agent, and promises to defray all the costs of an exhibit for a payment of 8*l*. The *Kölnische Zeitung* has made inquiries in Paris concerning this exhibition and finds that nothing is known of it, either on the Champ de Mars or at any Ministerial department.

THE CHOLERA GERM.—The Berlin correspondent of the *Daily News* states that Professor Pettenkofer, of Munich, will publish the account of his experiences during the recent cholera epidemic. They prove, he thinks, the absolute frailty of the contagion theory. According to the Professor, local disposition is an indispensable condition to the spread of the epidemic. The seclusion of persons coming from cholera-infected places is useless, and the public should be rendered proof against the disease, first, perhaps, by some such method as in the case of smallpox, and then by improving the sanitary conditions. This summer Dr. Pettenkofer and Herr Emerich, the bacteriologist, swallowed some comma bacilli without coming to any harm. Both had diarrhoea afterwards; the dejecta contained myriads of the comma bacillus, but the experimenters had good appetites, felt well, and their organisms were not otherwise disturbed. Dr. Pettenkofer rejects the experiments on animals, saying that only experiments on human beings are of any use. He considers the late great rainfall as unfavourable to cholera, and says that some anxiety may be felt should it be dry next year, as many cholera germs still exist, and they retain their virulence for two years. In Calcutta the cholera rises and falls with the rainfall, and it was the same in the Munich epidemic of 1873.

RECTIFICATION OF THE REGISTERS OF PHARMACEUTICAL CHEMISTS AND CHEMISTS AND DRUGGISTS.

WE are requested by the Registrar to publish the following list of persons whose names will be erased from the Registers unless they communicate with him on or before December 30 next. Letters should be addressed to Mr. Richard Bremridge, 16 Bloomsbury Square, London, W.C.

Those marked (*) are Pharmaceutical Chemists.

Acton, Samuel	9 South Street, Sheffield
Aitken, Thomas Gebbie	60 Argyle Road, Southampton
Aitkenhead, James	7 Ravensdon Street, Kennington, London, S.E.
Aldred, Thomas	Altrincham
Anderson, James Grant	6 East Montgomery Street, Edinburgh
Atkinson, Walter	Portmahon, Sheffield
Atwell, Benjamin Arthur	25 High Street, Gosport
Bainbridge, Arthur	69 Churchfield Road, Acton, London, W.
Barnaby, Henry	4 Park Hill, Bexley, Kent
*Barrowclough, Alfred	Newlay Villa, Horsford, near Leeds
Barton, John	54 Saltisford, Warwick
Battle, Walter	45 East Street, Leeds
Bayne, Charles	19 India Street, Edinburgh
Beadel, Alfred	99 Pilgrim Street, Newcastle-on-Tyne
Beard, Thomas William	8 Wilmington Terrace, Earlsfield Road, Tottenham
Bell, Henry	401 Sauchiehall Street, Glasgow
Berry, Newton	Metheringham, Lincolnshire
Beveridge, John	8 Spence's Place, Edinburgh
Binnie, Robert	151 High Street, Dumbarton
Blunett, William Reginald	17 Martaban Road, Stamford Hill, London, N.
Bolton, Edgar Benjamin	8 Upper High Street, Winchester
Bond, Alfred	10 Tottenham Road, Kingsland, London, N.E.
Bond, James Benjamin	6 Cornbrook Street, Manchester
Boor, Jonathan	51A, High Street, Camden Town, London, N.W.
Borman, John Henrie	23 Artillery Lane, Bishopsgate Street London, E.C.
Borman, Richard William	73 Freeman Street, Great Grimsby
Boughen, Hugh	29 Percy Street, London, W.
Bracher, Walter Phipps	East Knoyle, Salisbury
Brierley, John	80 Cross Lane, Salford
Briggs, Robert John	27 Clarendon Square, London, N.W.
*Bromley, Richard Martin	3 Beckenham Place, Denmark Hill, London, S.E.
Broom, George	Llanely, Carmarthenshire
Broom, Thomas	14 Overston Road, Hammersmith, London, W.
Brothwood, Harry Skarratt	32 Royal Avenue, Chelsea, London, S.W.
Brown, Alexander	20 Argyll Street, Danoon, N.B.
Brown, Edwin	75 Essex Road, London, N.
*Browne, Joseph Alleyne	Barbadoes, West Indies
Brownridge, Peter Fallows	38 Bury Street, Salford
Buchner, Maximilian	Westbourne, Bournemouth
Burman, Charles Clarke	Cross House, Harrington, Cumberland
Burnett, Joseph	Mitcham Lane, Streatham, London, S.W.
Bush, Robert	2 Rochester Terrace, New Southgate London, N.
Candler, Joseph Thomas	39 High Street, Margate
Cant, John Reymer	135 Pilgrim Street, Newcastle-on-Tyne
Carns, Thomas	2 Back Lane, Hyde, Cheshire
*Carpenter, Henry	Demerara, West Indies
Carroll, George	Market Place, Romford
Carter, John	Albert Stables, Manor Street, Chelsea, London, S.W.
Chalmers, John	135 Nethergate, Dundee
Chapman, William	6 Castlegate, York
Chell, Frederick	35 Newington Crescent, London, S.E.
Christian, John Osborne	Douglas, Isle of Man
Clarke, Richard	2 High Street, Child's Hill, London, N.W.
Clarke, Robert Robinson	Linden Villa, Raleigh Road, Hornsey London, N.
Clayton, George Pearson	47 Spring Street, Huddersfield
Clayton, John Daniel	Pinxton, near Alfreton
Clutterbuck, Charles	3 Exchange Wharf, Nottingham
Coates, Arthur	Manor Farm, Belper
Coates, Joseph	38 Rosslyn Crescent, Edinburgh
Colam, Matthias	3 Tombland, Norwich

- Coleman, Friend West View, Station Road, Sidcup
 Cotley, John 59 Railway Road, King's Lynn
 Comerford, Charles James 52 Overstone Road, Hammersmith, London, W.
 Cook, James Holder 201 Balsall Heath Road, Birmingham
 Cookson, Samuel 27 West Clowes Street, Eccles New Road, Salford, Manchester
 Cookson, William 141 Great College Street, Camden Town, London, N.W.
 Coombs, William Thomas Brentford, Middlesex
 Cooper, Daniel The Willows, The Little Green, Richmond Surrey
 Corbin, Dennett George 91 High Street, Lymington, Hants
 Cox, Homersham Edward 32 Ship Street, Brighton
 Cox, William Milton Abbott, Devon
 Craig, Nicol Miller 14 Braigham Road, Edinburgh
 Crookes, James 227 Bristol Street, Birmingham
 Crossling, Frank 244 George Street, Aberdeen
 Crowther, Thomas Christopher Worcester
 Crutcher, George 3 Clapton Square, Lower Clapton, London, N.E.
 Cnutt, William Henry 38 Hendon Road, Sunderland
 Cullen, Robert Henry 2 The Pavement, High Street, South Norwood, London, S.E.
 Currah, George Ingersoll 43 Leverton Street, London, N.W.
 Dangerfield, Edward 270 Moseley Road, Birmingham
 Davies, David The Bridge, Harrow, Middlesex
 Davies, John Bridge 3 Lissant Street, Edge Hill, Liverpool
 *Davies, John Hugh 38 St. George's Street, Cape Town
 Davies, John Richards New Road, St. Sampsons, Guernsey
 Davies, Richard Williams Nantwich, Cheshire
 Day, George Blackheath, London, S.E.
 Dickinson, William 4 Newstead Grove, Nottingham
 Dodd, Richard Jefferson The Hospital for Women, Soho Square London, W.
 Dodd, William 32 East Street, Barking, London, E.
 Dods, John Henry 46 St. Mary's Terrace, Paddington Green, London, W.
 Donaldson, David 20 West Maitland Street, Edinburgh
 Doubell, James 17 Archer Street, Notting Hill, London, W.
 Douglas, John Cockerhmouth, Cumberland
 Drake, Henry Charles Birmingham, Chesterfield
 Duck, William George 123 Lisson Grove, London, N.W.
 Duncan, John Glendinning The Vine, Sevenoaks, Kent
 Dutton, William 140 Springdale, Sheffield
 Dyson, George William 11 Brunswick Street, North Street, Leeds
 Edwards, William Herbert 89 Park Lane, Liverpool
 Eedes, John Westmacott 24 Hatcham Park Road, New Cross, London, S.E.
 Ellis, Frederick 23 Sheffield Road, Barnsley
 Emms, William Robert 32 Acre Lane, Brixton, London, S.W.
 Evans, William James 123 Lisson Grove, Marylebone, London, N.W.
 Fawcett, Christopher 4 Oxford Street, New Cleve
 Fenton, George 28 Great Smith Street, Westminster, London, S.W.
 Flanagan, William James 1 Somerford Grove, Stoke Newington, London, N.
 Fleet, John Thomas 52 Elm Row, Leith Walk, Edinburgh
 Fletcher, Robert 156 Deritend, Birmingham
 Forbes, Walter 23 Eblana Street, Belfast
 Foster, Edwin Beast Fair, Pontefract, Yorks
 Fraser, John 60 Elmbank Street, Glasgow
 Furbur, Alfred William 272 Kentish Town Road, London, N.W.
 Gall, Alexander 52 Elm Row, Leith Walk, Edinburgh
 Garland, William New Briggate, Leeds
 Garthwaite, William Humble 45 Bedford Street North, Liverpool
 George, William Arthur 29 Abbey Gardens, St. John's Wood, London, N.W.
 Gery, James 47 Malden Road, Kentish Town, London, N.W.
 Gibson, Frederick 6 West Street, Fleetwood, Lancs
 Gill, Richard Turton Easingwold, Yorks
 Gillanders, James 4A Dawson Street, Dublin
 Glover, Thomas John 431 High Street, Cheltenham
 Goldsmith, Edgar Murdoch Place, Hamstead Road, Birmingham
 Goodall, John Edward Stamshaw, Landport
 Goodchild, Robert Stratford 1 Courtenay Terrace, Marsh Street, Walthamstow, London, E.
 Goodlad, John Jonathan 2 Abbeyfield Road, Bermondsey, London, S.E.
 Goodrick, John 28 Camden Street, Camden Town, London, N.W.
 *Gowland, William The Imperial Mint, Osaka, Japan
 Grady, Francis Edwin Villa Street, Hockley, Birmingham
 Graham, Monkhouse Sea Terrace Cottage, Redcar
 Graham, William Richard Stockton-on-Tees
 Greeves, John Williams 221 Whitechapel Road, London, E.
 Greeves, Robert Taylor 221 Whitechapel Road, London, E.
 Gregory, Richard Golborne, near Newton-le-Willows, Lancs
 Grice, Joseph Leftwich Green, Northwich, Cheshire
 Grummitt, William Clarke Castle Heddingham, Essex
 Hall, Sydney Charles 32 Market Place, Newark-on-Trent
 Hall, Thomas Henry 62 Ivydale Road, Nunhead, London, S.E.
 Hall, Walter Commercial Street, Batley, Yorks.
 Halliday, Henry Dudeney 54 Carnaby Street, Regent Street, London, W.
 Halliwell, Joseph 64 Newboro' Street, Scarborough
 Hamblby, George 69 Union Street, Stonehouse, Plymouth
 *Hamilton, Francois Dancey 5 Sydenham Road, Bell Green, London, S.E.
 Hamilton, Robert 81 Inkerman Terrace, Belfast
 Hammerton, Edward 28 High Street, Colchester
 Hancock, William Henry Dursley, Gloucestershire
 Hanslow, Charles Edward 30 South Street, Worthing
 Hardy, William Victoria Terrace, Stockton-on-Tees
 Harper, James 2 Lauriston Park, Edinburgh
 Harper, Joshua High Street, Aston New Town, Birmingham
 Harrison, Henry 70 Brunswick Street, Sheffield
 Harrison, Thomas Henry 33 Bank Street, Greenock
 Harrison, William Smith's Place, Leith Walk, Edinburgh
 Harrold, Charles Jessor 5 Anglesea Terrace, Anglesea Road, Ipswich
 Harwood, Thomas 322 Oldham Road, Manchester
 Hatfull, Robert 170 Deptford High Street, London, S.E.
 Heald, Samuel Haldane The Cottage, Badsworth, near Pontefract
 Hessel, James 200 Essex Road, London, N.
 Hibbert, Jane Isabella Farnworth, near Warrington
 Hickling, Henry Market Place, Clowne, Derbyshire
 Hill, Alexander Scott 68 Devonshire Road, Holloway, London, N.
 *Hill, Henry 12 Knatchbull Road, Camberwell, London, S.E.
 Hillgenberg, Eliza 13 Marine Square, Brighton
 Hinkley, Edward 11 Belmont Street, Southport
 Hobbs, Harry Huyton, near Liverpool
 Hodgetts, Nathaniel 19 Canterbury Terrace, Maida Vale, London, W.
 Hollingworth, Joseph Market Place, Mansfield, Notts
 Holmes, John Colwyn, North Wales
 Holmes, John Thomas 30 Upper Baggot Street, Dublin
 Hornby, Alfred Thorold Market Street, Compstall, Stockport
 Horne, Benjamin 80 Quarry Street, H'aton, near Bradford, Yorks
 Horsfall, John Aughton Road, Birkdale Park, Southport, Lancs
 Howe, Walter High Street, Gorleston, Suffolk
 Howell, John 1 London House Yard, London, E.C.
 Huband, Alfred Edward Vine Street, Evesham, Worcestershire
 Hubbard, Robert William High Street, Grays, Essex
 Hudson, William The Willows, Upper Mitcham, Surrey
 Hughes, Benjamin Longmore 1 West Bay Street, Jacksonville, Florida, U.S.A.
 Humphreys, George Chelmsford
 Humphreys, Maria Jane 13 Wilford Road, Nottingham
 Hunter, Charles Miller 13 Latimer Street, Leicester
 Huxham, William 197 Moseley Road, Birmingham
 Jackson, Frederick 12 Brunswick Place, Camberwell New Road, London, S.E.
 Jackson, George 12 Spittal Street, Edinburgh
 Jackson, Jared 44 Preston Street, Hulme, Manchester
 James, Henry Oak Street, Norwich
 James, Henry Powis Street, Woolwich, London, S.E.
 James, Thomas Jones 252 Old Kent Road, London, S.E.
 Jenkins, John Daniel 9 Market Street, Nottingham
 Jenkins, Thomas Idle, near Leeds
 Johnson, William Henry 83 Barton Street, Gloucester
 Joiner, Alexander 2 Holburn Street, Aberdeen
 Jones, Alfred Benjamin George 104 Dalry Road, Edinburgh
 Jones, John Albert Hastings Street, Napier, New Zealand
 *Jones, Rees Thomas 4 Mackintosh Place, Roath, Cardiff
 Jones, Samuel 13 Charles Street, St. James's, London, S.W.
 Jones, Samuel George 8 Halkin Street West, London, S.W.
 Kaye, Alexander 24 Buccleuch Street, Edinburgh
 Kear, Henry Frederick Whitecroft, near Lydney, Glos

Kenyon, Thomas 9 Penny Street, Blackburn, Lancs
 Ker, William Law 14 Downhill Street, Patrick, Glasgow
 Kidgell, Francis John Sparkhill, Birmingham
 Kitchen, James 30 High Street, Dumbarton
 Kitton, Charles George Blakeney, Norfolk
 Knowsley, Robert 179 Regent Street, Hull
 Lane, James 164 Kennington Road, London, S.E.
 Lathbury, Charles John 23 Duffield Road, Derby
 Lear, Charles 2 Victoria Terrace, Cliftonville, Brighton
 *Lediard, Charles St. Vincent, West Indies
 Lee, Richard Baxter 33 Fentiman Road, Clapham, London, S.W.
 Lester, Theodore Christopher .. 68 High Street, Hull
 Lewis, David William Taliesin, Cardiganshire
 Lewis, John Philip Splott House, Colwinstore, Cowbridge, South Wales
 Lewis, Joseph Newbury Street, Wantage, Berks
 Lloyd, Henry 14 Union Street, Plymouth
 Lloyd, John Piccadilly, Hanley, Staffs
 Lonnon, Frederick 4 Naval Terrace, Sheerness
 Lundie, Timothy Potter's Hill, Beverley, Yorks
 Macdonald, Ewan 84 High Street, Cheltenham
 Machon, Robert 39 Highfield Place, London Road, Sheffield
 Mackay, Alexander 63 St. George's Road, Southwark, London, S.E.
 McNulty, James Otley Road, Shipley, near Bradford, Yorks
 Macpherson, Mary Crich, Derbyshire
 MacRossen, James Rollo 96 N. Hanover Street, Glasgow
 Maleham, Henry William Oxford Street, Uppertorpe, Sheffield
 Manning, Thomas Harlesden, Norfolk
 Manthorp, George Samuel 8 Reedholm Street, Stoke Newington, London, N.
 Margetts, George William Potter's Bar, Middlesex
 Marks, George 62 Church Street, Toronto, Canada
 Marr, John Charles 24 Waterworks Street, Hull
 Marshall, Alfred Woodstock, Oxon
 Marshall, Hay McDougald Grant Charing Cross, Glasgow
 Marston, George Henry 4 Whateley Road, E. Dulwich, London, S.E.
 Martin, John 87 Fishergate, Preston
 Matland, Collier 2 Osborn Street, Whitechapel, London, E.
 Matthews, James Wavell 62 Belsize Road, South Hampstead, London, N.W.
 Medd, William Vine Cottage, Wotton, Glos
 Metcalfe, Edmund Henry London, Ont., Canada
 Metcalf, Edwin 2 The Retreat, Milton Road, Wokingham
 Millar, Archibald James 324 York Road, Wandsworth, London, S.W.
 Miller, Richard 34 St. Bees Street, Manchester
 Miller, Thomas Stark 5 Hampton Avenue, Camberwell Road, London, S.E.
 Mills, Richard Powell 282 Old Kent Road, S.E.
 Mills, Robert Simons Town, Cape of Good Hope
 Milward, Frederick 101 Mount Pleasant Road, Hastings
 Moffet, William Emslie High Street, Needham, Suffolk
 Moore, Albert 47 High Street, Fulham, London, S.W.
 Moore, Alexander John 91 Arkwright Street, Nottingham
 Morgan, Richard Edge 384 Eccles New Road, Weaste, Salford, Manchester
 Morley, John Thomas Market place, Ripley, Derbyshire
 Morrison, John Spittal, Aberdeen
 Morse, Julia 59 Beach Street, Deal, Kent
 Morton, Lawrence Knyvett 27 St. Nicholas Street, Coventry
 Moses, William Russell 1 Pipers Row, Wolverhampton
 Murdoch, John McGill 225 Sauchiehall Street, Glasgow
 Murray, William 6 Marine Parade, Brighton
 Neil, William 12 Newark Place, Port Glasgow
 Nicholls, Charles Market Place, Woodstock, Oxon
 Nicholson, John Hill 71 Eldon Street, Sheffield
 Oakley, James 342 Balsall Heath Road, Birmingham
 O'Brien, William 1 Gravel Lane, Salford, Manchester
 Odham, Samuel Mottram-in-Longendale, near Manchester
 Orton, Edward Arthur 89 Plumstead Road, Plumstead, London, S.E.
 Oswell, William Henry 21 St. David Street, Falmouth Road, London, S.E.
 Owen, John 1 Olive Crescent, Holt Hill, Tranmere, Cheshire
 Owen, Thomas Tanyfron, L'annor, Carnarvonshire
 Owles, Arthur 54 Piccadilly, London, W.
 Page, Jesse Henry 1 Theberton Street, London, N.
 Painter, Frederick Hubert 33 Grand Parade, Clapham Common, London, S.W.
 Parry, Alfred 6 Guildford Road, Poplar, London, E.
 Parry, John Cemmaes, Montgomeryshire

Partridge, William Moseley Road, Balsall Heath, Worcester-shire
 *Pasmore, Frederic Rich 17 High Street, Harlesden, London, N.W.
 Paterson, William 4 Portland Place North, Lower Clapton, London, N.E.
 Patrick, James 44 Rankellor Street, Edinburgh
 Peck, Henry Frederick 5 Strathavon Terrace, Brent Street, Hendon, London, N.W.
 Pendlebury, James 73 Brownlow Hill, Liverpool
 Pentelow, Harry Pohbrook Lodge, Oundle
 Phillips, Thomas 25 Trinity Road, Aston, Birmingham
 Pitt, Charles Day 18 Merriek Square, Newington, London, S.E.
 Pitts, Thomas Cruso 8 St. Giles Street, Norwich
 Pollard, Jeremiah 145 Tachbrook Street, Pimlico, London, S.W.
 Pool, George Andrew 68 High Street, Dumfries, N.B.
 Powell, Frederick William 18 Bernard Street, Leith
 Preece, Charles Godwin Bildeston, Suffolk
 Price, Henry Stephen Sheriff's Office, New York, U.S.A.
 Price, Thomas Harry 22 Stonest Street, Tollington Park, London, N.
 Price, Thomas Ulock High Street, Arundel, Sussex
 Pritchard, Lewis Thomas Richard 93 Walter Street, Aberavon
 Ransom, Edward George 34 Bridge Street, Cambridge
 Reece, Charles Clement 15 Kennington Park Gardens, London, S.E.
 Rees, Samuel Lawrence Penarth, Cardiff
 Reeves, Oliver Colston 127A Stafford Street, Walsall
 Reynolds, Edwin 7 Morningside Terrace, Edinburgh
 Richards, William Rolph 152 Camberwell Road, London, S.E.
 Richardson, George 35 Elgin Road, St. Peter's Park, London, W.
 Richardson, George 143 Pilgrim Street, Newcastle-on-Tyne
 Rieveley, Charles 68 Breckfield Road North, Liverpool
 Riggall, Francis Henry The Terrace, Spilsby
 Riley, John Cowgill 121 Adelphi Street, Preston
 Roberts, Henry Constable 30 Borough High Street, Southwark, London, S.E.
 Roberts, John Henllan, Denbighshire
 Roberts, Peter 25 White Street, Little Moorfields, London, E.C.
 Robertson, George White House Station, Aberdeen
 Robinson, John Threlkeld 16 Northbrook Street, Newbury, Berks
 Ross, David 71 Clerk Street, Edinburgh
 Royle, Alfred Market Place, Middleton, near Manchester
 Ryan, Walter Thomas Warley Barracks, Brentwood
 Sampson, Nicholas Mackey 22 St. David's Street, New Kent Road, London, S.E.
 Saunders, Ernest Clement 238 Randolph Street, Corner Gratiot, Detroit, U.S.A.
 Saunders, Parker 68 High Street, Hull
 Scammell, Luther Robert 2 Gresham Buildings, London, E.C.
 Sergeeff, Peter 2 Birkley Row, Rotherhithe, London, S.E.
 Sewell, Joseph 2 Pond Place, Fulham Road, London, S.W.
 Shannon, John 33 Longrow, Campbelltown, N.B.
 Sharp, Benjamin Carr Street, Ipswich
 Shaw, Charles Jesse West Street, Alford, Lincs
 Shearing, Robert 47 Watergate Street, Chester
 Shepherd, Charles 33 High Street, Guildford, Surrey
 Shepherd, George Prentis 33 High Street, Guildford
 Simons, Nathaniel Wells Nailsea, Somerset
 Singleton, John Sheffield
 Sinzintinex, Arthur Upper Tean, Staffs
 Slade, William Bushnell Whittlesea, Cambs
 Smith, Henry 31 West Derby Road, Liverpool
 Smith, James 30 Artesian Road, Bayswater, London, W.
 Smith, John Charles The Dispensary, Mary Place, Notting Hill, W.
 Smith, Nathan High Street, Amersham, Bucks
 Smith, Percival Henry 80 South Street, Liverpool
 Smith, Thomas William 18 Linton Road, Leystone, London, E.
 Sowray, Robert Duck 143 Sandy Lane, Skelmersdale, near Ormskirk
 Spark, William 10 Grindlay Street, Edinburgh
 Spencer, Robert The Chestnuts, Green Lanes, Wyde Green, Nottingham
 Sprent, Charles 91 Broad Street, Reading
 Staples, Charles Alfred 47 High Street, Fulham, London, S.W.
 Stapleton, Frederick William 30 Highbury Park, London, N.
 Starle, William Chantler 51A High Street, Camden Town, London, N.W.
 Stevens, Charles William Davis 149 Marylebone Road, London, N.W.
 Stobie, James 3 Buccleuch Street, Edinburgh
 Storer, Ernest 20 Bishop's Road, Bayswater, London, W.

Strachan, Joseph Lawson.....	25 High Street, Gosport, Hants
Stringer, Edward Cruttall	173 Queen's Road, Peckham, London, S.E.
Swain, Brady	6 Grey Terrace, Sunderland
Swann, Naphtali.....	Windermere Village, Westmoreland
Sykes, Edwin John.....	The Quadrant, Buxton
Symon, James	3 Buccleuch Street, Edinburgh
Talbot, John Hind	84 Hartington Road, Sefton Park, Liverpool
Taylor, Thomas	Skelton-in-Cleveland, Yorks
Taylor, Walter.....	Carrington Street Bridge, Nottingham
Thomas, John Evan	18 Merrick Square, London, S.E.
Thompson, Thomas	269 High Street, Bishopwearmouth, Sunderland
Thompson, Thomas.....	Finkle Street, Richmond, Yorks
Timothy, Thomas Norris	Chertsey, Surrey
Tite, John Reynolds	143 St. George's Road, Southwark, London, S.E.
Tite, Samuel Cooper	Towcester, Northamptonshire
Todd, Edward	237 Bilston Road, Monmore Green, Wolverhampton
Troake, Robert.....	28 Claverton Street, Bath
Tuck, George Frederick.....	Glendinnings, Waverley Grove, Southsea
Tuck, Walter Barber	42 Wharton Street, Lloyd Square, London, W.C.
Tunnickliff, George	Barton-under-Needwood, Staffordshire
Turner, Harold Strange	194 Kennington Road, London, S.E.
Turner, Joseph Amos.....	31 Great Russell Street, Birmingham
Turner, Joseph Kitchen	Post Office, Buffalo, New York, U.S.A.
*Tyson, Thomas Balmforth	21 Montague Street, Worthing
Wade, Edward	98 Chrisp Street, Bromley, London, E.
Walker, George	163 Lothian Road, Edinburgh
Walker, Robert	128 Brompton Road, London, S.W.
Wall, Edward John.....	127 Dalston Lane, London, N.E.
Wall, Thomas	65 Medlock Street, Hulme, Manchester
Ward, Thomas Rowland	22 Rochdale Road, Manchester
Watson, Henry	Bedale
Watson, Thomas Edmundson ..	High Street, Gateshead
Weatherston, Francis Beattie ..	7 Winchester Terrace, Sunderland
Webster, John	Market Deeping, Lincolnshire
Welch, George Murray	1 Earl Grey Street, Edinburgh
West, Frederick	148 King Street, Hammersmith, London, W.
West, William Painter	373 Cold Harbour Lane, Brixton, London, S.W.
White, William Henry	71 Embden Street, Greenheys, Manchester
Wilkinson, Frank	17 Wellington Road, Newark, Notts
Wilkinson, Henry	76 Hendon Road, Sunderland
Wilkinson, Robert Consort	Monkwearmouth, Sunderland
Wilkinson, William	2 Gluman Gate, Chesterfield
Willet, Joseph.....	8 Church Street, Garboldisham
Williams, Benjamin	Clifton Street, Roath, Cardiff
Williams, Edmund	44 Durden Street, Liverpool
Williams, Joseph	326 Oxford Street, Manchester
Williams, Richard	Llanfachreth, Anglesea
Willmott, Edwin	Southwark, London, S.E.
Wills, Mungo	1 New Bridge Street, Ayr, N.B.
Wilson, Alexander Watson	60 Brunswick Street, Edinburgh
Wilson, John Hart	64 Percy Street, Newcastle-on-Tyne
Wilson, Richard Bowes	64 Percy Street, Newcastle-on-Tyne
Wilson, William	1 Orchard Street, Preston, Lancs
Witherington, Thomas James ..	8 Foregate Street, Worcester
Wood, Henry.....	Gateacre Brow, Gateacre, near Liverpool
Worfolk, Alfred Egbert.....	193 Brixton Road, London, S.W.
Worger, Thomas Clifford	29 Chiswell Street, London, E.C.
Wright, Edward Goddard.....	43 Cartwright Street, Doncaster
Wright, Mark	188A Cleethorpe Road, Grimsby
Young, James John	246 Commercial Road, Peckham, London, S.E.

GLASSWOOL sometimes contains lead, so that we must be careful in filtering acids, &c., to see that the wool used is free from the objection.

SEYCHELLES TURTLE OIL.—A gentleman has leased the Aldabra Islands, in the neighbourhood of the Seychelles, in the Indian Ocean, and proposes to promote a company for utilising the enormous supply of turtle which these islands provide. A large profit is, he thinks, to be made in preserving and canning the turtle oil for shipment to Europe, where its excellent medicinal properties, which are far in advance of cod-liver oil, would probably be much appreciated.

The Winter Session.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—NORTH BRITISH BRANCH.

THE first meeting of the session was held in Edinburgh on Thursday, November 10—Mr. J. Laidlaw Ewing in the chair. There was a crowded attendance, and amongst those present were Dr. Ralph Stockman, lecturer on materia medica, Minto House; Dr. Joseph Tillie, assistant to Professor Fraser; and the leading pharmacists of the district, together with a few country members.

The CHAIRMAN said that they had again reached the beginning of another session, and it was to be hoped that their meetings would be as successful and as well attended as they had been last winter. Since that time Edinburgh had been visited by the British Pharmaceutical Conference, and it was a matter for congratulation to all concerned that the meetings had been most successful in all respects, and that the fair fame of Edinburgh for hospitality had been so well sustained. For that success the credit was largely due to Mr. Boa. (Applause.) It was now his pleasing duty to introduce Professor Charteris who had in the kindest manner agreed to deliver the inaugural address. (Applause.) He need hardly remind them that Professor Charteris had long taken an active interest in pharmacy, and that from time to time he had prepared papers on pharmaceutical subjects. (Applause.)

Professor CHARTERIS, who was received with loud applause, said: Mr. Chairman and Gentlemen,—When the committee of this Society requested me to give the inaugural sessional address, I felt that a high honour had been conferred upon me, and I had some hesitation in accepting the position, for I knew I had been preceded by gentlemen of high scientific attainments. Yet I considered it incumbent upon me to come here to-night, although I could not give you a very learned or a very scientific address, for I was desirous of placing before practical men some considerations which might form the basis for a useful discussion. These considerations are connected with our present Pharmacopœia, and may be termed

SUGGESTIONS FOR A REVISED PHARMACOPOEIA.

In introducing these to you, I deem it advisable to bring before you a slight sketch of the history and objects of a Pharmacopœia. A Pharmacopœia literally means the art of the *φάρμακοποιός* or drug-compounder, but in its modern technical interpretation it denotes a book for the identification of simple and the preparation of compound medical agents which is published by the authority of a Government or of a medical or pharmaceutical society. The name has also been applied to similar compendiums issued by private individuals; the most conspicuous example of this in our country is Martindale's "Extra Pharmacopœia."

The term "Pharmacopœia" first appears as a distinct title in a work published at Basle in 1561, by Dr. A. Foes; but it does not appear to have come into general use till the beginning of the seventeenth century, for until 1617 such drugs and medicines as were in common use were sold in England by the apothecaries and grocers. In that year the apothecaries obtained a separate licence, and it was enacted that no grocer should keep an apothecary's shop. The preparation of physicians' prescriptions was thus confined to the apothecaries, upon whom pressure was brought to bear in order to make them dispense accurately by the issue of a Pharmacopœia in May, 1618, by the College of Physicians. Further, the wardens of the apothecaries received, in common with the censors of the College of Physicians, the power of examining the shops of apothecaries within seven miles of London, and destroying all compounds which they found unfaithfully prepared. This was the first authorised London Pharmacopœia, and the medicaments in it were selected chiefly from the works of Megne and Nicolaus de Salerno, with a few additions from those of other authors then in repute. This edition contained so many errors that the whole of it was cancelled, and a fresh one was published in the following December. Further editions of this Pharmacopœia were issued in 1632, 1639, and 1677, and these

editions contained some most heterogeneous compounds. The fourth edition of a book published in 1691, by

WILLIAM SALMON, PROFESSOR OF PHYSICK,

at the Blue Balcony, by the Ditchside, nigh Holborn Bridge, is a commentary upon the Pharmacopœia then existing, with remarks upon some preparations found useful by him, or, as he expresses it, "Some choice medicines added by the Author." It is divided into six parts:—

1. Natures and properties of all sorts of roots, barks, woods, herbs, flowers, fruits, seeds, gums, and juices.
2. The qualities and virtues of all sorts of living creatures, taken from man, beasts, fowls, fish, serpents, insects, and their several parts.
3. The preparations, powers, and operations of all sorts of minerals and metals, semi-metals, salts, sulphur, stones, earths, and waters.

In the fourth and fifth parts are contained the chief compound official medicaments both external and internal.

In the sixth and last part the author says:—"We have added the Praxis Chymica or Modus Medicamentorum Preparandi; wherein, in few words, we have delivered the sum and substance of great volumes, and, as in a glass, represented to your view the reduction of Hercules his labours."

It is sometimes useful to compare a modern with a past age, and I shall claim your indulgence for a few minutes in indicating very briefly what our forefathers trusted to in the treatment of disease. On looking over its pages one is struck with the paucity of diseases and the formidable array of remedies. Thus the diseases all told amount to fifty-five, and the remedies for these are not fewer than 4,362. The ingredients entering into some of the formulæ are disgusting, for they contain the excrements of human beings, dogs, mice, geese; also calculi, human skull and moss growing on it, earthworms. Now let me give you examples of some of these old official *drugs*.

Fæces—Stereus—Dung is an emollient anodyne and maturant. Being applied it opens plague-sores, and dried, powdered, and mixed with honey, it cures inflamed wounds and quinsies. The ashes take away the pain caused by witchcraft.

Spittle.—*Fasting spittle* rubbed on oftentimes cures pimples, also the stinging of serpents and biting of mad dogs.

Calculus.—Stone taken from the kidneys or bladder. When powdered it dissolves and dispels the stone and gravel from all parts and opens obstructions.

Cranium.—The skull. "It is a specific in the cure of most diseases of the head, but chiefly the falling sickness; you may give it either levigated on a marble or calcined, or some of the following preparations thereof; the triangular bone on the temples is the most specific against the epilepsy." The preparations are a magisterium, an extract from Paracelsus, a tincture, a water, and a salt.

Lumbricus.—The earthworm. From earthworms were prepared an aqua, powder, liquor, and oil. "The aqua distilled is excellent against the dropsie; the powder glues together broken bones and draws things out of the flesh; the oil helps pains of the nerves and joints; and the oil, mixt with raddish water, when given, invariably provokes urine and sweat."

Almost every known insect was supposed to have special properties, the only exception being *Pulex*—the flea. "They have no physical virtues known, but they are certainly troublesome guests; they are generated by dust, as also by putrified sweat. The only remedy to destroy them is the pulp or decoction of *coloquintida*."

THE THREE PHARMACOPŒIAS.

For fifty years the Pharmacopœia containing these and similar astounding formulæ was the official standard of English practice—a fact we can hardly now realise—and it was not until 1721 that an edition published under the auspices of Sir Hans Sloane showed marked alterations. Then many ridiculous remedies previously in use were omitted, although a good number were still retained, such as earthworms and the human skull.

A great improvement was effected in the edition published in 1788. Greater deletions were made, the extremely compound medicines which had formed the principal remedies of physicians for two thousand years were discarded, while a few powerful drugs which had been considered to be too

dangerous to be included in the Pharmacopœia of 1765 were restored to their former position.

The last edition of the London Pharmacopœia was published in 1851. But it was not the only Pharmacopœia in Great Britain, for the first Edinburgh Pharmacopœia was published in 1699, and the last in 1841; while the first Dublin one was published in 1807, and the last in 1850.

The preparations contained in these three Pharmacopœias were not uniform in strength—a source of much inconvenience and danger to the public when powerful preparations were ordered in one country and dispensed according to the national Pharmacopœia in another. Hence a provision was inserted into the Medical Act of 1858 by which it was ordained that a General Medical Council should cause to be published under their direction a list of medicines and compounds and such other matters and things relating thereto as the General Council should think fit, and the list was to be called

THE BRITISH PHARMACOPŒIA.

The last edition of this Pharmacopœia appeared in 1885, and its Supplement in 1890. It is now an open secret that another edition will be issued within the next two years. With reference to the suggestions, a list of which is in your hands, I may say that three years ago a pharmacopœial committee was appointed by the Therapeutic Committee of the British Medical Association. This committee consisted of Professor Leech, Manchester; Professor Whitla, Belfast; and myself. We have never met to discuss our views, but Professor Leech submitted to me two years ago a list of deletions which I endorsed and supplemented, and it is with reference to these and other suggestions of my own that your opinion is asked.

DELETIONS SUGGESTED FOR NEW BRITISH PHARMACOPŒIA.

F.P. signifies French Pharmacopœia; G.P., German Pharmacopœia; U.S.P., United States Pharmacopœia.

Ammonii nitras, ammonii phosphas.—In U.S.P. Never prescribed.

Anisi stellati fructus.—In F.P. *Oi. anisi* might be described like *el. cajuputi*.

Antimonii oxidum, antimoni nigrum purificatum.—Little used.

Argenti oxidum.—Appears in the U.S.P., but it is now much out of repute.

It was got in in order to obviate the disadvantage of discoloration to the skin caused by nitrate of silver.

Bismuthi citras, bismuthi et ammonii cit.—In U.S.P. Unnecessary, as the liquor is sufficient.

Beberinæ sulphas.—Rarely used. Its physiological properties doubtful.

Calcii carbonas præcipitata.—Rarely used. A substitute might be found for troch. bismuthi.

Canellæ cortex.—Only used to make vin rhei.

Cassæ pulpa.—Rarely used. Not essential for confect. sennæ.

Cataplasma carbonis.—Out of use.

Cataplasma conii.—Not necessary since unguentum introduced.

Cataplasma fermenti.—A relic of old times, and might be dispensed with.

All cataplasms might be deleted.

Charta sinapis.—In G.P. I speak under correction, but I believe it is rarely ordered.

Confectio opii, confectio scammonii, confectio terebinthinæ.—Relics of old times.

Conii fructus.—In F. and U.S.P. Of doubtful utility. Certainly not so valuable as the fresh leaves.

Crocus tinctura.—In all Ps. Only a colouring-agent.

Cupri nitras.—Not necessary.

Decoctum hordei, decoctum papaveris.—F.P. Household remedies.

Elemi, elemi unguentum.—F.P.

Emplastrum calefaciens, U.S.P.; emplastrum ferri, U.S. and F.P.; emplastrum galbani, G.; emplastrum plumbi iodidi.—Not desirable to have these in the Pharmacopœia.

Enema aloes, enema asafœtidæ, enema magnesiæ sulphatis, enema terebinthinæ.—In no other Pharmacopœia.

Enema opii.—The exact amount of opium should be determined in each case by the prescriber.

Extractum lactucæ, extractum lupuli, extractum papaveris, F.P.—extractum pareiræ, U.S.P.—Liquid extract suffices.

Extractum quassia.—Made differently sometimes with hot and sometimes with cold water.

Extractum mezerei æthereum.—In most Ps. Only used for *lin. sinapis co.*

Ferri arsenias?—F.P. There is a difference of opinion regarding this. I do not think it of much value, but some think otherwise. I think if you want to give arsenic it could be given in a better form.

Ferri sulphas granulata, ferri peroxidum hydratum.—F.P.

Fœniculi fructus.—Not used here. It goes into the compound liquorice powder, and I am not sure that it might not be retained though mentioned in this list.

Hemidesmi radix, hemidesmi syrupus.—Not used.

Hordeum decortatum, hordeum decoctum.—Household remedies.

Infusum matricæ, infusum lini, infusum valerianæ, F.P.—Hardly ever used in this form. The last is unnecessary when there are two tinctures.

Lactuca.

Laricis cortex, laricis tinctura.—I am informed that this was got into the Pharmacopœia through the late Dr. Matthews Duncan, and that he largely prescribed it. I do not think it is much in use now.

Laurocerasi folia, F.P.; laurocerasi aqua.—A bad form for administering a powerful remedy, but considered elegant and a good deal used. There may be some difference of opinion as to whether it should be deleted or remain. I do not think it should remain.

Linimentum hydrargyri.

Liquor ammonii citratis fortior.

Liquor antimoni chloridum.—Only used for making the oxide.

Liquor chlori.—Rarely used, since it will not keep. Extemporaneous formulae desirable by adding acid. hydroch. to potass. chlor. in a bottle. Add water to dissolve chlorine formed. Not pure, but answers the purpose.

Liquor ferri acetatis.—Not required.

Liquor lithiæ effervescens, liquor potassæ effervescens, liquor sodæ effervescens.—Trade articles of varying strength.

Liquor magnesi carb.—This is too strong. Very apt to deposit.

Lupulnum.—In most Ps.

Mastiche, marmor album, mezerei cortex, mezerei ext. æther.—Not used, though in most Ps.

Mica panis.—Not necessary.

Moechus.—I do not think it is much prescribed now, though it is a valuable stimulant, and I have seen advantage from its use. I am not sure if it should not be retained.

Mori succus.—Not used.

Mistura ferri aromatica.—Not used. No credit to any P.

Nectandæ cortex. Oleum anethi, oleum coriandri.—U.S.

Oleum myristicæ.—Exp. and spiritus, U.S.

Os. ustum.—Phosphates of lime and sodium are commercial salts.

Oleo-resina cubebæ.—U.S., F. and G.P. Not used.

Pilula gambogiæ co.—Not used.

Pilula conii co.—Not much used.

Pilula ferri carb.—Superseded by pil. ferri.

Pilula ferri iodidi.—Not a good method of ordering iodide of iron.

Pimenta, oil of, aqua of.—U.S.P.

Pulv. opii co.

Pulv. antimonialis.—U.S.P. Hardly ever used, though pulv. Jacobi is still used.

Prunum. Pyrethri radix, pyrethri tinctura.—F.P. Quercus cortex, decoctum. Rosæ caninæ fructus, rosæ caninæ confectio.—F.P.

Sassafras radix.—In most Ps.

Scammonium.—F. and G.P. An expensive and unreliable substance; the resin is alone required.

Sodii hypophosphis.—F. and U.S.P. Lime salts alone desirable in B.P.

Spiritus armoraciæ co.—Not in other Ps.

Spiritus cajuputi.—Not in other Ps.

Spiritus cinnamomi.—U.S.P.

Staphisagrie semina, staphisagrie unguentum.—An ointment made with the oil might be recommended.

Suppositoria morphinæ, suppositoria acid. tan. c. sap., suppositoria plumbi co.—Ol. theobrom. without soap is quite satisfactory for all suppository-bases provided it is carefully watched when melting.

Syrupus mori. Thus americanum. Tinctura coccii. Tinctura sabinae.—U.S.P. Tinctura serpentariæ. Trochisci ferri redacti. Uvæ.—F.P.

Vapor acidii hydrocyanici. Vinum ferri citratis.—F.P.

Vinum opii.—In vin. opii the aromatics should be deleted. It is almost entirely used for eye-lotions, and these are objectionable.

Vinum rhei.—U.S. and G.P.

A COMPARISON.

Before proceeding to make any remarks upon these suggestions for the new British Pharmacopœia I desire to give a comparison between our Pharmacopœia and the German Pharmacopœia published last year :—

	German Pharmacopœia	British Pharmacopœia
Decoctions	1	13
Infusions	1	28
Extracts	25	46
Liquors	16	48
Ointments	20	43
Pills	3	21
Powders	8	15
Spirits	13	18
Tinctures	41	73
Trochisci	1	12
Vapours	none	6
Wines	6	11

So far my remarks have been destructive, but I shall now make a few observations upon medicinal agents which should be added to the British Pharmacopœia, and also point out some inaccuracies in regard to melting-points and dosage which appear in the present edition.

ADDITIONS TO THE BRITISH PHARMACOPŒIA.

Chloralamide.—Synonym, chloral formamide. My own opinion upon this preparation was expressed in the *Lancet* of March 5 last, and need not now be referred to. The Croonian lectures of Dr. T. Lauder Brunton have now been published, and he says:—"In chloralamide the amidogen group (NH) is combined with chloral instead of with an alkyl, and it is calculated to combine the stimulating action of ammonia with the soporific action of chloral, and thus prevent any danger arising from the depressing effect of chloral upon the heart. It consists of a combination of chloral with formamide, and appears to possess practically to a great extent the advantages which one would theoretically expect from it. Chloral, CCl₃.COH. Formamide, COH.NH. Chloralamide, CCl₃.COH.CO.NH₂.—Dose, 20-30 grs.

Convallariæ majalis tinctura.—Dose, 6-20 minims.

Easton's syrup (syrupus ferri quinicæ et strychninæ phosphatum).—Dose, 30 minims.

Grindelia: Extractum grindeliæ liquidum.—Dose, 10-30 minims.

Hydrargyri iodidum viride.—Dose, $\frac{1}{2}$ gr. in a pill.

Ichthyol.—Dose, 10-30 grs.

Malt: Extractum malti.—Dose, 1-4 drachms.

Papain.—Dose, 2-10 grs.

Pepsin: Glycerinum pepsin acidum.—Dose, 3j-3ij.

Pelletierinæ sulphas.—Dose, 5-8 grs.

Salol.—Dose, 4-30 grs.

Terebinum purum.—Dose, 5-30 minims.

Before an audience composed of such well-known pharmacists I hesitate to express an opinion upon a pharmaceutical subject, yet I think I should point out where the Pharmacopœia might be amended.

AMENDMENTS SUGGESTED.

Unguenta.—The combination of hard and soft paraffin recommended appears to be a mistake. The ointments in which they are to be used cannot be made quickly, for when hurried they are apt to be "lumpy." It would be advisable to have an official preparation of hard and soft paraffin which might be termed paraffinum medium. I show you a sample prepared of 1 of hard and 2 of soft paraffin. This could be made the basis for ung. acid. salicyl, ung. eucalypti, and ung. veratrinae.

In the June number of Helbing's *Pharmacological Record* attention is drawn to the desirability of having a standard oleum eucalypti based "upon the percentage of crystallisable eucalyptol, which is undoubtedly the medicinally active constituent and, further, on the absence of volatile aldehydic compounds which we believe give rise to irritation of the mucous membranes." His suggestions as to the characters and tests of oleum eucalypti should, I consider, be incorporated in the British Pharmacopœia, for there are for sale in retail stores eucalyptus oils of no medicinal value or possessing very irritating properties in flavour and odour.

Injectio Morphinæ Hypodermica.—A more soluble salt might be recommended—say, the tartrate, which is soluble at once in cold water. The British Pharmacopœia solution gets dark by standing, and one does not very accurately know what it then contains. I show specimens of the two injections.

MELTING-POINTS OF BRITISH PHARMACOPŒIA PREPARATIONS.

Salicylic Acid.—The melting-point of this acid in the British Pharmacopœia is about 155° C., but I understand that the reporter of the Pharmacopœia has notified his approval of raising the melting-point to 156.5° C. Carbolic Acid.—The melting-point of this acid in the British Pharmacopœia is 33° C. This is below the standard of any other Pharmacopœia, and should be raised to 40° C. Carbolic acid with this melting-point has distinct rhomboidal crystals, and from an experimental research I have made, which is shortly to be published in the *British Medical Journal*, it will be seen that the higher melting-point frees the acid from poisonous impurities while in no way impairing its antiseptic

properties. Based upon these experiments, Mr. McMillan, of Glasgow, has prepared a pill of pure carbolic acid and coated it with keratin. So made it is not soluble in an acid but in an alkaline solution, and thus passes undissolved from the stomach into the intestinal canal, where solution readily takes place. This pill has been tried at Belvidere Hospital in the treatment of typhoid fever, and has been favourably reported upon. I show you a sample of these pills.

DOSAGE.

Lastly, the dosage of the British Pharmacopœia might be improved. I forbear entering into details as to this, for I am afraid I have tried your patience too long already. But I would instance one flagrant error in a well-known preparation—namely, *extractum filicis liquidum*. The official dose for this is given as 15 to 30 minims, whereas it ought to be 90 to 180 minims if any therapeutic benefit is to be expected from its administration.

I cannot conclude without saying that these suggestions are made in no carping spirit. The work of the Pharmacopœial Committee of the General Medical Council is very onerous, and its responsibility is great. The members should, however, be wedded to no traditions, for the science of medicine is progressive: they should welcome from every source hints given in good faith. The work of the physician and the pharmacist should go hand in hand, and there should be no jealousy between us, for our mission is the same—to minister to the public weal and to make war against disease. Further, I think that we should aim at having

AN INTERNATIONAL PHARMACOPŒIA,

and this can only be based upon the metric or decimal mode of calculations and the Centigrade scale of temperatures. By adopting these principles we should bring ourselves into touch with earnest workers in every land. We should cease to be insular—we should be able to winnow the chaff from the wheat—and there might come in time a uniformity of extracts and tinctures; for, as you are aware, while these preparations embrace many powerful drugs, yet the same name does not always indicate the same thing. Doubtless in course of time, with the growth of pharmaceutical chemistry, experiments will indicate which of these in use in different countries form the most active and valuable preparations, and the general adoption of the metric system will lead to a clearer understanding of their relative potency. We should thus make our Pharmacopœia certainly less bulky but far more valuable, and it would become, as in former years, the standard authority of scientific accuracy and the pioneer of progress. (Loud applause.)

DISCUSSION.

The CHAIRMAN said that it was not customary to have any discussion following the inaugural address, but Professor Charteris had been kind enough to invite an expression of opinion. (Applause.) With regard to the deletions proposed it was a difficult matter to say certain articles should be removed from the Pharmacopœia, because while they might not be required in Edinburgh, they might be in great demand in other parts of the country. He thought that pharmacists and the members of the medical profession were sinners jointly in neglecting the Pharmacopœia. At present medical men were very anxious to get medicine ready made, and the chemists were quite as anxious to supply it. (Hear, hear.) He thought that all this proved the necessity that in the next Pharmacopœia one or two practical pharmacists should be upon the committee. (Applause.)

Mr. J. B. STEPHENSON said that for many years past they had been trying to assert their position as having a right to take part in the compilation of the Pharmacopœia, and they were gradually making good that position. With regard to the deletions proposed by Professor Charteris, the way that the proposal struck him was that it was a large order—(laughter)—because deletions required to be carefully considered. He was old enough to remember having heard Sir Robert Christison state that a committee of the College of Physicians met for the revival of the Pharmacopœia all of them determined to have one more compact than that existing at the time. When they came together, however, it was found difficult to carry out their determination, because all the different members had different ideas as to what should be given in that Pharma-

copœia, and the result was that the new one was larger than its predecessor. (Laughter.) While he did not think that all the deletions suggested by the lecturer should be made, he agreed with him to a large extent, because he did not think that the Pharmacopœia should be a bunker in which a remedy for everything was to be included. (Laughter.) It would be a good thing if they could get a consensus of authoritative opinion as to therapeutic remedies, and have only them in the Pharmacopœia. For instance, *mistura ferri aromatica*, which had not been in the previous Pharmacopœia, was introduced into that of 1867. Doubtless some influential member of the Medical Council had found benefit from the use of this article, and had got it included. Some medical men in Edinburgh had prescribed it largely, and he himself had prepared a quantity of it, the bulk of which was still in his shop. (Laughter.) That was an instance of how a high authority might be got for almost anything. He would mention a few of the articles which Professor Charteris suggested should be deleted but which he thought should be retained. Oxide of silver was one which he did not think should be deleted. He had known it to be prescribed—though not lately—by many leading doctors. Citrate of bismuth must be retained unless another formula was put in for making the liquor. Precipitated carbonate of lime should remain; so also should paper of mustard which was a very elegant form of applying a mustard plaster. *Conii fructus* could not be dispensed with unless there was put in its place some other part of the same plant. It was advisable to have a colouring-agent, and tincture of crocus was useful for that purpose. He did not see how the plasters could very well be struck out; galbanum, at all events, was a very useful agent, and could be applied for boils in all stages. As to the extracts he had no objection to marking some of them off, but he did not think granulated sulphate of iron could be put out, as it was sometimes convenient for dispensing. Fennel fruit was necessary for compound liquorice-powder, while as for citrate of ammonia it should be retained because it was frequently ordered. Oil of coriander was used for the syrup of senna, and could not therefore be deleted; and he should very decidedly object to the removal of stavesacre because of its value as an insecticide. (Applause.)

Dr. STOCKMAN said that he had been much interested in Professor Charteris's lecture, and, on the whole, he agreed with his proposed deletions. The matter was one which very much centred on the question, "What sort of Pharmacopœia is wanted?" About that there was a considerable difference of opinion, and rightly so. Many who were authorities thought that the Pharmacopœia should contain express directions as to how everything that was wanted should be made. On the other hand, there was an idea that the Pharmacopœia should be reduced to a reasonable bulk, and only things that were frequently used put into it. As a teacher, he considered it very hard that students should have to get up such an enormous mass of unnecessary detail. —(applause)—and he was convinced that they were quite overborne with the highly complex and useless things in the Pharmacopœia. (Applause.) On the whole, he was astonished that Professor Charteris had been so sparing. *Spiritus vini gallici* and *mistura spiritus vini gallici* certainly ought to be deleted, as they were never used, and they might as well have whisky as these in the Pharmacopœia. Orange wine also was a very unsuitable thing to use, and disagreed with most people. If they wanted an orange flavour, it could be got by using the tincture of orange. Green extracts ought also to be deleted. They had been introduced on an entirely mistaken assumption. The process for preparing them was extremely troublesome, and the separation of chlorophyll and its subsequent addition was also troublesome, and the chlorophyll had no medicinal value. He had never prescribed infusions since he had discovered that they were not prepared in accordance with the Pharmacopœia, and were kept by the chemists ready made in a concentrated condition. When he did prescribe a drug of which there was an infusion he ordered the tincture and directed that the mixture should be made up to the necessary measure with water.

Dr. TILLIE corroborated what Professor Charteris had said in regard to the dose of oil of male fern. He had recently given a dose of $1\frac{1}{2}$ drachm without result, and he intended now to give a dose of 2 or 3 drachms to the same

patient. He had no objections to take part in the revision of the Pharmacopœia if the meetings were to be preceded, as on that occasion, with an invitation to dinner. He objected to the expunging of the potash and soda waters, and said he had heard a scientific authority aver that the only difference between them as articles of trade was the label, and for that reason he would advocate the retention of the B.P. formulæ, so that physicians might be able to tell their patients to get these goods from the chemist, and not from the grocer, as they would then get the proper article.

Mr. DOTY agreed in the main with Professor Charteris's conclusions. The view taken of the proposed deletions would depend very much, however, on how the Pharmacopœia was regarded. There might be articles that some medical men would exclude; but if they were used for popular remedies it might be advisable to have preparations of them, although scientifically they might not be considered good things. He agreed with Professor Charteris that tartrate of morphine was preferable to the acetate for preparing the hypodermic injection.

Mr. NESBIT said that while there were many articles in Professor Charteris's list which might be deleted, there were others in it which he used very frequently—ammonium phosphate, for instance, was one of them. As regarded antimony oxide, that was used for a fever-powder instead of James's powder, and he thought he should not be under the necessity of paying 10s. for the latter, which he believed was no better than the other. Hemlock-seed, when used in the green state, made a very efficient tincture; but if allowed to ripen it was almost useless. It was very necessary to have a colouring-agent, and on that account they could not be without saffron. He very often used all the plasters, and he did not think they should be taken out. He did not think the liquor lithiæ effervescens should be deleted, as, unlike potash and soda, it was not used as an ordinary beverage, but only as a medicinal agent, and they should have a standard for preparing it.

Mr. JAMES MACKENZIE said he would agree to all the deletions except five—namely, lactuca, lin. hydrarg., pulv. antimonialis, scammonium, and sodii hypophosphis. There ought to be some instructions given in the Pharmacopœia as to how certain tinctures were made, or certain properties retained. Those made from digitalis and hyoscyamus would be very different, where the drug which had been kept in a paper parcel or drawer, than if made from a drug properly preserved. In the case of henbane, for instance, it ought to be sun-dried and kept in a stoppered bottle. Paraffin ought to be expunged from the Pharmacopœia as an ointment-basis, because of its non-absorption by the skin, and lanoline or lard was greatly to be preferred. He disagreed with the proposal to delete scammony. The resin of scammony was of very little use; it certainly had not the same action as scammony, and if they put it in pills the difference would very soon be detected by the patient. He was of opinion that nothing but the best scammony should ever be used in dispensing.

Mr. ADAM GIBSON agreed in the main with the deletions proposed. He said that infusions were made on a large scale and in a concentrated form by cold repercolation, and it was a mistake to say that they did not represent the active properties of the drug. With respect to the green extracts the chlorophyll was, of course, useless, and might very well be left out.

Mr. BOA said that he agreed with what Mr. Stephenson had said about galbanum plasters; he had spread a good many of them, and he believed they were used with good results. As to enemata it occurred to him to suggest that a typical formula might be retained so as to indicate the way the enema could best be prepared when the prescriber wanted to order it. In his experience larch-bark had been used pretty frequently within the last two years in the form of an infusion made in the usual way of dispensing, or by sending out the bark to be used in small portions by the patients themselves. He might say, however, that those preparations of bark were all ordered by one practitioner—a very eminent one, however. As to *mistura ferri aromatica* he understood that had been reintroduced at the instance of a representative on the Pharmacopœial Committee who came from Ireland. One other notorious preparation, due to the same gentleman, had created a considerable disturbance. At one time he (Mr. BOA) had dispensed iodide of iron pills, but he

did not find them much in demand now, although, so far as he could learn, several practitioners in Belfast continued to order them. Tincture of pellitory was extremely useful in some cases of toothache. Tincture of serpentary was used in Edinburgh, while citrate-of-iron wine was, he believed, a useful preparation for children.

At the close of Mr. BOA's remarks, the CHAIRMAN suggested that the discussion might be adjourned, and said that the further discussion of the subject in the journals might lead to some practical results.

The CHAIRMAN then moved a vote of thanks to Professor Charteris for his address, and the motion was seconded by Mr. STEPHENSON, and carried with acclamation.

Professor CHARTERIS, in reply, said that he had been informed by their esteemed Assistant Secretary that the subject of his address was one that called for discussion. He thought that the discussion which had taken place would do good, when carried far and wide by means of their journals. (Applause.) He only wished to add that, in his opinion, pharmacists should be placed upon the Pharmacopœial Committee and the Medical Council, and he believed that that would lead to a satisfactory Pharmacopœia being prepared. (Applause.)

Mr. J. R. HILL (Assistant Secretary) then called attention to some recent donations to the museum, and intimated that the next meeting would be on December 14, when papers would be read by Drs. Stockman and Sharp and Mr. Carswell.

CHEMISTS' ASSISTANTS' ASSOCIATION.

SEVERAL short papers were on the programme on Thursday, November 10. The first was a note, by Mr. G. ROE, on

QUININE AND MAGNESIUM SULPHATE.

Having a large demand for the above salts in dispensing, stock-solutions of the following strengths were made:—

Quin. sulph.	..	..	..	..	gr. ij.
Acid. sulph. dil.	..	..	..	..	q.s.
Aquam ad	..	..	..	..	℥j.

Mag. sulph.	..	..	..	..	℥j.
Aquam ad	..	..	..	..	℥j.

These two solutions have been found very convenient, and gave no trouble until the following prescription was presented:—

Quin. sulph.	..	..	..	..	gr. j.
Acid. sulph. dil.	..	..	..	..	q.s.
Mag. sulph.	..	..	..	..	gr. xx.
Aq. commun. ad	..	..	..	..	℥j.

This was dispensed with the above solutions, made a few days before, and after a few hours stellate crystals were deposited on the sides of the bottle, and since no reason could be assigned for this, a few simple experiments were made to attempt to determine the cause. When the mag. sulph. and quinine sulph. were much increased in quantity, no change took place, the mixture remaining clear. Fresh solutions of mag. sulph. in common water were added to the stock-solution of quinine, when crystals were deposited. If dispensed entirely with distilled water, the solution remained unchanged. The crystals were separated, pressed between filter-paper, and placed in a little cold water, in which about half dissolved. After filtering the liquid, the filtrate gave the reactions of magnesium sulphate, whilst the insoluble portion was found to be sulphate of quinine. The question then arises, Why does common water cause this peculiar crystallisation of the salts?

Mr. ROGERS said that this note showed the necessity of using distilled water under all circumstances.

Mr. SAGE said that London water contained a certain amount of alkaline carbonates, which might neutralise the acid, and so cause precipitation of the quinine.

Mr. GARNETT said he had found ammonium bromide and quinine sulphate behave in much the same way, and suggested the formation of a double salt of magnesium and quinine. Had Mr. Roe analysed the crystals?

Mr. ROE, in reply, said he had not yet completely analysed the crystals. He found that all the stock-solutions prepared with common water precipitated these crystals, which much

resembled those deposited by a strong solution of magnesium sulphate on evaporating.

The next paper was by Mr. S. A. WALTON, entitled—

"DISPENSING NOTES."

In this paper the author directed the attention of dispensers to some principles of dispensing. He pointed out that the duty of a dispenser did not terminate when he has prepared the prescription he has in hand. He should notice the appearance and even taste of the mixture, and cast over in his mind whether any other method of manipulation could have given a better appearance or greater activity. Such methods of observation have always been successful, and it is the dispenser who has thus the opportunity of introducing new remedies. He highly commended to members of the Association a little book published by Mr. Charles Arthur, dispenser to the Edinburgh Infirmary—viz., the Pharmacopœia of that institution, to which reference was recently made in this journal. A great deal of careful observation was evident, he said, in Mr. Arthur's work, and by such observation it was possible for all to profit.

The PRESIDENT said it was not advisable for the young dispenser to wait till his day's work was over, and then to think over all the mixtures he had dispensed; every case should be examined as it occurred. The same prescription often yields very different results in the hands of different dispensers, and this difference is due in most cases to difference of manipulation.

Mr. JONETT urged that the success of a dispenser depended on the application of the knowledge he had obtained in theory to every case in practice. So long as men studied chemistry or botany merely to pass examinations they would never succeed. They must study in order to apply this knowledge to their everyday work.

Mr. WALTON having replied, Mr. E. GANE read a paper on

CONCENTRATED TINCTURES AND INFUSIONS.

The author strongly condemned the use of these preparations, and as to the infusions, questioned the correctness of their strength. The methods of manufacturing them are:—(1) By cold maceration and evaporation of the resulting liquor; (2) infusion in hot water, and pressure; (3) by percolation with cold water or dilute spirit. In the first process there are two drawbacks—viz., loss of aroma and decomposition of the active principles by the long evaporation. In the second process the product is always far stronger, when diluted as directed, than the B.P. preparation. The third process yields a better article, but still not a B.P. one; for very little of the mucilaginous matter is extracted by cold percolation, and when weak spirit is used we get, not an infusion, but a kind of tincture. The author also referred to Mr. R. A. Cripps's experience of inf. cinch. conc., which, when made by the prolonged evaporation method, always contains an excess of extractive matter and no quinine (on account of hydrolysis). Concentrated tinctures he placed on the same level with concentrated infusions, and considered that in some cases it is impossible to make such preparations.

The PRESIDENT considered that concentrated infusions should never be used except when a customer could not wait for fresh ones to be prepared, in which case it should be distinctly stated that a concentrated preparation was used.

Mr. ROE said that fresh infusions certainly ought to be used; but in hospitals, when large quantities were wanted and the time of the dispensers limited, this was often impracticable. He saw no objection to a concentrated infusion of quassia.

Mr. HARRISON said in his experience fresh infusions were generally used in hospitals. He doubted if there was much economy in using the concentrated forms.

Mr. SAGE said it was impossible to concentrate infusion of buchu to one-eighth strength without losing much of its strength.

Mr. GANE, in reply, said he hoped that official standardisation of tinctures would soon come in force. Infusion of digitalis should not be concentrated under any circumstances, and preservatives ought not to be added to infusions.

The last paper was by Mr. H. A. JOWETT, on "Evolution in Chemistry."

DUNDEE CHEMISTS' ASSISTANTS' ASSOCIATION.

"BOTANY in relation to Pharmacy—an Evolution" was the subject of a lecture by Mr. WILLIAM G. SMITH, B.Sc., lecturer in Agriculture to the Forfarshire County Council, at last week's meeting of this Association. The attendance was not encouraging. Mr. Smith traced, in the course of a very interesting paper, the close relations of botany to pharmacy and medicine, from the latter of which both originated. Pharmacy, he said, owed much of the splendid advance of the last two centuries to the influence of botany and the microscope, and there were signs that the advances of the future were to be made through the assistance of the botanist. Botany he considered to be absolutely necessary to complete the training of the pharmacist, and if pharmacy was to be a profession they ought to set themselves to acquire the knowledge and to satisfy their examiners. He was confident that the examiners would not ask them to do impossibilities and the harder the striving to get through, the more enjoyable the reward of getting through: if they could not take their botany as a pleasure they must take it as a duty.

GLASGOW PHARMACEUTICAL ASSOCIATION.

The first social meeting of this Association was held in the Alexandra Hotel, Bath Street, Glasgow, on November 10. Mr. W. L. Currie presided. The meeting is regarded as the most successful of the kind that has ever taken place in Glasgow in connection with the drug-trade, fully 150 gentlemen being present. Songs and recitations and selections of instrumental music were the features.

LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

The usual fortnightly meeting was held at the University College on November 10. There was a large attendance of members.

Mr. R. H. MITCHELL called attention to a prescription for a liniment containing an unusual combination—viz, salicylate of soda along with opium liniment. Thereafter Mr. EDWARD DAVIES read a paper on "The Aromatic Compounds and Ring Formulae," for which he received the warm thanks of the meeting.

BRIGHTON JUNIOR ASSOCIATION OF PHARMACY.

At the last meeting of this Association, Mr. LOMAX, Curator of the Brighton Museum, delivered a lecture on "The Colours of Flowers." As is usual on these occasions, the attendance of members was most meagre. Those present, however, had an intellectual treat, the lecture throughout being highly entertaining and instructive. In the course of his remarks, Mr. Lomax said that some twenty years ago, when he returned to the town from the uttermost parts of the earth, he joined the local Natural History Society. Shortly afterwards he delivered a lecture to them on the colours of flowers, and a lengthy discussion followed. They talked about every subject under the sun except the one he introduced; but still he held the same views he advanced, and even at that lapse of time he had had no reason to alter them. These are, that the prevailing colour in England is yellow, in Norway blue, and in the central parts of South America and Palestine, scarlet. He also touched upon the use of colour in flowers. At the conclusion of the lecture Mr. Lomax was thanked.

U.S.A. TRADE-MARKS.—The following trade-marks were registered at Washington on November 1:—Design of two female figures holding a bottle, and signature, for mint alcohol, by E. de Kieques et Cie, Lyons and Paris; "Vapo-flater," for boxes, bottles, atomisers, tubes, and distributors for dispensing powders, liquids and semi-liquids, by McKesson & Robbins, New York; "Gossage's," "The Right Sort" and several other marks, for soaps, by Wm. Gossage & Sons, Widnes and Liverpool; "Moki" for medicinal herb teas, by the Moki Herb Remedy Co., Tempe, Ariz.; Signature of the applicant, for pills, by Maurice Leprince, Bourges; "Boomerang" for medicated snuff, by A. M. Fisher, Chillicothe, Mo.

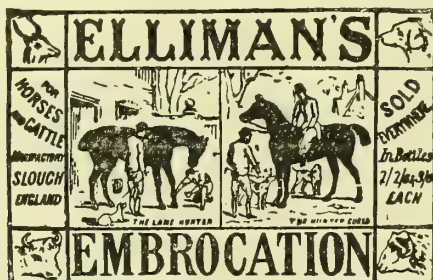
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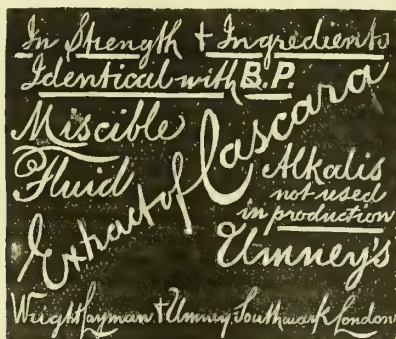
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Editorial Comments.

PHARMACOPŒIA REVISION.

CLEARLY, there are two opinions in regard to the revision of our national Pharmacopœia. There is the medical opinion, and the pharmaceutical. Our own sympathies naturally are towards the latter, but we cannot help admiring the definite

and temperate fashion in which Professor Charteris expressed the medical opinion at the opening of the North British Branch session. He is all for a small Pharmacopœia. There was a countryman of his who carried his *materia medica* in his waistcoat pockets—"calomey" in the one and "morphy" in the other; and a big reputation was built thereon, sullied though it was now and then by pinches out of the wrong pockets. This old medico would have materially lengthened Professor Charteris's list of deletions; for him a Pharmacopœia containing calomel and morphia sufficed. Obviously Professor Charteris began at the wrong end. If we are to revise the Pharmacopœia by taking each medical practitioner's opinion of what should be omitted from it nothing would be left. That was very well shown in the remarks which followed the address, and we could tick many more articles in the list than those named which are used, and used extensively, this side of the Border, while there are more which are used largely in Ireland, though very slightly in Great Britain. Appreciation of such facts is one of the first principles to be recognised in revising our Pharmacopœia; it is the standard for the three kingdoms; an embodiment of all that is best in the prescriptions of the thousands of practitioners who are on the medical register.

There is much, however, in Professor Charteris's suggestions which deserves the earnest consideration of prescribers and pharmacists. It seems a fitting time now to consider whether some of the relics of mediæval medical practice should not be relegated to the limbo of forgetfulness. There are not many in the list; but the class which Professor Charteris has labelled "household remedies" at least deserve serious thought, for the suggestion to omit them challenges at once the endeavour, which since 1885 has been growing in strength, to make the British Pharmacopœia the standard for popular medicines. The principle behind the omission of such articles, and others which Professor Charteris describes as "not used," "unnecessary," &c., is that the Pharmacopœia will become a compendium of medicines in common use by medical men. That is the old idea; but with the growth of popular knowledge of medicines pharmacists have found that it is also a compendium of those in popular demand, and in the drug-trade the necessity is recognised of continuing the existence of formulæ and standards of quality for such articles as have ceased to be generally prescribed by medical men but are still commonly retailed. Indeed, there are some in the trade (those who look forward to the time when pharmacopœial articles will only be relied by chemists) who would have a much more extensive list of household remedies in the Pharmacopœia. But that is beside the present question; what is much more important is the necessity for having a standard for the more popular household remedies, and it is fairly agreed that the British Pharmacopœia should fulfil that object. The General Medical Council have accepted that view in a tentative fashion, and have to a limited extent recognised the claim of pharmacists to a voice in pharmacopœial revision by seeking their counsel from time to time. This is as far as the Medical Council under its statutory powers can go; but it is not far enough for pharmacists, and fresh power must be sought to give retailers of medicines a fair share in the determination of the standards according to which these medicines are compounded.

There is little to be gained by a small Pharmacopœia. At present the British Pharmacopœia represents only a fraction of the *materia medica* daily prescribed. Hospital and extra pharmacopœias sufficiently indicate the ground which the national Pharmacopœia does not cover, and outside these and other partially-recognised compendia there is a proprietary *materia medica* which pharmacists have to reckon

with. Nor is it altogether desirable to bring our Pharmacopœia in line with those of other nations. The different methods of treatment prevailing in the different countries are a substantial obstacle to that. For example, the non-recognition of vapours in the German Pharmacopœia does not alter the fact that they are very extensively used in this country, and that the formulæ in daily request are far more numerous than those of the British Pharmacopœia. We may also point out that the German Pharmacopœia gives a general standard for infusions and for decoctions, and that these preparations are more used there than in this country. It is only in regard to potent preparations in universal use that there is necessity for uniformity, and that, experience has amply proved, is less likely to be obtained by an International Pharmacopœia than by international agreement to make the necessary emendations slowly, as has been done in the case of the B.P. liquors.

If, as Professor Charteris has stated (we trust incorrectly), we are to get a new Pharmacopœia in two years, it is quite time that pharmacists should do something more business-like than talk about the share they ought to have in its revision.

ABOUT MENTHOL.

THE medicinal use of menthol in China and Japan goes back into the dateless ages. Isolated references to its application in the East are met with here and there in the records of Western travellers in those parts, but we shall probably never know the name of its discoverer or the early history of its introduction. We do not even know with absolute certainty when, and by whom, menthol crystals were first brought to the notice of European pharmacologists. It is said that they have been used pharmaceutically on the Continent as long ago as the end of the last century, but if that statement is capable of proof, the drug must have fallen into oblivion shortly after its introduction, for it was certainly utterly unknown, even by repute, to most persons in the drug-trade twenty-five years ago. Somewhere about 1864 a consignment of the drug was received in London under the name of Chinese peppermint oil, and passingly commented upon for its curious property of solidifying with a fall in the temperature. To the late Mr. John Mackay, of Edinburgh, belongs the distinction of first having called the attention of British pharmacists to the valuable properties of menthol. Mr. Mackay is believed to have brought "Po-Ho oil" with him from Paris, where it was then sold, in the small red-labelled Chinese bottles familiar to Eastern travellers, as a kind of proprietary article. Had menthol been an utterly valueless quack medicine, it would, perhaps, have taken Europe by storm then, and reigned for a season, just long enough to gather a fortune for its first exploiter. But as the drug happened to have a solid therapeutic value it had to wrestle through the familiar stages of contumely, ridicule, animosity, and unreasoning popularity, just like any new creed or reformer. The commercial history of menthol practically dates from 1878, when an English firm in Yokohama made a small shipment of it to London, determined not to rest until they had succeeded in securing for the remedy a footing upon the market. After many months their shipment went back, with a note from the agents, announcing that "the stuff" could not be sold here, as no one knew what to do with it. But the Yokohama firm persevered, and they reaped their reward. Four years later, menthol crystals were the rage of the season, selling at 60s per lb. wholesale, and carried about in cone-shape by all persons with any pretence to the possession of a civilised nervous system.

That was the hot youth of the drug, when Cocking and Christy were kings, and the vicissitudes of speculators alternated between the poles of elation and despair as rapidly as those of the lovers in an Adelphi melodrama. But though the twenty years of menthol in Europe have been immeasurably more exciting than all its cycles of Cathay, the drug has since settled down to an eminently respectable position among the well-established articles of commerce. Perhaps its early excesses may be due to the circumstance that it was not quite happy in all of its first sponsors. Anyhow, it came to stay, and has settled down in our midst to a steady career of usefulness in the inhaler-, plaster-, cone- and snuff- lines, and only recalling the days when its heart was volcanic by an occasional splutter of mild speculative energy.

Such a period of decorous excitement is now in progress. The menthol stocks in Europe are believed to be very small; the shipments from Japan are known to have fallen off considerably. Previous to 1890 no separate official records were kept of peppermint oil and crystals. In that year the shipments of menthol alone from Japan amounted to 36,091 lbs.; in 1891 they were 22,017 lbs.; and in the first half of 1892 4,684 lbs. That is a very considerable reduction, particularly significant because a much smaller proportion of the exports now goes to Europe and to America than formerly. During the first six months of 1892, only 1,000 lbs. were cleared in Yokohama for New York, 880 lbs. for Hamburg, and 320 lbs. for New York. There exists a widespread belief that the coming winter will witness a recrudescence of the influenza epidemic, and that we may prepare ourselves for a cholera visit next summer. Menthol has been widely recommended as a remedy for the one, and peppermint oil as a prophylactic against the other complaint. Furthermore, the Eastern exchanges have lately taken a turn for the better, and any small advance in silver reacts at once upon the value of Japanese goods. These are the main points upon which the bull-speculators rely for a continued rise in menthol crystals, the price of which has already advanced from about 7s. 6d. in April last to 12s. per lb. at the present time. Their hopes appear to rest upon pretty solid foundations; but the serious factor of the unknown stocks that may possibly be held in China and Japan, and for the non-existence of which we have no other security than the assurances of a few speculators, should not be left out of account. In our trade report we give a review of the principal price fluctuations of menthol during the last ten years, from which it will be seen that the price is now already higher than it has been since the beginning of 1887. It appears to us that one of the facts most likely to exercise an advancing influence upon the price of menthol must be sought for in the fact, which now appears fairly conclusively established, that the selling prices of Japanese peppermint oil and of menthol since 1887 have been too low to make it worth the while of the producers to place their land under the very exhaustive peppermint crop. There are two harvests of the herb in Japan, the principal one in June, and the smaller one in August. Allowing for the time required for the distillation and marketing of the product, the last of the oil and crystals of this year's harvest ought to be now well on the way from Japan; and the fact that the exporters there offer very sparingly, and require higher and higher prices for their holdings, also goes some way to uphold the views of those who "think well" of the article.

A WEAK SPOT.

MR. IVAN LEVINSTEIN was deploring in Manchester the other day the apathy in regard to scientific education which

infests English chemical industries. If we leave out managers and employers there is little scientific knowledge left amongst the thousands of workers who get a living from these industries, and Mr. Levinstein rightly regarded this as the chief obstacle to our success in competition with more favoured nations. We have striking confirmation of the first assertion in the report, which has just been issued, of the technological examinations promoted by the City and Guilds of London Institute. Nothing is brought out more clearly by that report than the astonishing neglect of technical subjects appertaining to applied chemistry. The examinations, it may be explained, were instituted in 1879 for the purpose of encouraging the study of the principles underlying our great industries. It was the artisans who were aimed at, and that they have admirably responded in many cases is shown by the figures for the fourteen years that have elapsed since. A beginning was made with seven subjects; now there are fifty-six. There were twenty-three centres in 1879; this year 265. In the first year 202 papers were given in by candidates; this year the number was 8,534, and from the beginning nearly 104,000 students have taken advantage of the classes recognised by the Institute. The progress is very satisfactory, and perhaps the best feature from a British-trade point of view is the large number of persons engaged in the textile industries who seek to improve themselves by the means thus presented to them. More than a third of the total number of students have attended spinning, weaving, and allied classes. Other handicrafts, from iron and steel manufacture to brickwork and masonry, make up the bulk of the rest, with students numbering from hundreds to thousands in the several classes. When we touch the chemical industries the falling-off is phenomenal. This year salt manufacture and alkali manufacture produced not a single student; in soap manufacture there were twelve students, three went in for examination, and one passed. Three "external candidates" were examined and passed. We note also the following figures:—Coal-tar products, 47 students, 17 examined; oils and fats, 20 students, 4 examined; gas manufacture, 54 candidates; paper manufacture, 10 candidates; sugar manufacture and glass manufacture, none—altogether less than 150 students from the most important chemical industries of the country. This lamentable neglect has been apparent all the fourteen years, and the contrast with other handicrafts is so striking that we are forced to the conclusion that there is a strong deterrent influence in the chemical industries themselves. We do not overlook the probability of many attending pure science classes; these would have acted as feeders for the technological classes, but there has been no feeding worth speaking about. The true explanation of the matter lies in the principle upon which our chemical industries are conducted. It is the antithesis of that which obtains in our textile and metallurgical industries, where the majority of foremen and managers have worked themselves up from the lowest rungs of the industrial ladder; they are encouraged to do that. As a result we retain commercial supremacy in these industries in spite of most pinching hostile tariffs. There is no such encouragement to chemical-workers. What the manufacturers want is a large volume of unskilled labour, with the scientific and technical knowledge concentrated in the brain of the managers and their immediate assistants. It has always been considered the proper thing not to let labourers know too much; all that is wanted of them is mechanic dexterity. Intelligent interest in the work thus becomes impossible, and we have no progress. The weak spot in our chemical industries is here, and it cannot be strengthened until, as in the more successful handicrafts, the workmen themselves endeavour to secure by education better position

in the crafts they pursue. But that reform can never be brought about if manufacturers do not hold out inducements to them. A little less preaching in market and meeting places about the superiority of German chemists, and more direct practical endeavour to encourage competence in the British workman, appears to be the proper prescription.

COMMENTARY.

MR. CARTEIGHE'S PAPER.—The daily newspapers appear to be taking Mr. Carteighe's advice, in regard to the sale of poisons to medical men, in quite a different light from what was intended. Thus comments the *Evening Standard*:—"The Pharmaceutical Society has done well to take up the question of the sale of poisons by apothecaries. There is abundant evidence to show that many of them are not sufficiently cautious in supplying such articles to customers who represent themselves as medical men. The Neill case has shown that the practice is lamentably lax." Nothing of the kind; there was no evidence whatever to show where Neill obtained his strychnine, and it is questionable if it was bought in this country at all. Our contemporary considers that the necessity for the precautions advocated by Mr. Carteighe "appears to be self-evident; yet they are by no means superfluous under the laxity which has grown up, and facilitated the perpetration of more than one cold-blooded murder." The *Daily News* and the *Echo* have also referred to the paper, but offer no comment.

MR. HART URGES GREATER ACTIVITY.—The *British Medical Journal* still pegs away at the Pharmaceutical Society and its duty in regard to the sale of poisons. "Whatever may be said," remarks the editor, "as to the enforcement of the seventeenth section being a duty appertaining especially to the State, there cannot be any question that the restriction of the sale of poison within its proper channels is the particular function of the Pharmaceutical Society, since the power of enforcing the Act in that respect is placed exclusively in its hands. While, from the public point of view, the medical profession expects that power to be exercised in the interests of public safety, members of the Pharmaceutical Society will naturally look for its exercise in favour of their material interests. Reasonable as this may be, provided that the Society's larger and higher public duty is efficiently fulfilled, it cannot at this juncture be overlooked that the Pharmaceutical Society's public duty in regard to the sale of poison will have to be performed with greater energy than has hitherto been manifested in the regulation of the trade in poisons."

Business Changes.

MR. L. M. JONES has opened a very handsome pharmacy at Menai Bridge, North Wales.

MR. J. W. B. SWAINSON, chemist, has opened a business at 22 Albert Road, Morrice Town, Devonport.

MR. HENRY M. ASHTON has removed from London to Warrington, where he has bought the business of Mr. C. J. Bennett, who is leaving the retail for the wholesale trade.

MR. F. W. HARRIS, chemist and druggist, has removed his business from 83 Brockley Road, Brockley, S.E., to No. 87, two doors from the old premises. He has secured a long lease of the new buildings.

MR. J. MCKNIGHT, chemist, of 290 Euston Road, and Mr. George Driver, electrician, of 210 Euston Road, are

about to have their respective premises lighted by the St. Pancras Vestry by electricity.

MR. JOSEPH FINLAY, L.P.S.I., lately manager of drug department Messrs. Woods, Webb & Co., Dublin, has undertaken the management (for executors) of Coake's Medical Hall, Clonmel, *vice* Mr. Thomas McMurray, L.P.S.I., who is studying for the medical profession in Dublin.

MR. GEORGE MELVIN, pharmaceutical chemist, who for some time was in Richmond, has completed a partnership agreement with Messrs. James Robertson & Co., 35A George Street, Edinburgh. Mr. Melvin takes a share in the retail business. Mr. Thomas Thompson retains his interest in that business, and will still supervise the retail department, but he has lately acquired extensive premises behind, but distinct from the pharmacy, where the gelatine capsule and mineral-water business will have room for development, and to this he will pay special attention.

COMMERCIAL GOA POWDER.

By E. J. MILLARD, F.C.S.

A RECENT examination of several samples of commercial Goa powder has shown such a remarkable amount of adulteration as to render it expedient to draw immediate attention to it.

The samples were all obtained from wholesale houses, either in England or Scotland, those particularly being selected who claim to import the article.

It is probable from the figures given below that more than one sample emanated from the same source. The amount of moisture varied somewhat from 1 to 3 per cent.

The following samples were examined:—

No.	Source	Colour	Percentage of Ash
1	London	Brown	4.0
2	"	"	28.5
3	"	Greenish-brown	22.9
4	"	Brown	28.6
5	Liverpool	"	7.7
6	"	"	28.0
7	Edinburgh	"	4.2
8	"	Dark-brown	23.9

The ash consisted chiefly of SiO_2 , Al_2O_3 , and Fe_2O_3 .

The sample examined by Professor Attfield in 1875 yielded only 0.43 per cent. of ash.

Several of the samples were labelled "Chrysarobin B.P."

A glance at most of the wholesale lists indicates that considerable confusion exists as to what constitutes chrysarobin B.P. This is due to the inaccurate synonyms employed in the Pharmacopœia. There is no doubt, as Mr. N. H. Martin pointed out, that the description of character and tests under chrysarobin applied only to so-called chrysophanic acid. The omission of this synonym and inclusion of Goa powder and araroba has unquestionably led to the inference that the unpurified article is official. It should be clearly understood, therefore, that only so-called chrysophanic acid—or purified chrysarobin, as Mr. Martindale calls it—answers the requirements and tests of the Pharmacopœia for chrysarobin.

DEATH OF THE SENIOR FRENCH PHARMACIST.—The death is announced of M. Eugène Schoedelin, the *doyen* of French pharmacists. The deceased gentleman was 90 years of age, having been born at Colmar in 1803. For a long time he practised pharmacy at Thann, Alsace, where his personal qualities, and his devotion during the great cholera epidemic of 1851, won for him the respect and friendship of all. As a distinguished chemist, his processes for manufacturing certain extracts have been adopted by the French Codex. M. Schoedelin died on the morning of Monday, November 14, at the residence of his son-in-law, Dr. Hahn, who holds the position of librarian of the Paris Faculty of Medicine.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

MCGLASHAN—BRUCE.—At 4 Maitland Street, Edinburgh, on November 9, by the Rev. W. Landels, D.D., Dublin Street Baptist Church, James McGlashan, chemist and surgeon-dentist, Edinburgh, to Lizzie, eldest daughter of Mr. Isaac Bruce, Maitland Street, Edinburgh.

WRIGHT—SCLATER.—At 95 George Street, Edinburgh, on November 10, by the Rev. John Sclater, of Manchester, assisted by the Rev. D. Georgeson, M.A., Bowling, Mr. David Morgan Wright, chemist, Kirkwall, to Maggie Jane, youngest daughter of the late Mr. John Sclater, Kirkwall.

DEATHS.

RAMSDEN.—On November 8, at Kingston, Halifax, Mr. Alfred Ramsden, aged 62. Mr. Ramsden commenced life as apprentice to Mr. Lofthouse, chemist, Halifax, and later conducted a business in Northgate for nine years. He relinquished the craft, however, for journalism, and eventually became editor and proprietor of the *Halifax Courier*. The deceased gentleman was one of the leading men of the town, and was elected alderman in 1880 and mayor in 1883. He leaves a widow, three sons, and a daughter.

SMITH.—At Laurel Bank, New Scone, N.B., on November 4, Mr. James Wilson, chemist and druggist, formerly of Smith, Sutherland & Wilson, Leith.

VALENTINE.—Mr. Mann Satterwhite Valentine, the inventor of "Valentine's Meat-juice," died at his residence in Richmond City, Va., on Saturday, October 22, after a lingering illness. The deceased gentleman was in his 69th year, having been born in Richmond on April 22, 1824. The study of medicine was from the first his ambition, and this he pursued in his native town, and then at Lyons, where he was vice-consul for U.S.A. Then he returned to the States, and after the war, being broken in fortune, he commenced a "notion business." It was in 1870 that he conceived the idea of a meat-juice, and he was directly led to this by his devotedness to his invalid wife. At the suggestion of the leading physicians in Richmond he began to manufacture the juice for their patients, and in 1874 abandoned the "notion trade," and devoted his whole time to the meat-juice, with what success is shown by the estate which he has left—viz., to the value of \$275,000. By his will, several bequests are made to the charitable institutions of his city; and, in a codicil, he bequeaths to the city an extremely valuable museum of books, manuscripts, and curiosities collected from all parts of the world, together with the house in which they are stored. Mr. Valentine had been a collector from his boyhood, and his collection is regarded as one of exceptional richness. It is now proposed to call it "The Valentine Museum." Mr. Valentine was much attached to his family, and was a close companion of his seven sons, who have hardly known a day when they were not by his side (excepting the time they were travelling). There will be no change in the business.

WALTON.—The death, by a railway accident, is announced of Dr. Joseph R. Walton, of the firm of Whiteside & Walton, Washington, D.C. The deceased gentleman was in his forty-seventh year, and was professor of analytical chemistry in the National College of Pharmacy at Washington, as well as being a business man. He was a native of Halifax, England, and in 1870 went to the States. Although always of a scientific turn, it was not until 1876 that he took up the study of medicine.

Personalities.

On Saturday Mr. Alderman A. H. Cox, J.P., of pill-fame, of Brighton, attained the eightieth year of his age.

MR. FREDERICK W. BIRD, chemist, Coventry, has been appointed dispenser to the Coventry and Warwickshire Hospital.

MR. MARSHALL LEIGH, of Brighton, has been presented with a handsomely illuminated address by a union of the literary societies of the town.

MR. A. SYDNEY CAMPKIN, chemist and druggist, Cambridge, has been placed upon the commission of peace for the borough of Cambridge. Mr. Campkin is well known as one of the leading Oddfellows of the country.

SINCE the meeting of the National Wholesale Druggists' Association of U.S.A., Mr. John M. Peters, a leading member of it, and the treasurer of the firm Seabury & Johnson, has been presented with a handsome gold watch-chain and appendages. The presentation was made at a dinner given in Mr. Peters' honour.

MR. M. I. ELLWOOD has been placed upon the Commission of the Peace for the borough of Leominster. Mr. Ellwood has been in business at Leominster for some twenty-two years. He was apprenticed at Mawson's, Newcastle-on-Tyne. Mr. Councillor Barclay was an apprentice there at the same time, and Mr. Ellwood was afterwards, for two or three years, in the laboratory of Messrs. Southall Bros., Birmingham. Later, he returned to Newcastle, to take charge of the drug department of Messrs. Mawson & Swan, in Moseley Street. Mr. Ellwood bought Mr. Gilkes' business in Leominster. There he has taken a very active part in public life, and has twice held the mayoral office. He was for a few years the proprietor and editor of the *Leominster News*, and has been a contributor to various journals, amongst them *THE CHEMIST AND DRUGGIST*.

MUNICIPAL HONOURS.

To the list of chemists who have been elected mayors we have to add this week several names, and we now present portraits of all that are available. All the accounts that we have received show that chemists who obtain municipal honours are very popular men. We note, for example, that Mr. J. Brooks Parkin, the Mayor of Ripon, was returned to the Council two years ago by the largest majority ever given by the citizens. On the day of his election as mayor he was greeted on leaving the Town Hall with loud cheers by a large crowd. At the entrance to Kirkgate a triumphal arch had been erected. The mayoral procession was escorted to his Worship's residence by the Ripon City Band.

Mr. Jonathan Phillips, of Wigan, is a pharmaceutical chemist. Before starting in business in Crewe in 1868 he had had experience in London with Butler & Crispe, in Naples at the Royal Pharmacy, and in Paris with Roberts & Co. He sold his Crewe business to Henderson & Co. in 1871, and two months after opened in Wallgate, Wigan. Mr. Phillips has long taken a part in municipal work, and has done excellent service for his town on the Sanitary Committee and Infirmary Board of Management.

Mr. George Strawson, of Yarborough House, Bishop's Castle, has been in business in that town for fifteen years, and has been a member of the Corporation since its foundation. He was returned on November 1 at the head of the poll with a majority of fifty-one votes, and the mayor's chain is a fitting recognition by his colleagues of Mr. Strawson's popularity.

In the group we include the three Welsh mayors regarding whom we gave some personal particulars last week.

Mr. Alfred Ream, chemist and druggist, Mayor of King's Lynn, gave up the chemist's business twenty-five years since, he tells us, so that we can scarcely include him in a pharmaceutical group. Mr. Alderman W. Mount, of Canterbury, Mr. Alderman Parkinson, wholesale druggist, Burnley, and Mr. Alderman Wild, Hyde, have each been elected a second time, while Mr. Jonathan Slater enters on the third year of his chief citizenship.

Mr. Enoch Palmer, J.P., chemist, Great Grimsby, has been re-elected an alderman of that town. Mr. Palmer headed the poll.

Mr. Arthur Deck, Cambridge, has been elected for the third time alderman of the borough.

Mr. Ferdinand Green Foster, chemist and dentist, of Lake Road, Landport, was a successful candidate at the recent election, defeating his opponent by 223 votes. Portsmouth has now the unique distinction of being represented in the Town Council by three brothers, all of whom were trained as chemists—viz., Messrs. Tom Scott Foster, (ex-Mayor), Harry Pibworth Foster, Queen Street, and F. G. Foster.

Pharmaceutical

Mayors



ALDERMAN MOUNT, Canterbury.



ALDERMAN W. MERRY, Ilkeston.



ALDERMAN PARKINSON, Burnley.



MR. JONATHAN PHILLIPS, Wigan.



MR. A. G. GAMBLE, Grantham.



MR. GEORGE STRAWSON, Bishop's Castle.



MR. JOHN LLEWELLYN, Cowbridge.



MR. E. CEREDIG EVANS, Cardigan.



ALDERMAN EVANS, Lampete



MR. JONATHAN SLATER, Wel's.



MR. J. BROOKS PARKIN, R'pon.



ALDERMAN WILD, H'de.

Legal Reports.

THE PYN-KA SYNDICATE (LIMITED) V. W. B. FORDHAM & SONS (LIMITED).

ON Friday, November 11, in the Chancery Division of the High Court of Justice, Mr. Waggett appeared, before Mr. Justice North on behalf of Henry Hadida & Co. and the Pyn-Ka Syndicate (Limited) in support of a motion that W. B. Fordham & Sons (Limited) might be restrained by injunction until the trial of the action or further order from selling any "putz paste" or other polishing paste not manufactured by the plaintiffs as "Pyn-Ka" or "Pyn-Ka paste," or under any name calculated to induce the belief that the goods of the defendants were those of the plaintiffs.

In opening the motion, the learned counsel said that the plaintiffs were the vendors of a certain paste for polishing metals, for which they obtained the exclusive right of sale in the early part of the year 1891. They invented the word "Pyn-Ka" for use in connection with this paste, registering a trade-mark of which the word "Pyn-Ka" formed one of the essential features. His case was that "Pyn-Ka" meant the plaintiffs' goods, and that the defendants were passing off their goods as "Pyn-Ka."

Mr. Justice North asked what the plaintiffs said their right was.

Mr. Waggett replied that the exclusive right was to the use of the word "Pyn-Ka" and to a particular label of which that word formed a prominent feature. His case was that the defendants had introduced to a customer as "Pyn-Ka," goods which were not "Pyn-Ka," thereby deceiving the shopkeeper and the public.

Mr. Cozens Hardy, Q.C., said he appeared for the defendants. Was the plaintiffs' case that the defendants intended to use "Pyn-Ka"?

Mr. Waggett replied that in view of what the defendants had done it was necessary that the plaintiffs should have protection for the future.

Mr. Cozens Hardy said that the defendants had never threatened to use the word "Pyn-Ka." If in this one instance a clerk did put that on the invoice it was purely by mistake and without the defendants' knowledge or consent.

Mr. Justice North said that if Mr. Hardy's clients would undertake not to do what the Court was asked to restrain them from doing, he would postpone the hearing of the discussion until the trial.

Mr. Cozens Hardy said he would give the undertaking his Lordship had mentioned, but that did not in the least bind him to say that the motion was properly brought.

Mr. Justice North said that Mr. Hardy's clients would not be prejudiced.

Mr. Cozens Hardy said that being so they would undertake not to use "Pyn-Ka" in any form or shape.

Mr. Waggett said that was all the plaintiffs wanted; they did not ask for anything else.

Mr. Justice North thereupon accepted the defendants undertaking not to use the word "Pyn-Ka" in any way, this undertaking to be without prejudice to any question at the trial, and directed the motion to stand over to the trial.

MULTIPLICATION OF OFFENCES: APOTHECARIES' SOCIETY'S APPEAL DISMISSED.

ON Friday last week, Mr. Baron Pollock and Mr. Justice Hawkins, sitting as a Divisional Court of the Queen's Bench, delivered judgment in an appeal by the Society of Apothecaries in a case brought by them against an apothecary named Jones from a judgment of the County Court Judge of Derby in three actions for penalties for acting and practising as an apothecary without being qualified under the sections of the Act of 1815.

Mr. Houghton, who argued the case for the appellant Society, said the question they raised was whether the Judge was right in holding that where several persons were attended to on one and the same day by an uncertified person it could be regarded as a comprehensive (or single) offence, or whether—as he submitted for the appellants—there was a distinct offence in each individual case. The Judge found

for the plaintiffs in one case for 20%, but dismissed the two others. The defendant carried on a large business, having agencies in various towns. In a series of cards he had issued it was stated that he cured cancer without operation, and had made 75 of such cures in Nottingham alone, one of the cards reading "All germs of consumption cured even when they are given up."

At the conclusion of the arguments, Mr. Baron Pollock, in delivering a written judgment, said that in the course of the argument counsel for the Society called attention to the fact that in no cases had the present question been fully argued, and that they were founded in great measure upon the well-known judgment in the case of "Crepps v. Durden," where it was held that a baker who had sold a number of hot loaves on the same Sunday could not be convicted of more than one offence. The prescribing for and giving medicine to different patients, counsel argued, could not properly be compared to the selling of different rolls, especially as in the present case a separate offence in the case of each patient would seem to be involved. There was, no doubt, great force in this remark, and it might afford a good ground for amending the Apothecaries Act, but at present the provision in that Act as to offences is identical with that in the Sunday Trading Act. That Act imposes the penalty on any one who shall do or exercise any worldly labour, business, or work on the Lord's Day, and the language of the Apothecaries Act is, "If any person shall act or practise as an apothecary," &c., and both Acts go on to provide that every person so offending shall for every such offence forfeit and pay a certain sum. It appeared to his Lordship to be clear that, however the subject-matter or the character of the offences created by the two Acts may differ, they are both directed against an habitual or continuous course of conduct, not against an individual act, and therefore they ought both to receive the same construction. He therefore dismissed the appeal, with costs.

Mr. Justice Hawkins, in assenting, said he was not at all sorry that he had been led to the same conclusion, when he looked at the way in which the penalty had been obtained. A solicitor's clerk, with two friends, neither of them ill or requiring medical assistance, went to the defendant, and the clerk, pretending to be sick, obtained some medicine from him. Then one of his friends went in, and also simulated sickness; and a lady, likewise pretending to be ill, obtained some pills and medicine. He could only compare these three to birds that enticed other birds into a trap. They enticed others to this apothecary's, and then the Court was asked to make these three pretended cases of sickness the subject of separate penalties. He was glad that the County Court Judge took the view he did, it being in accordance with good sense, as distinguished from common sense.

Mr. Houghton asked for leave to appeal, if the Society desired to carry the case further, but their Lordships refused the application, saying they had no doubt about the case.

SPECIAL SOAPS BY WEIGHT.

A WOLVERHAMPTON grocer offered by handbill to sell 3 lbs. of "Sunlight" for 7½d., 3 lbs. of "Venus" soap for 7½d., and "Matchless Cleanser" at 2 lbs. for 5½d. An inspector took advantage of the offer and bought a lot. He afterwards tried and found the "Sunlight" soap to be a little over 1 lb. deficient, and the "Venus" soap 12½ oz. short. The words "12-oz. tablets" were on the "Sunlight" soap box. The grocer was last week summoned before the Magistrate and fined 10s. and costs in each case. The defence was that it was the custom of the trade to sell these soaps by tablets, but defendant has since stated that it was inadvertently omitted to be stated to the customers that three tablets, and not 3 lbs. of soap, were to be sold for 7½d. By a printer's error "pounds" had been inserted on the handbills instead of "tablets."

FLOATING A PATENT MEDICINE.

THE liniment which Dr. Robert Bell, of Glasgow, placed upon the market as a patent medicine a few years ago was the subject of a lengthy legal argument before Lord Stormonth Darling, in the Court of Session, Edinburgh, on Monday. This arose from the actions by

Mrs. Margaret Isabella Meason or Thomson, 10 Park Quadrant, Glasgow, and her husband, Alexander Thomson, in which they sued Dr. Bell, who resides at 29 Lynedoch Street, Glasgow, for repayment of 423*l.* 8*s.* 9*d.* and 106*l.* 12*s.* 3*d.* respectively, being sums which they say they advanced on loan to him. Dr. Bell was, however, of the opinion that Mr. and Mrs. Thomson were partners with him in the concern. In support of this contention Mr. Clark, his counsel, said there was no relative statement of the loan, only a letter written by Dr. Bell, in which he asked Mr. Thomson to "pay 50% in two instalments, and after ten instalments of 40%. This will give you one-fifth of the interest in the liniment, and I will agree to pay you back all you put into the company, with 5 per cent. added, at the end of five years." The plaintiffs produced this letter and the receipts for the money as a proof that the contract of loan had been entered into, but he submitted strongly that that letter was not, on the face of it, anything like a contract of loan. Premises were taken at 51 Woodlands Road, Glasgow, and there the business of manufacturing "Dr. Bell's liniment" was carried on by "Estell & Co." that being the name assumed for the purpose. In November and December, 1885, the plaintiff advanced 40*l.*, being her proportion of the 50% instalments of the loan as agreed on. She advanced 32*l.*, being her proportion of the 40% instalments, monthly hereafter till March, 1887, when she paid a reduced instalment of 24*l.*. At that date the plaintiff had advanced 520*l.*, but she made no further advances, as the business had proved an utter failure and their security over the net profits had proved of no value. About the spring of 1888 the defendant, in consequence of certain proceedings of the Faculty of Physicians and Surgeons in Glasgow with reference to the business of Estell & Co., was extremely desirous of concealing his identity with the firm. The plaintiff's son was induced by the defendant after some negotiations and correspondence to write to him in terms, suggested by the defendant, a letter which was used by the defendant to clear himself before the Faculty. This letter was very reluctantly granted. The shop at 51 Woodlands Road was shortly hereafter closed, and the stock was handed over for realisation to Messrs. Hatrick & Co., wholesale chemists, Glasgow. Since the realisation the plaintiff had been repaid 213*l.* 2*s.* 5*d.* It was further contended that the arrangement was a joint adventure and not a contract of loan. Counsel for defendant pointed out that by an assignation it was provided that the plaintiffs were to get a third part of the profits of sale of the liniment after the manufacture and advertising of the article had been repaid, that the remaining part of the profits were to be the property of his wife and children, and in the event of their death their share of the business was to revert to him.

After considerable argument between Dr. Bell's counsel and his Lordship upon technical points in the documents, counsel for the plaintiffs joining therein, it was ultimately agreed that the matter should go to proof, and accordingly his Lordship allowed the plaintiffs a proof *habili modo* and the defendant conjunct probation.

PHARMACY ACT PROSECUTION.

At the Croydon County Court on Tuesday, before his Honour Judge Lushington, the case of the Pharmaceutical Society of Great Britain v. Rhodes came on for hearing and was disposed of, it being an action to recover penalties for six breaches of the Pharmacy Act. The defendant, who keeps a chemist's shop and carries on the business of a post-office at 1 Penge Lane, Sydenham, did not appear, nor was there anyone present on his behalf. The Pharmaceutical Society was represented by Mr. Flux, who stated that the particulars showed that the claim was for six penalties for having sold poisons on six different occasions—or, rather, for having kept open shop for the sale of poisons—the defendant not being a registered person within the meaning of the Act.

The Judge: Has this Court power to enforce penalties?

Mr. Flux: Yes, your Honour; penalties have to be recovered in the County Court.

The Judge: I see you are claiming 30*l.* What is the practice, can you tell me?

Mr. Flux: There is no option of mitigating the penalty.

The Act says that for every such offence the penalty is to be 5*l.*

The Judge: But whether a defendant is liable is in the discretion of the Court?

Mr. Flux: Yes; but the Judge has no power to reduce the penalty.

The Judge: Is there any power to remit the penalty?

Mr. Flux: Only by means of an application to the Privy Council direct. The enforcement of the penalties is left in the hands of the Pharmaceutical Society, under the Act, and they have to account to the governing Council for the penalties so recovered. In this instance the defendant has been sued on three or four previous occasions, but each time he has paid up before the case has come into Court.

The Judge: Then he is an old offender?

Mr. Flux: Oh, yes, sir.

The Judge: Then I think it relieves me of a great deal of responsibility in the matter. It seems to indicate which way my opinion should turn.

Mr. Hobbs, an employé of the Society at 17 Bloomsbury Square, then deposed to visiting the defendant's shop on August 4, and asking for 2*d.* worth of laudanum and 2*d.* worth of scap-liniment mixed.

The Judge: I believe it is not necessary to show that the defendant himself sold it?

Mr. Flux: No; he is being proceeded against for keeping open shop. We cannot proceed against the same man for selling and keeping open shop as well.

The Judge: I see; you are depending on the 15th section of the Act—"for keeping open shop for retailing, dispensing, or compounding poisons." Is 2*d.* worth of laudanum poison?

Mr. Flux: Yes, sir.

The witness went on to say that he made similar purchases on August 12, 22, and 26, and on September 2 and October 14. He retained the purchases until he handed them to an analyst, when they were sealed up, and a number and date put on each bottle.

Mr. Flux now handed to his Honour the report of the decision in Wheeldon's case, which was given by Mr. Justice Hawkins on appeal from the Wandsworth County Court, and said that no question was raised in that case as to the Pharmaceutical Society being the proper Society to sue.

The Judge: You have proved six actual sales?

Mr. Flux: Yes.

Mr. Eastes, who said he was an analyst, and connected with several societies engaged in chemical and analytical work, proved receiving the six bottles (produced) from the last witness, and said he analysed their contents. He found laudanum in each and all of them.

By Mr. Flux: Laudanum was a preparation of opium—tincture of opium.

This was the case for the prosecution.

His Honour (to Mr. Flux): I suppose you have no evidence to give me that the defendant has been guilty of the same kind of conduct on previous occasions?

Mr. Flux said the evidence he had was in the form of a communication, which, of course, was not admissible. In 1889 the Society applied for five penalties, and the defendant paid them.

His Honour said he would take it from Mr. Flux that there was no reason for showing any particular mercy in the case.

Mr. Flux: It is one of those cases in which a man still goes on, and the Act says, "Whereas it is expedient for the public safety," &c.

In giving his decision, his Honour said this was a very important Act which he was called upon for the first time to enforce. He did not know whether the case was simplified by the absence of the defendant, or otherwise. A claim was made against him for penalties for keeping open shop for retailing, dispensing, and compounding poisons. He did not wish to lay undue stress on the fact that the plural was used in the Act, but the evidence was that on six occasions the defendant, who kept a chemist's shop and a post-office, on being applied to, furnished and served tincture of opium, commonly called laudanum, which was a poison under the Act. That being so, he was of opinion that it had been proved that he did keep open shop for the retailing, dispensing, or compounding of poisons, or at any rate a poison, and that was enough for the present case.

Of course every Court ought to be careful in enforcing penalties, and very often it was very properly left in the discretion of the Court whether penalties should be fully enforced. He had on this occasion to deal with an Act which jealously guarded the public safety, and it was an Act which should be and was well known. It had been suggested to him that the defendant was an old offender, but no legal proof of it had been given, and therefore he did not think he ought to act on that; but he would assume that there was no knowledge on the part of the prosecuting authority that the defendant was a person who should be leniently dealt with. It was doubtful, perhaps, whether he had power to mitigate the penalty; at any rate, he would give judgment for the full penalties—30% in all—against this man for his conduct, which was contrary to the Act and dangerous to the public. Judgment accordingly.

Bankruptcy Reports.

Re SAUNDERS & SAUNDERS, Cleckheaton, Manufacturing Chemists.

THE creditors interested in this bankruptcy on Monday authorised the trustee to continue to carry on the bankrupt's business for any period not exceeding twelve months, and to enter into contracts and engagements so that there may be a more beneficial winding-up of the estate.

Re J. SILVER, Croydon.

THE private meeting of creditors (referred to under English News) was held on Thursday afternoon at the offices of Messrs. Attwood, Binsted & Co., 171 Queen Victoria Street, E.C., to consider the offer made by debtor. It appeared from the statement of affairs made out by debtor that the unsecured liabilities amounted to 1,200*l.* and assets *nil*.

Mr. Binsted (Attwood, Binsted & Co.) said that shortly after the last meeting of creditors, Mrs. Silver, thinking her husband dead, instructed him to realise the estate. He advertised the business for sale, and eventually found a purchaser, who gave 7*l.* for the books, goodwill, &c. The stock was covered by a bill of sale for 150*l.*, and the bill-of-sale holder had sold it to the purchaser.

The debtor, in reply to questions, said that creditors to the extent of 700*l.* had signed the circular, and another for 260*l.* had promised to refrain from pressing him. The cash creditors were friends of his, and would not harass him. He had no reversionary interest of any kind, and had no property or assets whatever. He had lost 1,000*l.* in the business, which he had saved whilst in the grocery trade. After further discussion the meeting decided not to sign the agreement, although they had no objection to allow their debts to stand over for the present.

Gazette.

PARTNERSHIPS DISSOLVED.

Chapman, B., and Booker, J., under the style of B. Chapman & Co., Sheffield, mineral-water manufacturers.

Meadows, F. L., and Read, J. B., under the style of Hill, Bros. & Co., Wandsworth, chemical manufacturers and merchants.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATIONS.

Cockshoot, Thomas Bower, Hyde, veterinary surgeon, &c.

Savory, William, Rastrick, and trading in co-partnership with T. Milnes, C. Jessop, and R. Crowther, as Savory & Co., Brighouse, dry salter.

RECEIVING ORDERS.

Cockshoot, Thomas Bower, Hyde, veterinary surgeon and shoeing-smith.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampto Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," November 2, 1892.)

"HEDLEY'S GENUINE DOUBLE SUPER"; for toilet-soap. By E. A. Hedley and A. Hedley, trading as Thomas Hedley & Co., City Soap-works, City Road, Newcastle-on-Tyne. 167,229.

(From the "Trade Marks Journal," November 9, 1892.)

"LION BRAND," and device of lion holding bottle, with shield on crossed keys, and monogram; for sugar of milk. By J. P. Ritterhaus, Leiden, Holland. The essential particular is the combination of devices. 166,344.

Device of sheep standing on two full sacks; for fuller's earth. By the Fuller's Earth Union (Limited), 24 Bridge Row, E.C. 157,362.

Device of check-board box, with wording and signature on label; for gelatine. By R. Cox, trading as J. & G. Cox, Gorgie Mills, Edinburgh. 166,237.

"ROYAL HOUSEHOLD SOAP"; for toilet-soap, shaving-soap, &c. By J. L. Thomas & Co., 162 Fore Street, Exeter. 166,226.

"J. L. THOMAS & CO., EXETER"; for toilet and shaving soaps, &c. By J. L. Thomas, 162 Fore Street, Exeter. 166,227.

"FURNESS BOUQUET," sketch of Conishead Priory, and wording on label; for a perfume. By C. Askew & Son, 22 New Market Street, Ulverston. The essential particular is the picture of the Priory. 166,549.

Sketches of four carnations; for perfumery. By J. Sturrock, trading as Sturrock & Sons, 66 Regent Street, London. 166,557.

"ZEE KEE"; a preparation for the teeth. By W. Revell & F. A. Badman, trading as Revell, Steele & Co., 40 New Street, Birmingham. 167,257.

(From the "Trade Marks Journal," November 16, 1892.)

"KINGE BLADUD," and ancient effigy in niche; for mineral and aerated waters. By the Bath Brewery (Limited), Bathwick Street, Bath. 164,548.

New Companies.

MR. W. POTTER, 81 High Street, Plaistow, E., calls our attention to the fact that the name of the company of which he is managing director, and to which reference was made last week, is W. S. Potter (Limited).

RYDER & CO. (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on business as manufacturers of, dealers in, and agents for screw and other stoppers, bottle and jar merchants, &c. The first subscribers (who take one share each) are:—J. Lawson, Musgrave Road, S.W., manager; G. T. Nunn, Huddleston Road, W., clerk; T. H. Furneaux, Malmesbury Road, E., clerk; H. W. Bettles, Stratford Place, Camden Town, N., clerk; T. Wye, Walthamstow, foreman; W. Kibbs, Little Coram Street, W.C., foreman; and H. Humphreys, Beachcroft Road, Leytonstone, shopman.

"KAR-NA" SOAP SYNDICATE (LIMITED).—Capital 15,000*l.*, in 10*l.* shares. Object: To acquire the business of soap manufacturers hitherto carried on by H. Hadida, at Congleton, Cheshire, and to develop and extend the same. The first subscribers (who take one share each) are: W. P. J. Fawcett, St. Ann's Square, Manchester, engineer; H. J. Owen, 14 St. Mary's Gate, Manchester, agent; G. Graham, Clement's Road, Chorlton-cum-Hardy, agent; W. A. Cartwright, Shep-

pard Street, Stoke-on-Trent, agent; H. Hadida, Lord Street, Liverpool, merchant; and S. T. Loader, The Temple, Liverpool, corn merchant. There shall not be less than three nor more than five directors; the first to be elected by the above-named subscribers. Qualification not specified. Remuneration to be fixed in general meeting.

THE HYDE DRUG COMPANY (LIMITED) was registered on November 10 by Messrs. Jordan & Sons, of 120 Chancery Lane. Capital 1,000*l.*, in 1*l.* shares. Object: To acquire and carry on the business of a drysalter, patent-medicine vendor, optician, oil dealer, and oil merchant, now carried on by Alfred Sherwin, at No. 1 Market Street, Hyde, Cheshire. The first subscribers (who take one share each) are as follows:—Edward Alfred Sherwin, Hibbert Lane, Marple, drysalter; Mrs. Harriet Sherwin, of the same place; John Roberts Thompson, King Street, Bakewell, chemist; Mrs. Ellen Agnes Thompson, of the same place; Charles Sherwin, London Road, Alvaston, Derby, builder; Mrs. Elizabeth Mary Sherwin, of the same place; Henry Oldfield, 192 Mottram Road, Hyde, retired chemist. Registered office, 1 Market Street, Hyde.

THOMAS MOSCROP & Co. (LIMITED).—Capital 30,000*l.*, in 10*l.* shares. Objects: To acquire the business of drysalter, oilman, and wholesale and retail chemist and druggist, now carried on by T. Holmes at Bolton, Lancs., and to carry on the same in all branches. The first subscribers (who take one share each) are:—T. Holmes, Haywood Leigh, Sharples, drysalter, &c.; Eleanor A. Holmes, Sharples; C. B. Holmes, Wigan, contractor; Annie Holmes, Wigan; R. Sandover, Haywood Leigh, gentleman; E. Knowles, Tonge, Bolton, drysalter; and Annie Knowles, Tonge, Bolton. There shall not be less than two nor more than five directors, and the first are E. Knowles and C. B. Holmes. Qualification, 100*l.*. Mr. T. Holmes is to be a permanent director, with a qualification of 5,000*l.*. Remuneration to be determined in general meeting.

ALKALI SYNDICATE (LIMITED).—Capital 20,000*l.*, in 5*l.* shares. Object: To carry on business as alkali manufacturers, engineers, &c.; to acquire patents, &c., and to develop and turn to account the same. The first subscribers (who take one share each) are: C. P. Thompson, 92 Fouldon Road, West Hackney, secretary; F. E. Hancock, 7 Smith Square, Westminster; J. Burchall, North Finchley, clerk; W. S. Gayton, Kingston Hill, clerk; T. R. Rollisson, 28 Vernon Street, West Kensington; H. C. Hannington, 95 Farringdon Street, E.C., accountant, and W. M. Whitford, 120 Newgate Street, tobacconist. There shall not be less than three nor more than seven directors, and the first are to be elected by the above-named subscribers. Qualification, 500*l.*; remuneration, 150*l.* each per annum; chairman, 100*l.* extra, with an additional sum of 1 per cent. on all net profits available for dividend in each half-year.

COPPEN BROTHERS & Co.—Registered on November 14 by Messrs. Jordan & Sons, of 120 Chancery Lane. Capital 2,000*l.*, in 1*l.* shares. Objects: To carry on the trades or businesses of chemists and druggists and dealers in patent medicines, mineral waters, and proprietary articles, and to buy, sell, and deal in all kinds of chemicals, drugs, materials, and things required for such trades or businesses. The company is unlimited. The first subscribers are:—John Coppen, Normanhurst, Ashford, Middlesex, retired merchant; Mrs. Margaret Prudence Coppen, of the same place; Henry William Coppen, 42 Marsham Street, Westminster, store proprietor; John Frederic Coppen, Fermanin, Keswick Road, Putney, store proprietor; Mrs. Emma Augusta Coppen, of the same place; Clara Louisa Coppen, Normanhurst, Ashford, spinster; Ada Elizabeth Coppen, Normanhurst, Ashford, spinster; Alfred James Coppen, 155 and 157 Lambeth Walk, Lambeth, S.E., store assistant. The first directors are Henry William Coppen, John Frederic Coppen, and Alfred James Coppen. Qualification, 100*l.*. Registered office, 12 Carey Street, Westminster.

COMPANY MEETINGS.

PRENTICE BROTHERS (LIMITED).—A meeting of the shareholders of this company was held at the company's chemical works, at Stowmarket, last week. Mr. B. T. L. Thomson, who presided, stated that the depression in agricul-

tural circles had affected the demand for chemical manures. Still, the directors were able to report that the net profit made during the year was 3,450*l.* 19*s.*, which, with 551*l.* 5*s.* 11*d.* brought forward from the preceding year, gave an available balance of 4,002*l.* 4*s.* 11*d.* Out of this sum they recommended the payment of dividends at the rate of 6 per cent. on the preference shares and 10 per cent. on the ordinary shares, leaving a balance of 581*l.* 0*s.* 11*d.* to be carried forward.

THE CHEMISTS' AERATED MINERAL-WATERS ASSOCIATION (LIMITED).—The fourteenth annual meeting of this company was held at Anderton's Hotel on Thursday afternoon, November 17. Mr. H. Davenport (Chairman of Directors) presided, and there were about twenty-five shareholders in attendance. The report and balance-sheet showed a net profit of 2,086*l.* 10*s.* 9*d.*, and out of this the directors recommended a dividend of 10 per cent., free of income-tax, which would absorb 1,810*l.*, the remaining 276*l.* 10*s.* 9*d.* being carried forward.

Mr. DAVENPORT, in moving the adoption of the report, recommended a bonus to the employes, and said he was sure they would all be pleased to see the increased success they had met with. He had not much to say to them—in fact, a friend of his had told him that with such a balance-sheet he need only rise and say, "Gentlemen, ditto to last year." (Applause.) There had been an increase in the sales at every one of the factories, and in consequence of the greater business at Bristol it would be necessary to enlarge the premises there. After explaining some of the items of the balance-sheet,

Mr. LONG formally seconded the resolution.

Mr. NICHOLLS asked what percentage of increase in London was due to the convenience and despatch afforded the Association by means of the alterations.

The CHAIRMAN said he was hardly in a position to say; but, roughly speaking, he thought from 7½ per cent. to 10 per cent.

Mr. NICHOLLS again rose to put some question regarding the balance-sheet, comparing it with that of 1889, but

Mr. DAVENPORT pointed out that he was altogether wrong in his numerals and assumption. He resumed his seat with an apology.

A SHAREHOLDER asked what was the reason for leaving out the information as to the increased number of members for the year.

The CHAIRMAN said there was none.

The SECRETARY: The increase last year was 149.

A SHAREHOLDER said he did not see the advantage of publishing such figures, as it was not essential that they should increase their numbers in order to increase their business. (Hear, hear.)

The resolution was then carried *nem. con.*

Mr. LONG proposed that the retiring directors—Messrs. Davenport and Wilson—be re-elected. Mr. NICHOLLS seconded, and the motion was agreed to.

Mr. NICHOLLS then proposed the following resolution, which ran somewhat on the same lines as the one which he laid before last year's meeting:—

That the directors be requested to report at the next annual general meeting (or before), on the advisability, or otherwise, of extending the business of the Association, having regard to the B.P. and its addendum, also on any other extension of which they may approve, subject to the Articles of the Association.

He wished to add to the business of the Association preparations that were now not prescribed as effervescent waters of the Pharmacopœia, but which might be used in hospitals, large institutions, and by medical men in everyday practice.

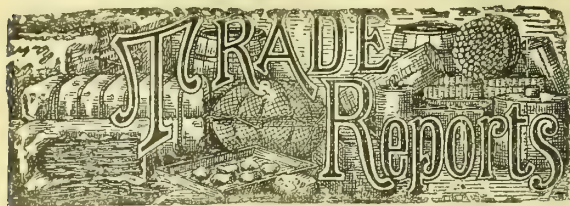
A SHAREHOLDER: What preparations?

Mr. NICHOLLS: Well, say, for instance, chlorate of potash.

Mr. FITCH formally seconded the resolution, and after some discussion, not very favourable to the motion, it was put to the meeting and rejected, the mover being the only one who voted in its favour.

A vote of thanks to the Chairman and the Directors, which was heartily accorded, terminated the proceedings.

A LEAD OXYIODIDE having the formula PbO, PbI_2, I_3 , has been obtained by Gröger. It has a brownish violet-red colour. (See *Jour. Chem. Soc.*, p. 1280.)



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

The London Markets.

42 CANNON STREET, E.C., November 17.

THE drug market has passed a very quiet week. There are not many alterations to notice, and there has been no excitement of any kind except in opium, which is again dearer, principally upon the receipt of telegrams announcing a great advance in Smyrna. Cod-liver oil is also higher, and for raw camphor higher rates must be paid, though business has not been reported. Jamaica honey is scarce and inquired for, and there has been a fair amount of business in Turkey colocynt, though at low prices. The new saffron is being offered at rather lower rates, and star anise may be had for somewhat distant shipment at easier prices. The same applies to menthol. Fenugreek-seed is in demand at high rates, and for Mal'a cumin-seed extreme rates must also be paid. In fine chemicals the principal alteration of the week has been the advance in morphia and codeia in sympathy with the movement in opium. For lithia it is difficult to quote prices, but extreme rates are asked. English refined camphor has been advanced 1d. per lb., cocaine is also tending higher, and cream of tartar must be pronounced firmer. On the other hand, the small sale in quinine has brought that article to slightly below its level of last week. Chlorate of potash though scarce on the spot can be had at comparatively low prices for delivery early next year. Peroxide of hydrogen has lately been reduced in price. Citric acid is dull, and concentrated lemon-juice offering at easier rates; tartaric acid unchanged. In the outside markets there has been an advance in sulphate of copper; alcohol remains steady. China galls and turmeric are very firm, and indiarubber has recovered, and is quoted to-day at 1s. 9½d., for fine Pará, with buyers. The varnish gum sales held to-day went off well, and large quantities of kowrie sold at slightly higher prices. Gum animi was quiet; copal, damar, and olibanum gums steady but unaltered. Spices are mostly lower, especially cloves. Canary-seed is also easier. The tea market is dull; shellac was lower at the auctions, but is higher privately, and sulphur has somewhat declined in price. The Bank rate remains at 3 per cent., and for bar silver 38½d. per oz. is to-day's price. The Bombay exchange is 1s. 2¾d.; Calcutta, 1s. 2¼d.

New York. Our correspondent, writing from New York on November 8, states that but little of interest has occurred during the week in the drug market there. The Presidential campaign has been throughout a rather quiet one, and it was not until the last week of the canvass that any marked interest was exhibited. The drug and chemical trades, however, contributed a considerable contingent to the parade of Democratic business-men on Saturday.

Forty cases of Central American *Balsam copaiba*, out of a lot of 60 cases just arrived, have been sold at 35c. *Balsam tolu* is firmly held at 28c. to 30c., stocks being pretty well concentrated. It is currently reported that the present stock of Mexican *Vanilla-beans* in first

hands does not exceed 80 cases, being probably the smallest stock held at this season for the past dozen years. The demand is moderately active and price very firm. HGH *Peppermint oil* is held at \$2.57½ to \$2.60, at which there seems to be no export demand. No change is reported nor any transactions of note in other domestic essential oils. *Ginseng-root* is quoted at \$2.50 to \$3.25, *Golden seal* at 23c. to 25c., *Jalap* at 33c. to 35c., *Mandrake* at 3½c. to 3¾c., *Pink root* at 24c. to 30c., *Snake root* at 21c. to 23c., and *Senega* at 57½c. to 60c., with no transactions of note in any one of these articles. Mexican *Sarsaparilla* continues weak, and is offered at 7c. from first-hands for either Tuxpan or Tampico, without takers. California yellow *Mustard seed* has sold at 7½c., but 7¾c. is wanted for additional parcels. The stock of *Jaborandi-leaves* is very low, and the price has been marked up to 50c. *Coca-leaves* are also scarce, and are held at 35c. for Truxillo and 45c. for Huanoco. *Quinine* is quiet and slightly easier, with 19c. asked for foreign and 20c. for domestic in large bulk. But little business is being transacted just now, however. The holders of *Opium* have been rendered a little firmer in their views by the favourable advices from London and Smyrna, and \$1.60 is the firm quotation on current quality of druggists' jobbing opium. Two thousand pounds of Spanish *Colocynth* sold at 22c. per lb. The firms quoting the higher prices on *Tartaric acid* have receded from their position, and now ask 24c. for crystals and 25c. for powdered. *Bleach* is quiet at 2½c., asked for casks, with a possibility of shading on a firm offer. Sanderson's *Oil of lemon* has been marked down to \$2.60, and *Sweet orange* to \$2.20.

The China Vermilion Trade.

The Austrian consul in Hong-Kong reports that the sale of quicksilver on the Chinese markets has fallen off very considerably lately. The cause lies principally in the fact that the output of vermilion of all the manufactories of that preparation has been reduced by about one-half. One of the works has already gone into liquidation.

Quinine Manufacture in Java.

Mr. David Howard, to whom we showed a copy of the pamphlet, recently printed in Java, advocating the establishment of a quinine factory in the island, writes us:—"I have examined, with much interest, the Dutch pamphlet which your representative kindly gave me yesterday to read. It is evident that the writer has no practical experience of manufacturing quinine, but derives his information from laboratory experience, and from incorrect information which he has picked up. The inaccuracies would be too many to point out, but we can only say that if quinine is to be made at a profit in Java, it will require a knowledge of the real difficulties of which the writer of the pamphlet has no idea."

Proposed Opium Monopoly in Turkey.

The *Standard* correspondent in Constantinople, telegraphing on Monday last, stated that "two Palace favourites recently sent in a demand for a monopoly of the opium produce of Turkey. The matter was referred to the Chamber of Commerce, which, having regard to the influential position occupied at Yildiz by the would-be *concessionnaires*, at once hastened to report favourably upon the scheme. The time," continues the correspondent, "was well chosen to submit the project, for, technically, the Government would be within its right in granting the privilege, as the commercial treaties with the Powers have expired, and new ones have not come into force, but the monopoly of an international product like opium would be opposed to the spirit of both the old treaties and those in process of negotiation. Several members of the Council of State intend opposing the scheme, as being contrary to the interests of the country at large." We telegraphed at once to the British Consul in Constantinople, and to our regular correspondent in Smyrna, asking them to inform us whether there was any ground for believing that such a monopoly would be granted. The Consul's reply is as follows:—

Opium monopoly contrary to commercial policy of empire. Granting most unlikely.

And our Smyrna correspondent wires almost simultaneously:—

Private parties are endeavouring to obtain from the Government an opium monopoly. Request is not likely to be entertained, as the Ambassadors of all the Powers would certainly protest against it.

The monopoly if granted would probably run on the lines similar to that upon which the tobacco *régie* is worked in Turkey. But, judging from the replies we have quoted, it seems very improbable that anything more will be heard of the proposal for the present. The handing over of a drug of the importance of opium to a clique of monopolists would certainly be highly injurious to all the legitimate traders in the article.

Lead-free Citric and Tartaric Acids.

The special committee appointed by the London Chamber of Commerce to consider the question of lead in citric and tartaric acids are now engaged in investigating the standards of purity which may be reasonably enforced, and the adoption of some recognised method of testing the purity of the acids. Their recommendations are expected to be shortly submitted to the Chemical Section of the Chamber.

ACID (CARBOLIC).—The market is dragging, with a lower tendency. Holders are now offering 34°–35° crystals at 4½*d.*, and 39°–40° ditto at 4¾*d.* per lb. in drums. Liquid 95–99 per cent. is held for 1*s.* per gallon.

ACID (CITRIC).—The market is very quiet, with prices running from 1*s.* 5½*d.* to 1*s.* 6*d.* per lb., according to position and brand. Concentrated lemon juice is offering at lower prices for new crop, 18*l.* 10*s.* to 18*l.* 15*s.*, f.o.b., being to day's quotations.

ALCOHOL.—German potato spirit shows no alteration in price, 8½*d.* per proof gallon net, c.i.f., naked, being still the price for 2,000-gallon contracts.

ALOES.—The exports of aloes from Cape Colony in the year ending June 30, 1892, amounted to 478,012 lbs., valued at 2,673*l.* The imports of aloes into Curaçao from the neighbouring islands, for re-export, in 1891, were valued at 14,215 florins, against 24,975 florins in 1890.

ANISE (STAR).—The small supply on the spot is now all in second-hands, and owners generally want 125*s.* per cwt., though no such price, or anything like it, has yet been paid. To-day's "c.i.f." quotation is 79*s.* per cwt. We hear from Shanghai, under date of October 13, that the star-anise market had become very much firmer, from 200 to 300 piculs having been sold at \$30 to \$31 per picul, which are the prices now demanded by the Chinese holders.

BISMUTH SUBNITRATE remains unaltered at 7*s.* 3*d.* per lb.

CAMPHOR (CRUDE).—The market is firm and rising, but not much business can actually be traced. For Japan, 160*s.* per cwt. was paid on the spot a few days ago, and holders now call the price 165*s.* per cwt. For early arrival, 160*s.* per cwt., c.i.f., is asked.

CAMPHOR (REFINED).—The long expected advance in English refined camphor was established on November 14, when the makers advanced their quotations by 1*d.* per lb., making *Bells* from 1*s.* 10½*d.* to 1*s.* 11*d.* per lb., according to quantity, usual terms. We believe that one of the makers wished to raise the price by 2*d.* instead of 1*d.* per lb., but his views were overruled. French is held at 1*s.* 9*d.* to 1*s.* 10*d.* per lb. net for *Bells*, according to size. German remains at 1*s.* 9*d.* per lb. net.

CASCARA SAGRADA.—Firmly held, but inactive. On the spot 74*s.* 6*d.* per cwt. is asked for good quality.

CASTORUM.—The winter sale of the Hudson's Bay Co. will be held on December 14, when the moderate quantity of 1,471 lbs. will be offered, consisting of the following brands: Y.F., 578 lbs.; Canada, 545 lbs.; M.R., E.M., &c., 237 lbs.; N.W., 104 lbs.; E.B., 7 lbs.

CHLORATE OF POTASH.—There has been no further advance, but the spot price remains as firm as ever, and 8½*d.* per lb. has been freely paid. For delivery prices are rather easier, and we hear that there are sellers at 7½*d.* per lb. for January.

CIVET.—We hear that there has been a good demand for civet lately, and that prices have advanced, 10*s.* per oz. being now asked for fine quality.

CINCHONA.—Tuesday's periodical auctions were of very small extent, the seven catalogues including only:—

	Packages	Packages
Ceylon cinchona	819 of which	819 were sold
East Indian cinchona ..	230 "	230 "
Java cinchona	60 "	60 "
South American cinchona ..	511 "	318 "
	1,620	1,427

The assortment was rather above the average, and comprised a fair proportion of grey and yellow barks from Ceylon, but Indian kinds were very poorly represented. Competition was dull at first, but gradually a slight improvement set in, and ultimately almost the entire supply offered was disposed of at unaltered rates, the unit averaging from 1½*d.* to 1¾*d.* for common red to good yellow barks, which is slightly above that of the recent Amsterdam auctions, and not notably below the last London sales. The approximate quantities purchased by the principal buyers were:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	99,005
" Brunswick quinine works	61,250
" Frankfort-o/Main and Stuttgart works	44,093
" Auerbach factory	37,150
Messrs. Howards & Sons	30,732
Agents for the Paris factory	13,980
Sundry druggists	24,121
Total quantity of bark sold	310,330
Bought in or withdrawn	31,670
Total quantity offered	342,000

It is worthy of observation that the agents for the American factory, for the first time for some years, did not make a single bid. It should be well understood that the quantity of bark bought gives little or no clue to the quinine represented by the purchases, as firms who buy little will sometimes bid for rich barks only, and *vice versa*. The following are the prices paid for sound bark:—

CEYLON CINCHONA.—*Original.*—Red varieties: Common woody and dusty to good bright quilly stem and branch chips, 1½*d.* to 2¾*d.*; ordinary to fair root, 1¾*d.* to 2½*d.* per lb. Grey varieties: Dull small twigs and woody chips, 1½*d.* to 2½*d.*; fair quilly stem chips, 3*d.* to 3½*d.*; good but dusty root, 4½*d.* to 5½*d.* per lb. Yellow varieties: Ordinary dull to good bright stem and branch chips, 2¾*d.* to 4*d.*; fine bold bright chips of old import, 7¾*d.* to 8*d.*; fair root, 5½*d.* to 6½*d.* per lb. Hybrid chips, 2*d.* to 3*d.*; shavings, 2*d.*; root, 3½*d.* per lb. *Renewed.*—Red varieties: Ordinary thin to fair stem and branch chips, 1½*d.* to 2*d.*; good bright chips, 3*d.* to 3½*d.*; fine bright shavings, 5½*d.* per lb. Grey varieties: Ordinary weak stem chips, 2½*d.* to 4*d.*; good bright quilly chips, 7*d.* to 7½*d.*; dusty to good bright shavings, 5½*d.* to 6½*d.* per lb. Yellow ordinary to fair stem and branch chips, 3½*d.* to 5*d.*; good shavings, 5½*d.* per lb. Hybrid stem and branch chips, 2½*d.* to 4½*d.* per lb.

EAST INDIAN CINCHONA.—A parcel of 79 bales (about 3½ tons) of druggists' cinchona from Madras (*officialis*), imported seven years ago, in good bright thin broken quill, sold with fair competition at 5*d.* per lb. *Original*, rather dusty to fair quilly chips, realised 2½*d.* to 2½*d.*; *renewed* ditto, 3½*d.* per lb.

SOUTH AMERICAN CINCHONA.—Of *Calisaya* quill from the Bolivian plantations, 511 packages were offered to-day, of which 318 sold at fairly good prices, the finest lots being firmly held for full rates and bought in. Good sound quill, partly silvery, brought 9½*d.* per lb.; damaged ditto, 9*d.* to 9½*d.* per lb.; fair, partly thin, and split quill at 7*d.* to 5*d.* per lb.; ordinary ditto, rather badly damaged, at 4¾*d.* to 4¾*d.* per lb.

JAVA CINCHONA.—Only 60 bales of Java bark were offered to-day. They sold at 3½*d.* to 4*d.* per lb. for fair Ledger dust, and at 2½*d.* per lb. for branch chips.

The Ceylon exports from January 1 to October 29 have been 5,640,000 lbs. in 1892, against 4,930,000 lbs. in 1891.

CLOVES.—The market for Zanzibar cloves was considerably firmer early in the week, but that improvement has since been lost. At the auctions, however, there was very little demand, and of the 658 bales Zanzibar offered only 110 sold at a fall of ½*d.* per lb.; ordinary dark to fair, 2½*d.* to 2¾*d.* per lb.; picked Java, dull to good bright, realised 5*d.* to 5½*d.* per lb.; ordinary to fair unpicked Penang, 7½*d.* to 8½*d.*

per lb. The market for delivery is also lower again to-day; $2\frac{3}{4}$ d. per lb. has been accepted for November-January steamer shipment.

COCAINE.—A firm market. For bulk cocaine 18s. 6d. per oz. is asked. The stock of crude cocaine in Hamburg is said to have been cleared, while in London holders ask very high prices.

COLOCYNTH.—There has been a fair demand recently for Turkey colocynth, and over 50 cases were said to have been sold at 11d. per lb. for good pale apple mixed with seed. A small quantity of inferior quality sold at 8d. per lb.

CONDURANGO.—A portion of the parcel offered at the last drug-sales has since been sold privately at 8d. per lb.

COPPER (SULPHATE) has advanced to 14l. 10s. per ton in London, and 15l. to 15l. 10s. per ton in Liverpool.

CREAM OF TARTAR.—Slightly firmer, 82s. to 82s. 6d. per cwt. being asked to-day for best white French crystals. On the Continent the markets have advanced rather more than here.

CUTCH is very firm, with sales of *MM* in tablets at 32s.; *Star B* ditto at 31s.; and *BMOL* at 28s. to 29s. per cwt.

ELATERIUM.—There has been another arrival from Malta, but prices keep up well, and sales have been made at 3s. per oz.

ERGOT OF RYE.—Sixty packages came from Vigo in the *Tamar* yesterday. The London market is quiet, and it is very difficult to effect sales, though some small quantity of fair French has been sold since the last auctions at 2s. 4d. per lb.

GALLS (CHINA).—A firm market. On the spot 55s. per cwt. is asked for good quality, and for shipment 48s. per cwt., c.i.f. terms.

GALLS (TURKEY).—Sales of good blue Bassorah are reported at 57s. per cwt., and of green ditto at 49s. per cwt.; good white galls are wanted, and would bring from 43s. to 44s. per cwt. Blue Smyrna galls are being offered at 55s. but can find no buyers.

GAMBOGE.—We are told that some business has been transacted privately since the auctions upon the basis of 12l. per cwt. for fair Saigon pipe, partly ricy in fracture.

GLYCERINE.—Firmly held. For double-distilled German (s.g. 1,260) 66s. per cwt. is said to have been paid, but we think there are second-hand holders willing to shade that figure.

GUM ACACIA.—The London market has been very quiet since the last auctions, although *Ghatti* is reported to be inquired for, and somewhat scarce. *Senegal* gum is very quiet and low in price at present. *Galam* may be bought at 42s. per cwt. f.o.b. *Soudan* gums are still arriving in Liverpool. We have not heard of any further business on them, and the prices asked for what is offering run from 60s. to 75s. per cwt. according to quality. Some sales of good soft sorts have been made at 72s. 6d. per cwt. *Gehzirah* gum is held nominally for 35s. to 40s. per cwt.; *Talca* for 5s. less. *Egyptian Amrad* gum is scarce, and 37s. 6d. per cwt. has been paid.

GUM MASTIC.—The new crop is now arriving, but our supplies are rather small. There is no demand, however, and prices are nominal, at 2s. to 2s. 2d. per lb. for clean pale drop, and 1s. 6d. to 1s. 10d. per lb. for yellow.

GUM TRAGACANTH.—Holders are now asking very high prices, which interfere with business in the better grades.

HONEY.—*Jamaica* honey is scarce, especially in good liquid amber quality, in which hardly anything is offering; there are several inquiries.

INDIGO.—According to mail advices from Calcutta, dated October 26, the new *Oude* indigo, which is now arriving, is generally dry and of good quality. The *Behar* samples show a fair average, but those received from *Bengal* are not so good as last year's.

IPECACUANHA.—Another arrival of 21 bales from Montevideo is reported this week. A few bales of good plump Carthagena root have been sold privately this week at 5s. 6d. per lb.

JABORANDI-LEAVES.—There has just been an arrival of 30 bales of this much-wanted drug from Ceará, in Brazil. Two bags have also come in from Maranhão per *Braganza*. The 30 bales which have arrived in Liverpool are said to be genuine, but very short and rather stinky leaves. It is not stated whether they are thick and of good colour.

LIME-JUICE.—The market remains firm, but without much change; 1s. 2d. to 1s. 3d. per gallon is now asked for fair West Indian.

LITHIA.—We hear that small sales have been made at 6s. 6d. to 7s., but the manufacturers are not offering any at present. It is said that there is not a sufficient quantity of litholite available now to suffice for the preparation of the normal requirements in lithia.

MORPHIA.—The price of Smith's brand in powder has been raised to-day to 3s. 9d. per oz.; and that of Macfarlan's has also been advanced from 3s. 4d. to 3s. 6d. per oz. *Codéia* is now held by the makers for 12s. 6d. per oz., but probably it would be possible to buy still at 12s.

OIL (COD-LIVER).—The market is firm, and sales are reported at 75s. per barrel for best non-congealing Norwegian. But few of the owners try to push sales at present, as they appear to think that prices are certain to rise further before the new fishing. In Norway the very small stock is well held, and in Hamburg, we hear, there is next to nothing to be had.

OILS (ESSENTIAL).—Small sales of *Star anise* oil on the spot are reported at 6s. 2d. to 6s. 3d. per lb.; the latter is now the general quotation. For shipment also the market closes slightly better. After a sale at 5s. 4½d. per lb., c.i.f., nothing is now to be had below that figure. *Menthol* is decidedly firmer again. Sales have been made at 10s. 9d. per lb. this week, and 11s. per lb. is now asked by some holders. The c.i.f. quotation is 10s. 6d. to 10s. 9d. per lb., but there is not much offering for early arrival. To-day, however, there are offers at reduced prices for distant shipment—viz., from 9s. to 9s. 6d. per lb., c.i.f., November-December. The following figures denote the principal changes in the price of ordinary commercial brands of menthol during the last ten years:—

—	1883	1884	1885	1886	1887
	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.
January ..	—	31 6	40 6	32 6	13 6
February ..	—	—	—	20 6	10 9
June ..	—	45 0	—	—	—
September ..	—	—	32 6	—	—
October ..	60 0	—	—	13 6	—
December ..	54 0	45 0	—	—	10 9

—	1888	1889	1890	1891	1892
	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.
January ..	10 9	7 3	6 9	—	7 0
March ..	8 0	—	—	—	—
April ..	—	—	—	9 6	—
October ..	7 3	—	—	—	11 0
December ..	—	6 9	—	—	—

Japanese Oil of peppermint is held to-day at 7s. per lb., while for American oil (HGH) 12s. per lb. would be accepted.

OPIUM.—There has been a good deal of excitement in London caused by the continued reports of higher prices in Smyrna and Constantinople, which reached their maximum to-day when a telegram from Smyrna announced a rise of 4d. per lb. upon yesterday's quotation, 7s. 3d. having been said to have been paid there for Talequale quality. The business in our market includes *Salonica* of old crop up to 10s. 3d. per lb. This variety, which is suitable for manufacturing purposes, has been particularly enquired for. *Soft shipping* opium is held for 10s. 6d. to 11s. *Persian* which has undergone very little change at 10s. to 10s. 6d. according to quality; *fine druggists* at 8s., and *seconds* at 7s. to 7s. 6d. Altogether a very considerable business has been done, though it is difficult to estimate the exact

amount. There is very little offering here in fine shipping opium of this year's crop, and all the new Karahissar, which has arrived has been bought up. There have also been considerable sales of fine old Tokat opium. We hear from Smyrna, under date of November 5, that during the week then ending about 350 baskets were bought for the Dutch Government, out of which, however, it was thought that not more than 100 to 120 would pass the examiner's tests of quality. A little rain had fallen in the northern growing districts, but none in the southern. The total 1892 crop is now estimated at about 8 500 baskets, of which, at the date of writing, 3,250 had arrived in Smyrna, against 2,660 last year. This does not include the arrivals in Constantinople and Salonica.

QUICKSILVER.—The quantity of quicksilver forwarded by rail from San Francisco for the nine months ending September 30 was 11,800 bottles in 1892, against 8,402 bottles in 1891. In London the market is sluggish, at 6*l.* 6*s.* in second-hand.

QUININE.—The market during the early part of the week remained neglected at 9*½d.* per oz. for second-hand German bulk nominally; but on Wednesday a sale was reported of 5,000 oz. second-hand (spot) at 9*½d.* per oz.

RHUBARB.—The only arrivals this week have been one, of 39 cases, per *Rosetta*, and one, of 27 cases, per *Achilles*, from Shanghai.

SHELLAC.—Last week the market closed rather firmer, with sales of several hundred cases *Orange TN*, for delivery from December to February, at 8*s.* per cwt., and no sellers below that figure. At the auctions, 1,348 cases were offered, of which 917 sold at irregular rates. *Second orange* opening full *l.* lower, but closing steadily. *Garnet* and *button lac* *l.* lower. The following were the prices paid:—*Fine orange*: ASSL unworked pale bronze blocky, 90*s.* to 91*s.* *Second orange*: Worked, broken to fair reddish livery, 84*s.* to 86*s.*; unworked, fair to good bright flat, 85*s.* to 88*s.*; cakey to fair reddish, 82*s.* to 85*s.* per cwt. *Button lac*, good pale first unworked, 96*s.* per cwt. *Garnet*, unworked blocky to fair but cakey AC, 84*s.* to 86*s.* per cwt. After the sales the speculative market again improved, and a fair amount of business was concluded at higher prices, closing as follows:—*Orange TN*—November, 87*s.*; December and January, 88*s.* per cwt.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

OUR market closes exceedingly firm, and last week's advance has been surpassed by several pence. The sales for the week ending to-day amount to 100 cases, including *Karahissar* opium at the parity of 7*s.* 5*d.* per lb., f.o.b., and usual kind of *Manufacturing* at from 6*s.* 10*d.* to 6*s.* 11*d.* per lb., f.o.b.

Notes of Nobelties.

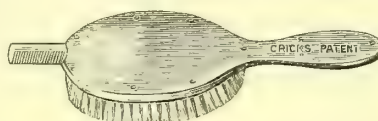
A NEW KOLA PREPARATION.

MR. THOMAS CHRISTY, of Lime Street, after much experimenting, has succeeded in preparing kola in such a way that a palatable beverage may be made from it by the simple addition of boiling water, sugar and milk according to taste. Hitherto the chief obstacles in the way of ingratiating kola-powder with the public to the same extent as cocoa have been its astringency, earthiness, and wryness of taste. Mr. Christy claims that these drawbacks are quite removed by his new process, and we have had occasion to convince ourselves of the truth of this assertion by partaking of a cup of the new "Christy's prepared kola" made from the first sample batch. The process has the further advantage that the natural colour of the kola is not only not lessened, but is actually brightened, none of the kola-red or of the active principles of the drug, so we are informed, being lost in the process of manufacture. The firm are

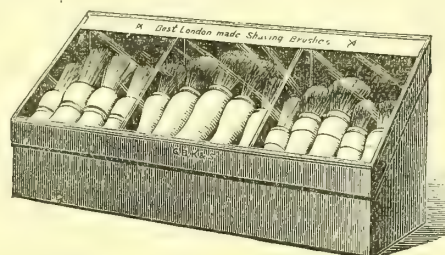
about to bring their new preparation upon the market, put up in tins similar to those in which the familiar cocoa-powders are sold, and are just engaged in tinning their first batch of a few hundredweight. The powder made by the new process is of a rich red-brown colour, and has none of the greasiness of the yellow powder produced under the ordinary process.

THE BRUSH TRADE.

HERE are two nice things which Messrs. G. B. Kent & Sons, of Great Marlborough Street, W., are introducing to their customers. First, we have a boon to travellers—a hair-



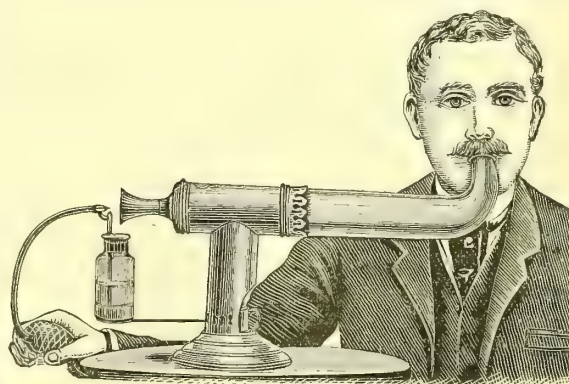
brush with a recess in the back for holding a comb. This is manufactured under Crick's patent, and is an article of decided utility. The second illustration is a drawing of a new



shaving-brush showcase, which contains a saleable assortment of brushes exposed in such a way as to encourage trade.

STÖRMER'S "NORWEGIAN" INHALER.

MESSRS. JOHNSEN & JORGENSEN, of 5 Savage Gardens, E.C., have taken over the agency for Great Britain of the inhaler of which we give illustration. The instrument, we are informed, has been in use in Scandinavia for some time, and and is highly spoken of by several of the best known medical authorities in Christiania. The special advantage



claimed for the inhaler is that it is the only one by which dry or fluid drugs can be distributed undiluted in minute particles into the upper part of the respiratory organs. The apparatus consists of a large tube in which the air is heated by means of the lamp underneath. The drug in solution is placed in the bottle at the end and thrown into the tube by pressing an indiarubber syringe. The theory is that the hot air in the tube absorbs the moisture adhering to the drug particle and carries them in dust-form into the lungs.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Conditions of Labour in Pharmacy.

SIR,—My advice to assistants is, Combine. The more you ventilate your grievances and seek a remedy, the more you will understand the difficulties of the position. In my youth assistants had no evenings off, no yearly holiday, 30% maximum salary, and 7 to 11 ordinary day, and that in London; their present position shows a vast improvement, and I should be glad to see both employers' and assistants' hours further reduced.

Assistants by meeting together and discussing the question would find they partly are the cause of their present position. They ruin their future prospects by accepting situations in stores and cutting-shops. If these stores could not obtain assistants they could not remain open. And how often has early-closing been wrecked by assistants! In St. John's Wood for some twelve years every chemist closed at 8. This arrangement was upset by one young man keeping open a business he bought till 11, and often later. Had this gentleman been a unionist assistant he would have seen the folly of such a course.

Our business is peculiar in the smallness of its returns and in the demands of the public. Taking chemists' businesses in London, ninety out of a hundred do not make a return of 1,000%. When rents were moderate a third could be reckoned upon as net profits, but now selling on invoice prices and a higher-scale rent it is a mystery to me how the ordinary chemist exists. Then, again, if a chemist closes at 7, what about the calls after that hour? People are constantly ringing me up late, and on Sundays at all hours, for really necessary medicines. Is the employer to be the slave, and debarred from going out after shop is closed, or on Sunday?

Then, again, objection to indoor berths. Chemists generally are unable to meet *externe* salaries of 80% to 100%, and having no one on the premises at meal-times and night. As a rule it is an assistant's fault if he is not comfortable.

Chemists' salaries, like all other professional men's assistants', can never be liberal except in isolated cases. But I believe by combination and common sense a great improvement could be made. The want of combination has been our curse. I therefore say to employers and assistants, Combine, join the Society, and lead the Council instead of the Council now leading us. If we took more interest in the Society the *Pharmaceutical Journal* would be improved and as eagerly sought after as THE CHEMIST AND DRUGGIST is now.

Truly yours,

South Hampstead.

ARTHUR SANGSTER.

SIR,—Your report of the meeting to discuss the above subject will be read with considerable interest by assistants who were not able to be present. I do not see that much can be done to shorten the hours of business, as the public will not purchase their physic until the evening—at any rate, in the suburbs of London and large towns.

The irksomeness and injury to health caused to assistants by their excessive hours might be alleviated in the indoor berths by the employers making their men a little more "at home." After dinner I do not see why the assistant should not join the master in his pipe and afternoon siesta, but of

course this could only be done in those places where the "missus" is not master.

With regard to remuneration, I find myself in accord with Mr. Parry, who spoke at the meeting: we must be content with what we now get until things get better for the drug-trade. Mr. Harrison appeared to object to the items in advertisements, such as non-smoker, churchman, dissenter preferred, and so on; I think putting these items in advertisements is very useful, as it gives the reader who is looking for a berth an idea of the man who is advertising. The words "comfortable home" in an advertisement, however, require reading with an ironical inflexion to be properly appreciated. I never answer advertisements with this description in them: I have had some "comfortable homes." I should like to offer a little advice to chemists' wives as to the amelioration of indoor assistants' grievances. Let them remember that the board and lodging is part of the remuneration for services rendered, and that the assistant is not a mere interloper. Let them see that his bed is properly made, and that he is as comfortable as if he were a lodger in furnished apartments. Mrs. Chemist can do much in this way if she likes, and it will be well for her to begin.

Yours truly,

November 5. A MAN OF THE WORLD. (159/33.)

The writer of the letter quoted by Mr MacEwan on page 672 informs us that after the Great Portland Street place another pharmacy is referred to in the sentence beginning, "I and the assistant used to go out."

SIR,—I was pleased to see the "Union business" had re-kindled, and should like to say a few words on its behalf. What we want is a "Chemists' Union," comprising chemists, chemists' assistants, and apprentices. The object of the Union, I take to be thorough trade protection—protection to all. And the Union to be built in such a manner that any grade can air its particular grievances.

Trade-protection there never will be without legislation. How can we obtain legislation? Only by combination. Therefore I say it is useless a few trying to do good: it wants combination. We must capture all in connection with the drug-trade, then we shall have a voice which can be heard at Westminster.

Assuming 40,000 in touch with the drug-trade, I take it that everyone is sufficiently interested to stand by a cause which is so beneficial to himself and his *confrères*, but with that "sufficient interest" he would have to oil in the shape of a yearly subscription.

How do the following figures look on paper? Say:—

10,000 masters at 10s. per annum	£5,000
20,000 assistants at 5s.	5,000
5,000 apprentices at 2s. 6d.	625
Wholesale houses, 20s. each, and 20s. for each member	
of wholesale house—say	1,000
	£11,625

What a grand Union, having an income of 11,500%! How to work it would be to divide the country into districts, letting each district elect its own council, and a grand council selected from the district councils, which would be absolutely essential for legislative and such important matters.

All associations belonging to the craft could be amalgamated with the Union, and thus we could soon arrange locally a uniform price for drugs, the patented-medicine question, shop-hours, and shake up the stores; while the grand council would be in a position to pull the strings at Westminster, and make our Government protect us—nay, the whole country would be with us.

Assuming this came to pass, it would be a bad look-out for any man or wholesale house who did not join the Union. Those who are in extreme difficulties could easily be looked after by the district council. With this vast sum we could, to make the Union more popular, give life-insurance policies—say, to the amount of 20%, payable in the event of death during membership.

But we must find out what sort of a membership we are going to have before we can put anything into practice. Therefore permit me to suggest that every chemist, chemist's

assistant, and apprentice should send (with your permission Mr. Editor) to your office, on a given date—say, December 3 1892—a post-card, addressed “Union Department, Office of THE CHEMIST AND DRUGGIST,” &c., and, for the purpose of easy analysis, to be drafted something after this style:—

I promise to pay a yearly subscription to the Chemists' Union.

	Qualification whether master, assistant, or apprentice	Yearly subscrip- tion according to rank
Name—		
Address—		
Town—		

I think if all who are so deeply interested in trade-protection, &c., were to fall into this or some such view, we should, by January 1, 1893, be able to start full-speed ahead.

Yours, &c.,

REX III. (221/39.)

[We know the drug-trade too well to accept any such duty as that which our correspondent proposes. We print the letter as a specimen of the sanguine estimates which are often made, but which depend for realisation on the impossible theory of a universal agreement with the writer.—*Ed. C. & D.*]

A Day's Dispensing.

SIR,—In answer to your request that dispensers would write you on the subject of the possible daily output of prescriptions, perhaps a little bit of personal history will be better than a ream of theorising. Firstly, let me premise that previous to the time of which I am writing, I had been some years in one of the historic West-end houses, and—if you will pardon me a little self-praise—was considered a quick and accurate dispenser. Well, two or three years ago I was at the Army and Navy Stores as a “dispenser,” and while there we were expected to do a daily average of sixty items. Anyone who has tried it week after week will bear me out that it was downright slavery. That this was so was practically admitted, as complaints became so frequent that the rule was perforce relaxed. Admitting, however, for the sake of argument, that “sixty” items is an average possible tale of daily work, we get the following result:—Nine dispensers doing sixty items daily, two copiers, five finishers, and one superintendent—i.e., seventeen persons for 540 items, or an average of 31.76 items daily. This figure gives the utmost possible amount of work a man could get through if he had absolutely nothing else to do, as we had a “stockkeeper,” who filled up our bottles and made such preparations as were not bought, and if he is added to the staff, it brings out the result to exactly thirty; and then there was an army of boys constantly washing mortars and measures, squeezing lemons, heating plaster-irons, and doing odd jobs of that sort. Perhaps many of your readers to whom prescriptions are like angels' visits, may open their eyes in astonishment and incredulity at these figures and opinions, but there are lots of men I could name who could verify them if they had not the fear of “the Major” (the warrior, not the examination) before their eyes.

Yours obediently,

C. P. (161/43)

SIR,—During last winter's epidemic of influenza, a day's dispensing for the man probably exceeded fifty prescriptions in many establishments, and I should consider that number anything but phenomenal. I myself copied, wrote labels, and dispensed (without wrapping) seventy-three prescriptions on one occasion; and at that time sixty was of very frequent occurrence.

Yours,

F. J. F. (159/73)

Questionable Postcards.

There are postcards circulating just now which provincial chemists should be chary about. They apparently emanate from persons who are interested in detecting infringements of the Medicine-stamp Act. Mr. J. Goodenough, Somersham, Hunts, has had one dated from Earlsfield, Surrey. It says:—

Kindly send me price-list or handbills recommending medicines of your own make suitable for a family to keep at hand.

A similar card, in different handwriting, and emanating from West Hampstead, has been received by Mr. J. Gant, Raunds, Thrapstone:—

Will you kindly send me your price-list or handbills of medicines suitable for general family use?

In both cases the object of the request is too transparent to deceive any but the unwary, but this note may warn chemists to be on their guard, and may induce some to ensure themselves once more that they have no medicines unstamped which are liable to the duty.

The “West Malling” Case.

SIR,—Perhaps the enclosed correspondence would be deemed conducive to the ends of justice were it published in your next issue. The prisoner has not, however, given his full name, which is Wm. Gascoigne Shepperley, his father's being Wm. Shepperley, formerly a jeweller.

I am, yours faithfully,

GEO. SHEPPERLEY.

Western Terrace, The Park, Nottingham, Nov. 13.

The following are copies of the original letters sent:—

St. Benedict's Abbey, Fort Augustus, N.B.,
October 18, 1889.

DEAR MR. SHEPPERLEY,—Your nephew, Mr. W. G. Shepperley, has applied for admission to this abbey as a novice; in fact, he has since last week commenced to make a first trial of his religious vocation. For the importance of the matter you will kindly forgive me for applying to you for some information about his character, former life, &c. Your opinion, founded on your intimate acquaintance with your nephew, with regard to his fitness for the monastic life, will be of much valuable help to me. With sincere apologies for troubling you in this way,

Believe me, dear Mr. Shepperley,

Yours sincerely,

(Signed) + LEO LINSE,
Abb.

Western Terrace, The Park, Nottingham,
October 20, 1889.

VERY REVD. AND DEAR FATHER,—In reply to your letter of this morning, I regret to have to acknowledge being an uncle of the young man you have written about, although we have never been intimate for reasons too painful to relate.

His career from a youth (when he was imprisoned) has been one of pain and disgrace to all connected with him. It greatly surprises me to learn that he has given you his real name, as for the last nine or ten years I have only heard of him by his many aliases, such as Archdeacon Baring, at Nottingham; Comte d'Islay, at Paris; and Mons. Regnier, at Liverpool, in which latter city I imagined him still to be.

I heard many years ago that he had been some time with the “Marist Brothers,” at their house in Belgium, but never learned the reason of his leaving. You may imagine how surprised I am to learn the contents of your letter, and with what horror I regard his attempt at a religious vocation.

I only wish I could hear of him safe in some penitentiary, and turning his undoubted abilities (he has had untold opportunities) in some honest direction.

I am, Very Revd. and dear Father,

Yours very faithfully,

(Signed) G. W. SHEPPERLEY.

The Very Revd. Leo. Linse, Abbot.

DISPENSING NOTES.

156/35. *Bos.*—We should think that it is the 40-per-cent. acetic acid that is meant in the prescription.

The Australian Prescription: Protests.

SIR,—The intention of prescriber and writer of illegible prescription is evidently a sedative digestive after a full

meal, which is only taken once a day in Australia. I still adhere to one after dining every day.

M.P.S., N.S.W.

Mr. Mount, of Dorking, begs to inform the publisher of THE CHEMIST AND DRUGGIST that he did not give the rendering of the Australian prescription as represented in the journal of November 12. The following is the correct copy of the rendering sent, which is not more curious than many given, nor so curious as the publisher has made the rendering appear:—

* Magister bism.	..	..	..	..	3iij.
† Oryz. pulv.	..	..	..	..	gr. iiij.
Pepsine puræ	..	..	..	..	3ss.

Divide in pulv. eq. xij.
j. s. every day.
* Bism. nit. † Rice (powdered).

[The rendering was set up from the original.—Ed. C. & D.]

SIR,—I am of opinion that Messrs. Wilcox are literally correct in their reading of the recipe; the small dose probably suggesting "porci" instead of "puræ," to the majority. I may mention that I was doubtful of the magnes. pond being correct for the same reason—namely, the small dose. I think it remarkable that so hurried a writer should be so careful as to dot every "i." In the word "pepsine" he seems to have put the dot, but not the hook, and there is no dot at the end of "porci."

Yours truly,

A. MAIR.

Leith, November 12.

SIR,—In your remarks respecting the translations of "Australian Prescription *Fac-simile*" I note you state only one gives the quantity of second ingredient differently—viz., gr. viij. I think, if you please refer to my post-card sent in, I gave it opii pulv. gr. iiij, there being four distinct dots above the line following the word "gr." I read it "gr. iv.," and should most certainly have dispensed it thus:—

Magister bismuth. (subnit.)	..	..	..	3iij.
Opil pulv...	..	..	..	gr. iv.
Pepsinæ puræ	..	..	..	3ss.

Div. in pulv. xij.

Yours respectfully,

18 Southwell Road, Nottingham,
November 15.

G. U. SPRATT.

LEGAL QUERIES.

158/10. *One in Doubt*.—It is not necessary to stamp medicines recommended for the complaints of animals other than human beings.

161/25. *His Master*.—You would have no *locus standi* in an action against your ex-apprentice. If he is not of age he could plead infancy, and in any case the Statute of Frauds, which enacts that no action can be maintained on a verbal agreement in respect of a contract that is not to be completed within one year, would provide a perfect defence.

161/15. *W. M.*—You (not being qualified under the Dentists Act) cannot legally be a partner in a business in which the title "dentist" is used or exhibited. Still less, of course, can you be proprietor of such a business. The qualified dentist may be the proprietor, and you his assistant; but if it could be proved against you that you were carrying on the business on your own account, you would be liable to a penalty.

161/14. *T. W.*—We think it could be proved that by "camphorated oil" is generally understood the lin. camph. of the Pharmacopœia, and, if so, it would be an offence under the Sale of Food and Drugs Act to sell any other compound under that name.

163/18. *Chemicus*.—Neither sulphate of zinc, salt of lemons, nor precipitate ointment is a scheduled poison.

161/64. *V. C. W.*—You require a "sweets" licence to sell orange wine. The retailers' licence (25s.) allows you to sell quantities of less than 2 gallons (or one dozen) at a time, but to sell more than that you must have a dealer's licence. (5l. 5s.) THE CHEMISTS' AND DRUGGISTS' DIARY contains full information concerning all licences.

161/71. *Acotin*.—It is not necessary to label a furniture-polish "poison" because it contains liquor antim. chlor.

MISCELLANEOUS INQUIRIES.

157/17. *Gluc*.—A trace of oil of mirbane appears to be the scent of the liquid gluc which you send.

156/70. *Carbon*.—Nesbit's Specific—See THE CHEMIST AND DRUGGIST, January 26, 1892, page 93 *et seq.*

156/44. *A. G. R.*—Leaf Lard is a name for *Adeps preparatus*.

157/12. *Dom Nay*.—The best way to make Solution of Nitrous Ether is to follow the B.P. process omitting the last 2 pints of rectified spirit. The distillate is a 1-to-3 preparation.

Sample Queries.—We hope to deal with these next week, and other correspondence held over.

Trade Notes.

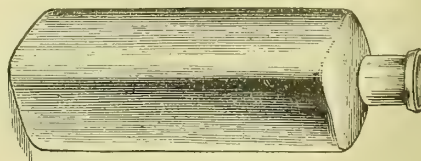
MESSRS. HEATH BROS. have removed to larger premises at 27 Blackfriars Street, Manchester.

MESSRS. BURROUGHS, WELLCOME & CO. have been awarded a gold medal for their exhibit at the Genoa Exhibition.

MESSRS. SHIRLEY BROS. are removing from Farringdon Road to larger premises, which they have secured at 105 Upper Whitecross Street, E.C.

THE "Perfection" clinical thermometer, which is manufactured by Messrs. Hudson & Co., 5 Crosby Square, E.C., is one in which, in addition to a magnifying stem, the mercury column is so adjusted that the record of the bodily temperature is made within half a minute. In practice we find the thermometers satisfactory. The manufacturers invite correspondence with chemists in view of the approaching winter's trade.

MESSRS. H. GILBERTSON & SONS, of St Andrew's Street, E.C., are now making square dispensing-bottles in the round-corner style, which has become so popular in the flat shape. The bottles look well, as our illustration shows, and they are produced either plain or graduated. The metal is of the



pleasing fluorescent tint of blue commonly called "quinine-tinted." There has been no hit in the bottle line of recent years which has been so well responded to by the trade, and it is certainly sound business to add to accuracy in dispensing that degree of neatness in externals which customers regard as the accompaniment of good work.



ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
A WEEKLY JOURNAL

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Summary.

AN Irish candidate communicates his experience of the licence examination.

MR. J. S. WARD, principal of the Liverpool School of Pharmacy, died on Wednesday.

IN an Editorial article we give particulars regarding the Court of Arbitration founded in the City of London. The arbitrators are to be men in business.

THE unqualified assistant of a Welsh doctor has been censured by a coroner's jury for giving a woman 10 grains of strychnine instead of as much croton-chloral hydrate.

THE Midland Railway Company were the carriers of some parcels of dye, which they failed to deliver promptly. The dye in consequence became unsaleable at the expected prices, and the consignee has now been awarded the difference by the Judge of the Wakefield County Court.

A PHARMACEUTICAL ASSOCIATION has been formed at Cambridge amongst the juniors. Mr. Mair laid before the Dundee Assistants' Association a scheme of botanical study which as the support of pharmaceutical botany examiners. The Chemists' Assistants' Association of London held a successful *conversazione* last week.

IN our correspondence columns the discussions are continued on the conditions of labour in pharmacy (a chemist's wife having something to say), and what may be reckoned as a fair day's dispensing. Several letters on practical topics are printed, and we have more "questionable post-cards" asking for price-lists of proprietaries.

THE Chemical Society resumed work last week. The rooms of the Society have been greatly improved, and the electric light introduced. Professor Taorpe stated that he had repeated Moissan's experiments in the isolation of fluorine, and had failed to get that element. Moissan has practically refused him assistance.

"The Pharmacy and Poison Laws of the United Kingdom."

2s. 6d.; post-free, 2s. 9d.

This book is now ready. It is thoroughly valuable to all connected with pharmacy, and we have received highly complimentary notes regarding it from several gentlemen who take a special interest in pharmacy law. The following reviews have appeared:—

From the office in London of THE CHEMIST AND DRUGGIST comes a handbook of "The Pharmacy and Poison Laws of the United Kingdom." The book, which has no author's name attached to it, gives the statutes, the parliamentary discussions on the Acts of 1858 and 1869, and notes of the decisions. It will thus meet all the necessities of students preparing for the examinations of the Pharmaceutical Societies, for which purpose it appears to have been designed. But there is no reason why, convenient and comprehensive as it is, the book should not prove useful to a wider body.—*Scotsman*.

IN handy form we have here a history of the formation of the Pharmaceutical Society, and of the legislation which has from time to time been passed affecting the position of such society and regulating the sale of poisons in this country. The cases which have been decided, many of them merely in county courts, or magistrates' courts, and which would in an ordinary way remain unreported, are given clearly here, and thus render the book much more useful to the legal practitioner than it otherwise would be.—*Manchester Courier*.

WE have received from the office of THE CHEMIST AND DRUGGIST a very useful and laborious treatise on "The Pharmacy and Poison Laws of the United Kingdom—Their History and Interpretation." It furnishes a history of the legislation with regard to the practice of pharmacy in the United Kingdom, and includes an account of the pharmacy laws in force in Canada and the Colonies. It is intended for pharmaceutical students but forms a handy reference-book for others.—*Scottish Leader*.

THE CHEMISTS' AND DRUGGISTS' DIARY, 1893,

will be delivered to subscribers in the United Kingdom in the course of next week by Sutton & Co. Carriage is paid on all the Diaries, but it always happens that some of Sutton's agents will make a claim. In all such cases subscribers will oblige by paying the amount charged and taking a receipt for it. We will refund the amount thus paid if the receipt is sent to us. Subscribers whose subscriptions expire at the end of November will please note.

POST-CARD COMPETITIONS.

WE remind intending competitors who have not yet sent in their post-cards that November 30 is the last day for sending in. The object of the competition is to secure ideas, plans, sketches, or suggestions for a Christmas display of goods of any kind generally sold by chemists and druggists. The display may take the form of an effective window-dressing, counter-arrangement, or any other scheme which will give prominence to the goods, which will be consistent with the season, and encourage trade or draw custom. We do not exclude from the competition any ideas which have been carried out by chemists in past Christmas seasons. These will be treated on their merits. Nor do we place any limit upon the number of post-cards which a person may send in, but the rule is strict as regards "one idea on one post card." Competitors will please use *white* post-cards if they send any sketch.

English News.

A Devonport Chemist Gets a Month.

At the Devonport Police Court last week Richard Sweet Coke, chemist, late of Albert Road, Morice Town, was charged with assaulting his wife, Ellen Elizabeth Coke. The prosecutrix stated that the defendant came to the house where she was living and pulled her out of the room by the throat to the passage, where he used her very badly. Her evidence was supported by two other witnesses. The defendant stated that he went to the house to kiss his wife and make a reconciliation. (Laughter.) He had given away to drink lately and become very dissipated. The Bench ordered him to find two sureties of 20*l.* each to keep the peace for six months, or in default a month's imprisonment. As no sureties were forthcoming he went to prison.

Strychnine for Croton Chloral: a Doctor's Assistant Severely Censured.

Mr. A. J. Rhys, coroner, last Friday concluded an inquiry at Mountain Ash regarding the death of Mrs. Mary Ann Mellin, 22, who died at her residence 51 Henry Street, Mountain Ash, on November 7 under somewhat painful circumstances. She had been suffering from toothache, and went to Dr. Evans's surgery and received from an assistant some powder in a piece of paper. She went straight home, put the powder in a small glass with two tablespoonfuls of water, and swallowed it, death taking place shortly after. At the first inquiry an adjournment was made to allow of an analysis being made, and Dr. Morgan, public analyst for the county of Glamorgan, now said that upon examining the stomach he found seventh-tenths of a grain of strychnine.

Dr. E. P. Evans said that Mr. Owen Jones was his assistant. He had no qualification, and had been an assistant under him from four to five years. Mr. Owen Jones was in his (Pryce Street) surgery on last Monday week. Mr. Kent Jones was there also. He himself had only just left when deceased came in. He was called to deceased at half-past 8 [she took the powder at 6.30], and found her on the bed, complaining of pain, and suffering, as he thought, from a form of convulsive hysteria and paroxysms and twitching of the muscles. After a while she said that she felt much better, but complained of stiffness. He then ordered mustard poultices to be applied to the calves of her legs, and stayed there ten or twelve minutes and told them to let him know how she was at 10 o'clock. In the meantime she died. Strychnine was kept in a bottle, marked "Poison," on a shelf in the surgery, and was not kept with any non-poisonous matter, but was put away with other poisons. He saw the strychnine on the Sunday before in its usual place, together with other poisons. He always found Mr. Owen Jones to be careful.

Mr. Owen Jones said he was an assistant to Dr. Evans, and had filled that position for nearly five years. He had no qualification. He gave deceased a powder, which he thought was croton chloral. He took hold of the bottle and weighed 10 grains of the powder, but did not look at the label, thinking the bottle would be in the same place as usual. The strychnine-bottle was a new bottle, and was close to the chloral. He never used strychnine, and never saw that bottle there before.

Dr. Evans said that the strychnine-bottle had been on the shelf about a fortnight before this happened. Mr. Owen Jones spent most of his time at a branch surgery, but he occasionally attended there.

The Coroner having summed up, the jury considered the evidence in private, and ultimately returned the following verdict:—"Death from poisoning by strychnine, dispensed in mistake for croton chloral by Mr. Owen Jones. We find that the manner in which the poison was dispensed was negligent and deserving of censure, but we are of opinion that the negligence did not amount to criminality."

Butter of Antimony Poison.

An innkeeper named Luke Hoyle, 46 years of age, of Mount Tabor, near Halifax, got up in the night, went downstairs, and drank some butter of antimony from a bottle, came back to bed, told his wife he felt unwell, and died the same day. He had bought the stuff the day before from

Mr. Farr, chemist, Halifax for the cow's feet, and it was labelled "Poison." The jury found that the "man died from the effects of an overdose of butter of antimony, administered by himself, but with what intent there is not evidence to show."

Fire.

Mr. F. Appleby, chemist, Retford has just come through "a near thing" in the shape of a shop-fire. Cause, the conventional one—boy, lamp, and barrel of spirits. The lamp dropped, set fire to the spirits, and had it not been for the neighbours' exertions, Mr. Appleby would not have managed to put the conflagration under.

A Bovine Visitor.

Mr. Frederick Warren, chemist, of Moulsham, Chelmsford, had a visit from a cow the other day. It was making straight for the back shop, when Mr. Warren escorted it out the way it came in.

Chemicals and Thames Water.

At the meeting of the London County Council on Tuesday, the Main Drainage Committee reported that under the authority given to them by the resolution of the Council of March 13, 1891, they had engaged an expert to make observations on the organisms in sewage and sewer-air under various conditions and the effect thereon of antiseptics or other chemicals. They considered it desirable that these investigations should be continued in the direction of ascertaining the effects produced by organisms on sewage, and whether the conditions of the air in a small experimental sewer with intermittent flows of sewage were similar to those found to exist in large sewers, also as to the condition of sewer-air in stagnant sewers and at the pumping-stations and other places where abnormal conditions exist. For this purpose it would be necessary that the services of the expert, Mr. J. Parry Laws, should be retained, and they recommended—"That, subject to an estimate being submitted to the Council by the Finance Committee, as required by the statute, we be authorised to retain the services of Mr. Laws, at a cost not exceeding 105*l.*" This was agreed to.

A Semi-jubilee.

The Nottingham and Notts Chemists' Association was founded on December 10, 1863, and special reference will be made to the fact at the twenty-fifth annual dinner, which is to be held at the Masonic Hall, Goldsmith Street, on Wednesday, December 7, at 8.30 p.m. Tickets for the dinner can be obtained from Mr. W. Gill, 207 Radford Road, or any other officers of the association.

A Doulton Exhibition.

This week Messrs. Doulton & Co. have a special exhibition in their showrooms on the Albert Embankment, S.E., the *pièce de résistance* being a fine memorial statue of the late Henry Fawcett, M.P., which Sir Henry Doulton has presented to Lambeth for erection in Vauxhall Park on the spot where "The Lawns" (the house formerly occupied by Mr. Fawcett) now stands. The statue has been designed and modelled by Mr. George Tinworth. The entire height of the Memorial is about 16 feet. The pedestal measures 8 feet by 4 feet at the base, is 7 feet 6 inches high, and will be placed on a wide terra cotta step. On the sides of the pedestal are eight bas-reliefs containing subjects appropriate to Mr. Fawcett's character and work, four representing the virtues—"Courage," "Sympathy," "Justice," and "Truth"; three others relating to the Post Office—"Receiving Good News," "Receiving Bad News," and a female post-office clerk; and the last panel representing "India," in which Mr. Fawcett took an active interest. The group surmounting the pedestal represents Mr. Fawcett as seated, attired in professorial robes. The likeness is excellent. Behind him stands a figure of Victory, with extended wings and holding out a wreath of laurel. Along with this are exhibited a large number of Mr. Tinworth's famous panels representing Scriptural subjects. These are to be sent to the Chicago Exhibition, with another piece of Mr. Tinworth's—a magnificent vase (still unbaked) of quite original design, the outstanding feature being a series of medallions representing the sovereigns of England from the dawn of the Christian era to the present day. An exceptionally choice selection of "Doulton ware" Lambeth

faience, Burslem china, &c., is also to be sent to Chicago. The various pieces are typical, and there is scarcely any duplication to be seen in the whole of the collection, which is an excellent example of how art has been combined with modern science for the production of things of beauty. For example, amongst the Burslem ware (rarely to be seen at Lambeth) the production of unique glazes can be seen in several stages, the final stage showing a surface of pearl-like lustre. In the same case there is a fine Dante vase which is valued at 400/. Anyone who has still the opportunity of calling at Lambeth this week should not fail to see the exhibit.

The Chemists' Counter Tempted Him.

On November 18, at the Southampton Borough Police Court, George Cordey, 26, cook on the ss. *Orinoco*, R. M. Co., was charged with stealing 1 bottle of Eno's Fruit Salt, 1 bottle of Lamplough's Saline, 2 bottles of lime-juice and glycerine, 1 bottle of hair-wash, 1 bottle of smelling-salts, 1 jar of pomade, and 1 bottle of hair-oil, the property of James Turnbull Rubie, chemist, of 19 Bernard Street, Southampton. Mr. Rubie, who identified the articles as his property, valued them at about 7s. A shop-boy said the prisoner came into the shop when he was there alone, and took the articles from the counter. He called his master, who ran after and overtook the prisoner, who then threw something behind him. A little girl picked up the jar of pomade and handed it to him. Mr. Rubie took the prisoner back to the shop and gave him into custody. Prisoner elected to be summarily dealt with, and said he only came home from sea the same morning and had too much to drink. He did not remember anything about it. As it was his first offence prisoner was fined 40s., including costs.

The Wrong Bottle.

Sarah Ann Shore, aged 68, late of 40 Cedar Street, Cheetham, had been ailing, and a doctor who attended her prescribed some medicine and lotion. The latter was for application to her left side, and was labelled "Poison." She took the lotion instead of the mixture and died.

At Portmadoc, Ann Jones, a school-girl, was ill with scarlet fever. Her stepfather was at the same time suffering from sleeplessness and religious melancholia, and was attended by Dr. Griffiths. Dr. Roberts, Dr. Griffiths' assistant, made up a prescription for both patients, the stepfather's containing opium. The bottles were different, and there were different labels. The mother gave the daughter four tablespoonfuls of her father's opium mixture, and she slept into death.

Smoking Concert.

Messrs. Barron, Harveys & Co.'s cricket club had an enjoyable smoking concert in the Queen's Arms Tavern, Cheapside, last Friday evening. Mr. S. C. Gibbs was the chairman, and the programme included songs and pianoforte, mandoline, and violin solos.

Giving Laudanum to Children.

The infant child of Charles Thompson, of Sheffield, was weak and troublesome, and its grandmother—Mrs. Grattan—gave it a dose of laudanum—she could not be sure how much, but not more, she thought, than 3 drops. She had been accustomed to give the drug to her husband and children without harm, and she was surprised when her grandson became convulsed. Dr. Hargreaves was summoned and prescribed, but the child died from, the doctor certified, "Debility from birth and a dose of laudanum." At the inquest on Saturday the Coroner said 1 drop was sufficient to have killed the child, and Mrs. Grattan deserved punishment; but as there was no chance of obtaining a conviction the verdict was that the laudanum was administered without felonious intent.

Profits on a Medical Invention.

In the Westminster County Court on Tuesday, before his Honour Judge Bayley, in the case of *Lyall v. Hillock*, the defendant applied to set aside an order of committal. The defendant, Mrs. Mary E. Hillock, stated that she carried on business in Berners Street, W., as

the proprietor of an article known as the "Medical Electrode," which was an invention for the cure of deafness and loss of sight. Trade had been very dull, however, for some time past, and that was why she had not been able to meet her liabilities. She now asked that further time might be given her to pay this judgment debt, in respect of which an order for her committal to Holloway had been made. If an extension of time was given her she would pay it, but at present it was impossible. The Judge ordered the warrant of committal to be stayed for a further term of one month.

Weights and Measures.

A report has just been issued by the Board of Trade on their proceedings and business under the Weights and Measures Acts, 1878 and 1889. From the last examination of the Imperial standard pound weight it appears to have decreased in weight since it was restored and legalised by the Standards Act of 1855. Although the amount of diminution is not appreciable from a trade point of view, the Board are taking into consideration the question of restoring this standard as provided by section 6 of the 1878 Act. The Board have found on inquiry that the provisions of the Acts are well administered by most local authorities, but in the smaller boroughs there has been reluctance to carry out the requirements of the Acts, owing to expense. In a few districts visited, both county and borough, the requirements had either been entirely disregarded by the local authorities, or the administration had grown so feeble as to afford practically no protection whatever to the purchasing public or to traders.

Carbolic acid Poison.

Mary Burton was a servant in the employment of Mr. Theakston, a veterinary surgeon, of Gainsborough. She was suffering from toothache, and on Friday Mrs. Theakston gave her some cotton wool soaked with carbolic acid to place on the tooth, and this relieved the pain. The following morning the mistress went out, and when she came back found the girl on the hearthrug unconscious, and by her side a bottle, in which still remained some carbolic acid. Attempts at resuscitation were made, but unavailing. At the inquest Dr. Cassan deposed that death had resulted from carbolic-acid poisoning, and the jury returned a verdict of death by misadventure. They added an expression of opinion that Mr. Theakston should keep such poisons in safe places not accessible to servant-girls. The bottle was not labelled "Poison."

Mary Ann Maughan, 17, daughter of a policeman at Ormskirk, committed suicide with carbolic acid a few days since.

A man was found in Hyde Park last Saturday morning dying, with an empty bottle by his side which had contained carbolic acid. He was taken by the police to St. George's Hospital, where he died. Papers found on him indicated that he had come from Newcastle-on-Tyne.

An inquest was held at Brighton on Tuesday on the body of Rebecca Baker, a married woman, who committed suicide by drinking carbolic acid. The jury returned a verdict of suicide during temporary insanity, and added a rider to the effect "that it would be advisable to place some restriction upon the sale of such poisons to young children."

General Medical Council.

The autumn meeting of the Council commenced on Tuesday, and continues throughout this week. One of the subjects which the Council is to consider is the legality of the club system of medical treatment. In the large industrial centres in England there are clubs which employ salaried medical officers, retaining them for their exclusive service, the clubs themselves dividing the profits. There is a desire in medical circles to put down this practice.

A Sequah Concert.

On Monday evening a concert was given at Kingston Drill-hall to bid farewell to Sequah, the programme being carried out by a number of London artists, including Professor Baildons, Mr. Will Downes, Professor De Lara, and Madame Hartley Snow.

Scotch News.

Personal.

Mr. H. Bellyse Baildon, M.A., has, since he abandoned pharmacy, gained a considerable reputation as a lecturer. He gave the first lecture at the Edinburgh Literary Institute last week, the subject being "Bavaria and the Passion Play," and elsewhere, in lecturing on "Our Colonial Continent," he gave expression to some original views on gambling, these having special relation to the gold-fever. Mr. Baildon and Mr. Robert Cox (of J. & G. Cox, glue and gelatine manufacturers, Gorgie) have been elected members of the Midlothian County Council.

Mr. Adam Alexander, chemist, Aberdeen, has gained by competition the Strachan Medical Bursary, founded by the late Alexander Strachan, Esq., of Moreseat, and which is under the control of the Aberdeen Medico-Chirurgical Society.

Dr. J. M. Macfarlane, who for several years has been assistant to the Professor of Botany at the Edinburgh University, and lecturer on the subject at the Royal (Dick's) Veterinary College, has been appointed Professor of Biology in the University of Pennsylvania. Dr. Macfarlane is well known to Edinburgh pharmacists, and is the only "outsider" who has ever been asked to lecture before the Edinburgh Chemists' Assistants' Association, whose particular boast it is that its work is carried on by its own members.

Mr. J. Laidlaw Ewing and Mr. Peter Boa will be entertained to dinner in the Royal Hotel, Edinburgh, on the evening of Friday next, in recognition of their services as Vice-Chairman and Secretary respectively of the local executive of the Pharmaceutical Conference.

Mr. James Mackenzie, F.S.A., chemist, Edinburgh, who is known to be an ardent bibliophile and collector of antiquarian curiosities, is the possessor of some original Burns MSS. (poems and letters) the authenticity of which is disputed. There has been quite a lengthy and warm correspondence about the MSS. in the Ayrshire papers.

Mr. R. Urquhart, secretary to the Provident Dispensary, Marshall Street, has been ordered abroad for his health, and is leaving for South Africa. His medical friends are to entertain him to dinner in the Royal Hotel before he goes.

An Edinburgh Trade Association.

The proposal to form a Trade Association among Edinburgh chemists, referred to in our issue of October 15, is now assuming a practical shape, and a meeting for its consideration will be held on December 8. As has already been stated, its objects, as contemplated by the promoters, will be to consider questions affecting the trade generally on which there would be likely to be unanimity, and on which combined action could be taken if necessary.

French Pharmaceutical News.

(From our Paris Correspondent.)

GLYCERINE FOR GALL-STONES.—In a recent paper read before the Paris Academy of Medicine, Dr. Ferrand recommends glycerine instead of olive oil for the treatment of gall-stones. He has found that doses of 10 grammes taken in potash-water generally relieve pain, while doses of 25 grammes in most cases generally remove it. Dr. Ferrand does not go so far as to say that glycerine will dissolve the calculi, but he considers there is no better method of treating hepatic colic.

THE NEW MEDICAL LAW.—The law on the practice of medicine was a subject of debate in the French Senate last Tuesday. That body has on three occasions during the past two years returned the Bill to the Lower Chamber for alteration. The only point that now gave rise to discussion was Article 11, by which it was intended to prevent the simultaneous practice of medicine or dentistry and pharmacy.

M. Cornil, the reporter, explained that this would be more in its place in the proposed new law on pharmacy; after some remarks by Dr. Brouardel, the Senate approved this view, and then proceeded to pass the Bill in its entirety.

A PLETHORA OF PRIZES.—If M. Marcel Delépine keeps up the promise of his youth, his name will probably rank high in the pharmaceutical world ten or fifteen years hence. Among the prizes awarded to laureates of the Ecole Supérieure de Pharmacie de Paris for the session 1891-92, M. Delépine alone took four—to wit, general work, the first prize (silver medal and 75*fr.* worth of books); among the second-year scholars in practical chemistry, first prize (silver medal) for physics; scholarships—the *Prix Lebeault* (500*fr.*) and the first of the two *Prix Henri Buignet* (600*fr.*).

DYNAMITARDS AND PHARMACY.—It seems impossible for pharmacy to rid itself of the machinations of the dynamitards. On this occasion it is an English pharmacist, Mr. Alfred Coleman, formerly of Norwich, who has been made their victim, fortunately only as regards finances. Mr. Coleman occupied a large *appartement* in a well-appointed house at 59 Avenue Kléber. Unfortunately, in an ill-advised moment the proprietor accepted the Public Prosecutor as a tenant. Then the anarchists threatened to blow the house up. The other tenants immediately gave notice to leave, and out of respect for his wife's feelings Mr. Coleman did likewise. But the wily landlord managed to find a flaw in Mr. Coleman's letter advising his intention of leaving. The consequence is that after a lawsuit this gentleman has to pay the rent of his *appartement* for a further period of three years. He mentioned incidentally to the representative of THE CHEMIST AND DRUGGIST a few days ago that his law and other expenses in this connection will amount to 400*fr.*

A COMMITTEE OF DISCIPLINE.—The Syndical Chamber of Pharmacists of the First Class of the Seine Department has had under consideration for some time past the formation of a "Committee of Discipline." The object of the committee is to watch closely any cases of fraud in the sale of medicaments, and to consider any complaints that may be brought against pharmacists. If such complaints are well founded, the delinquent will receive a friendly notice announcing that a second offence may be followed by prosecution. From the "constitution" it appears that the nine active members of the committee must have been the proprietors of a retail pharmacy for a period of ten years, and they will be elected for a term of three years. The president, vice-president, and secretary of the Chamber will be *ex officio* members of the committee. The committee will meet once a month. The implicated products will be submitted to a professor of the School of Pharmacy for analysis. All the working-expenses incurred by the Committee of Discipline will be borne by the Syndical Chamber. M.M. Melville, Bocquillon, and Houdé are respectively president, vice-president, and secretary.

THE PERFUME OF FLOWERS.—At the Academy of Sciences on Monday, November 21, M. Ménard, a young botanist, read an interesting paper on the question of the origin and manner of formation of perfume in flowers. By a minute microscopic study of the different parts of flowers, he has discovered that the essential oils which produce odour have their seat in the inner surface of the flower-cup and the corolla. As a rule only a very few drops of essence are to be found on the outside. On the other hand, the colour-pigments and the tannin from which they are formed abound. Following up the development of flowers, M. Ménard remarked that the chlorophyll is the principle from which these products are derived. In the first place it changes to a glucoside, a substance similar to tannin; but the chemical action does not stop here. While on the outside, exposed to light and air, the glucoside serves for the formation of pigments and tannin, on the inside, which is protected in the bud, it is transformed into essential oils, and by rapidly oxidising, when the flower is in bloom, the perfume is produced. A perfume is fine in proportion to the strength of the essential oil—*i.e.*, the more the secondary products derived from the chlorophyll are eliminated from it. This explains why white flowers are generally odorous, why green flowers have no smell, why composite flowers (rich in tannin) have a disagreeable odour, and why artificial white lilac and forced roses have a finer perfume.

Foreign and Colonial News.

FAILURE OF A NEW YORK PERFUMERY HOUSE.—The firm of Munro & Baldwin, of New York, perfumers and agents for Zeno & Co., London, have failed. Their condition as reported to creditors (says the *Oil, Paint, and Drug Reporter*), is a very deplorable and unsatisfactory one, the liabilities being very high and assets extremely low.

DISTRESSED RUSSIAN PHARMACISTS.—The Council of the St. Petersburg Pharmaceutical Society have issued an appeal to all Russian pharmacists for contributions to enable them to alleviate the distress of the many broken-down provincial pharmacists who are drifting into the Russian capital and applying for help. The condition of pharmacy in Russia appears to be very miserable, and, although a pension fund has been projected, funds are immediately wanted to cope with urgent distress.

TIN v. EUCALYPTUS OIL.—A tin-mine of enormous richness was reported to be discovered the other day in Tasmania, with the result that all the working men about Hobart rushed off to the locality of the reputed deposits there and then, leaving the work to take care of itself. The hands employed by the Tasmanian Eucalyptus Oil Company left their work on the first rumour of the discovery, and although the manager kept the whistle going at intervals all day, not a man responded. The supposed tin-mine proved a fraud, and when our report left the manager of the Eucalyptus Company was expecting the return of his men.

IMPORTERS' DIFFICULTIES IN TURKEY.—Importers—particularly of foodstuffs and pharmaceutical articles—in Constantinople are complaining of the loss inflicted upon them by the long detention at the Custom House of goods which the authorities, on the allegation of adulteration, order to be submitted to chemical analysis. It is said by the *Levant Herald* that the fault rests with the analytical chemists of the "Bureau Medical," who, though occasionally prompt enough, spend weeks and months over their analysis when the case lacks the element that would quicken their interest in it. The "element" here euphonically referred to is probably of the same nature as "aurum," well known locally by the name of "baksheesh."

U.S.A. TRADE-MARKS.—The following were registered at Washington on November 8:—Representation of a trefoil figure, for camphor, by Gribble & Nash, New York; "Indapo," for pills, by Harris C. Wilkinson, Chicago; "Solomon's Wonder," for a liniment, by Solomon Eskridge, Rockwood, Tenn.; "Dr. Johnson's" over a monogram device, for sarsaparilla tonics, by A. C. & G. F. Weber, Albany, N.Y.; "Antithermal," for powder for allaying fevers, &c., by H. J. Parker, Clayton, Ill.; "Genetica," for a remedy for gonorrhoea and gleet, by E. H. Davis, Elmira, N.Y.; "Bovine," for medicinal remedies, by the Capital Drug Company, Augusta, Me.; "Antifetor," for deodorising-powder, by C. W. Chancellor, Baltimore, Md.; "Hite's Magic Cream," and figure of an open hand, for toilet cream, by James F. Hite, Owensborough, Ky.

MEDICINE-TAXES IN SPAIN.—The Barcelona Pharmaceutical Society (we learn from *El Memorandum*) have held a meeting to consider a clause in the new Spanish Revenue Bill enacting that every packet of mineral waters or patent medicines (*especificos*) offered for sale, must bear a Revenue stamp of 10 Céntimos—i.e., 1d. It was decided to memorialise the Government against the Bill, in the first place, on the ground that the sale of all patent medicines is nominally illegal in Spain, and that it cannot have been the intention of the Government to levy a tax that would legitimise an illegal trade, hence the only explanation of the Bill is that it intends to include all compound medicaments under the name *especificos*, and thereby impose an intolerable tax upon pharmacists. The 10c. mineral-water tax is expected to bring in about 30,000*l.* a year.

CANNABIS INDICA IN INDIA.—A former officer of the Bengal Civil Service, writing to the *Times* on the subject of the evils arising from the use of ganja in India, states that the only parts of the country where Indian hemp is cultivated are three districts in Lower Bengal, its cultivation

elsewhere being forbidden. The area of cultivation is included within a radius of about sixteen miles. The cultivators are required to take out a special licence from Government, and the storage, classification, transport, and retail sale of the drug are supervised by Government officers and regulated by Government rules. The yearly revenue derived from the sale of ganja is about 150,000*l.*, and the quantity consumed in Lower Bengal about 6,000 maunds of 82 lbs. weight. To its use (says the correspondent) can be traced many of the worst crimes in Lower Bengal, and to indulgence in it are due five times as many cases of insanity as can be attributed to spirits and opium combined.

QUININE FOR THE MILLION IN INDIA.—Thanks to a suggestion made by Mr. A. C. Tute, magistrate of Dinagore, says the *Madras Mail*, there seems to be every prospect of a cheap agency being arranged for supplying people in Bengal with quinine. The first suggestion was that passed medical students, who are to be found in most villages, should be the distributing agency, a drug almirah being opened at each principal post office. But this was when it was proposed to supply other drugs as well as quinine. The Government has, however, decided to supply quinine only, and it has been determined that the public shall pay directly for the quinine instead of getting it at the expense of the District Board. Postmasters will be utilised for the distribution of the febrifuge, and are to be remunerated by a commission of 1*l.* in the rupee on sales.

Next Week.

Secretaries of Associations and Societies should give the Editor post-card notice of meetings to be held, and the business to be transacted thereat, 5 Wednesday of the week before.

WEDNESDAY, NOVEMBER 30.—*The Royal Microscopical Society* will hold a *conversazione* in the Banqueting Saloon, St. James's Hall Restaurant, at 8 P.M.

WEDNESDAY, NOVEMBER 30.—*Edinburgh Athletic Club.* Run from J. Speed's, 2 Howard Place, Canonmills, at 8.45 P.M.

THURSDAY, DECEMBER 1.—*Chemical Society*, at 8 P.M. "On the Formation of Orcinol and other Condensation Products from Dehydracetic Acid," by J. Norman Collie. "Isolation of Two Predicted Hydrates of Nitric Acid," by S. U. Pickering. "Anhydrous Oxalic Acid," by W. W. Fisher. "Observations on the Origin of Colour and of Fluorescence," by W. N. Hartley. "The Origin of Colours—Azo-benzene," by H. E. Armstrong. "The Reduction Products of *aa'*-dimethyl-*aa'*-diacetyl-pentane," by Dr. Kipping. "The Products of the Action of Sulphuric Acid on Camphor," by Drs. Armstrong and Kipping. "Methods of Showing the Spectra of Easily Volatile Metals and their Salts, and of Separating their Spectra from those of the Alkaline Earths," by W. N. Hartley.

THURSDAY, DECEMBER 1.—*Chemists' Assistants' Association*, 103 Great Russell Street, W.C., at 9 P.M. Mr. W. R. Mitchell on "Six Months of Foreign Pharmacy."

THURSDAY, DECEMBER 1.—*Dundee Chemists' Assistants' Association.* Mr. J. Laidlaw Ewing will lecture on "A Holiday Trip to Russia, Finland, and Sweden," in Young's Hall, Nethergate.

OUR GERMAN FRIENDS (says the *Optician*) are hardly up to the mark in writing English as "she should be wrote." The following is a copy of a letter sent from a firm in the Thuringen district. "Dear Sir,—You receive my list C under separat-cover on these prices I to them 20 per cent. discount give. It is discount-nest by neat prices find not employing. I enclosed you yet price the goings sorts thermometer find, which I after England much send. Lists across thermometer send I late you as these yet are in work, after ready position also to. Lour further orders soon expect—" This needs some thinking over before one can arrive at the proper meaning.

The Winter Session.

CHEMICAL SOCIETY.

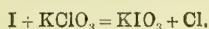
SIR HENRY E. ROSCOE formally opened the new session on Thursday, November 16. The rooms in Burlington House have a very different aspect since the alterations have been completed. In the theatre the old tiers of seats have gone, and all have been brought down to the floor-level. The platform is placed from east to west between the doors, and the seats are arranged in the same fashion, with several benches across the room at each end. The electric light has also been introduced, so with new paint, new bench-coverings, &c., everything looks very brilliant. Professor THORPE read the first paper, on thiosulphonic acid, an important compound of

FLUORINE.

This acid resembles chlorosulphonic acid in some respects, but boils at a higher temperature. It is a colourless liquid, attacks glass, and explodes when brought into contact with water. The properties of the compound were very fully described. In the course of a discussion which followed, Mr. PAGE asked if the isolation of fluorine by Moissan had been confirmed. To that Professor THORPE replied that he would be afraid to say how much Government money he had spent on that matter, for in the Royal College of Science they had repeated Moissan's experiments most carefully, but had failed to obtain the same results. He had written an account of all he had done, and asked Moissan to indicate wherein they were wrong, or in any other manner to specifically show how they could confirm his results; but Moissan would not do so—that is, he only replied in very general terms. So far, therefore, the French chemist's statements were without confirmation. Professor Thorpe then gave the gist of a note on

THE REACTION BETWEEN IODINE AND POTASSIUM CHLORATE.

These substances are used in making iodine monochloride, and the text-books give a very complicated equation to explain the reaction. Noticing that the yield of monochloride was small and extremely variable, Professor Thorpe carried out the experiment under constant conditions, and found that there is none of the monochloride formed at all, but that the iodine drives all the chlorine out of the chlorate, so—



This is very bad behaviour on the part of iodine; nevertheless, the decomposition is such, and it is almost quantitative. In the first of these papers Professor Thorpe had Mr. W. Kirman associated with him, in the second Mr. G. P. Perry.

Dr. W. H. PERKIN, sen., next took the audience through the general results of

OVER 4,000 EXPERIMENTS

on sulphuric, nitric, and phosphoric acids and salts thereof. These were in the molecular and magnetic rotations of solutions of the compounds, and they were made with the view to determining how the acids exist in solution, especially in view of the ion hypothesis. In the result the magnetic rotation was found to differ from the assumed hypothesis, and from the molecular rotation; but in the latter case, and as regards sulphuric acid, it was clearly brought out that there are two breaks in the curve, one agreeing with $H_2SO_4 \cdot H_2O$, and the other with $H_2SO_4 \cdot 4H_2O$. Dr. JAMES WALKER pointed out that Dr. Perkin had made no allowance for variable magnetic conductivity in the different solutions with which he had worked, and he thought that if that were done it would be found that the two sets of results would be in practical accord. Professor SPENCER PICKERING followed with another paper on

SOLUTIONS OF SULPHURIC ACID,

in which he showed, from the refractive indices and magnetic rotation, that 80-per-cent. sulphuric acid consists mainly of monohydrated acid, $H_2SO_4 \cdot H_2O$; 60-per-cent. tetra-

hydrated acid, $H_2SO_4 \cdot 4H_2O$; and 30 per-cent. hexahydrated acid, $H_2SO_4 \cdot 6H_2O$. Mr. Pickering is the principal exponent in this country of the hydration theory of solution, and he now gave a further example of his enthusiasm in a paper on

THE HYDRATES OF ALKYLAMINES.

By freezing solutions of methylamine and its homologues he obtained the amines in conditions of hydration varying from the half molecule to 6 molecules H_2O , according to the temperature. But all this, Professor THORPE explained, or much of it, had already been done by the late Professor Guthrie about ten years ago, and he had been accustomed to take advantage of the facts in his lecture experiments. Thus he showed that if we take a solution of methylamine in water and cool it to a certain point the solution becomes milky; cool it further, and it becomes clear again. He further showed, by the aid of the electric lantern, that pressure has a similar influence, thus showing that Boyle's law is as applicable to liquids as to gases, which fact coincides with Van 't Hoff's and Ostwald's theory that there is no distinct line of demarcation between gases and liquids.

Professor W. RAMSAY and Miss ASTON communicated a note on "The Atomic Weight of Boron" (see THE CHEMIST AND DRUGGIST, August 13, 1892, page 241). By the borax method the authors now find that the atomic weight is 10.995—practically 11.

Several papers were taken as read.

MIDLAND COUNTIES' CHEMISTS' ASSOCIATION.

A MEETING of this Association was held at the Mason College on November 17, when Mr. J. F. Liverseege read a paper on "The Sun and Planets: Their Distances, and How they are Measured." The paper was illustrated by means of the lantern with numerous slides and diagrams and the spectroscope. Mr. C. Thompson (President) was in the chair, and there was a good attendance of members and their lady friends.

CHEMISTS' ASSISTANTS' ASSOCIATION.

THE business routine of the members of the Chemists' Assistants' Association was interrupted on Thursday, November 17, by a very enjoyable *conversazione* at the Portman Rooms. A large number of guests were present. The first part of the programme consisted of an exhibition of pharmaceutical curios, very nicely arranged by Mr. J. O. Stead. Amongst the exhibits was a fine collection of pure chemicals sent by Messrs. Tyrer & Co. These comprised bismuth, mercury, and lithium salts, benzoates, hypophosphites, phosphates, and phosphoric acid, salts of ichthyol, and many organic compounds. Mr. Tyrer also sent a new form of a chemical balance (Betting), which can be manipulated without continually opening and shutting the case, by means of a system of levers, each bearing its separate weight. The publisher of THE CHEMIST AND DRUGGIST sent one of the rare first volumes of this journal, the octavo size which was adhered to for several years before the present size was adopted, and along with that he placed copies of the last Winter and Summer issues, the latter of which contained more matter than the whole of the first volume. Of interest also were the few specimens showing the evolution of the DIARY. First there was the small octavo size, that of 1870 containing the following articles, in addition to the diary matter:—"The Prices of Medicines," by Daniel Hanbury, F.R.S.; "Plain Directions for Testing Urine," by Professor Atfield, Ph. D., F.C.S.; "Mutual Help," by George Frederick Schacht, of Clifton; "English and Foreign Formulæ," by Joseph Ince, F.L.S., F.C.S.; and a number of special short articles on such subjects as "Headaches" and homœopathic pharmacy. In the following year the DIARY was changed to crown octavo, and the special feature was a long article on "Chemical Tests for Medicinal Articles," by Sydney W. Rich. The 1873 DIARY was uniform in size with THE CHEMIST AND DRUGGIST, and it marks the style which has not since been departed from, the diary pages being the same as now, the last pages being ruled and printed as a blank price-list. It contained 126 pages of literary matter and advertisements: the DIARY which we are to distribute to our subscribers in a few days contains 460 pages. The 1873 one weighed

15 oz.; that for 1893 dips the scale at 2 lbs. 13½ oz. A copy of the "Corner for Students" certificate was also exhibited. Messrs. J. Bell & Co. sent some fine arrows poisoned with woorari. The Pharmaceutical Society exhibited some very fine specimens of cinchona-bark, and a set of the so-called "terpeneless essences." Messrs. Corbyn & Co. showed a number of old pharmaceutical documents, and an old bell mortar dated 1536. A number of old apothecaries' pots were sent by Mr. Martindale and Mr. John Hodgkin. The other exhibitors were Messrs. Burroughs, Wellcome & Co., Miss Hicks, Mr. Peter MacEwan, and Messrs. S. Maw, Son & Thompson. The remainder of the evening was filled up by a concert arranged by Messrs. Robins and Robinson, which was a great success, and a dance which lasted well into the small hours of Friday morning, under the able management of Mr. T. W. Martin.

A PHARMACEUTICAL ASSOCIATION IN CAMBRIDGE.

ON Wednesday, November 16, a meeting of the chemists' assistants and apprentices of Cambridge was held at Mr. Addison's house, Market Hill—Mr. Arthur Deck, junior, in the chair. It had been arranged that a series of about six meetings should take place during the first part of the winter months for the reading of papers of pharmaceutical and scientific interest, followed by discussions. It is hoped, by thus introducing the matter to those interested in pharmacy in this town, at the end of the series a way can be seen to forming a Pharmaceutical Association.

At the meeting on November 16, an excellent inaugural address was given by Mr. ALBERT IVATT, B.A., M.P.S., F.C.S., of Christ's College, which was received with especial interest, as Mr. Ivatt holds the appointment of Lecturer in Pharmaceutical Chemistry to Emmanuel, Clare, Sidney, Sussex, and Christ's Colleges.

A hearty vote of thanks to Mr. Ivatt for his address was moved by Mr. HARRY CHURCH, and seconded by Mr. H. D. FUGG, of Trinity College, late Bell scholar and demonstrator at Bloomsbury Square. A discussion on the need of such a Society in Cambridge, and propositions for furthering the scheme, followed, in which Messrs. Elborne, of Trinity College (late Bell scholar), H. F. Cooke, E. S. Peck, C. S. Addison, Turner, Branch, S. H. Pryor, B. S. Campkin, A. Ivatt, and A. Smith took part. Votes of thanks to Mr. Addison for the room and to Mr. Deck for presiding were passed. A second meeting was held on November 24, when a paper on "Alchemy" was contributed by Mr. E. S. Peck.

DUNDEE CHEMISTS' ASSISTANTS' ASSOCIATION.

MR. W. MAIR lectured last Thursday evening (November 17) on "The Botany of the Minor Schedule," explaining a scheme which he had found valuable both in studying and teaching botany. He thought that students should make an early start, and they could begin anywhere and with the commonest objects—with the flower-pots in their own window-sills if they had no botanic garden. He reminded them that the true aspect of the subject was the physiological—to realise that every plant is a life and regard it as such. They should read their botany from the plants themselves, he said, and not from books; but to do this they had first to learn the alphabet, in order to be able to express themselves in the terse terms of modern botanical nomenclature. From this they would proceed to the internal structure, seeing everything for themselves and beginning with simple things, coming then to classification, and reading now and again, for the purpose of keeping up enthusiasm, treatises on such subjects as the wonderful adaptations of plant life—*e.g.*, insectivorous plants and the like. He had submitted this scheme to several well-known pharmaceutical botanists, and they were all in complete agreement with it. Mr. Corder wrote to say that after fifty years of botanical study he had come to realise how little he knew. So that it was well said by one very recently, "If the footprints of His servants are so glorious, what must be the All Wonderful Himself?" Mr. Jack deplored the want of practical knowledge exhibited by quite 90 per cent. of the candidates who presented themselves for examination. The cause of the

great grievance of the examiners was, he thought, that those cramming shops which flooded them with their pupils were inadequately supplied with the necessary materials and appliances by which they could teach their subjects—especially botany and chemistry—properly. Mr. Grierson wrote expressing the opinion that the examiners had been largely to blame for the dry-as-dust views of botany which were held by many students. This had arisen in some cases through their being bookmen and not naturalists. Mr. Druce was thoroughly in sympathy with any such scheme to simplify the study of botany and increase the interest of students in it. In conclusion, Mr. Mair advocated University training for pharmaceutical students, stating that, although the recent unfortunate experience in this direction at Owen's College might be taken to indicate that they were not quite ready for it, it would ultimately be found under the altered conditions of pharmacy to be the most desirable course.

THE PHARMACEUTICAL SOCIETY OF IRELAND.

THE second of the evening scientific meetings of the Pharmaceutical Society of Ireland will take place on Tuesday, December 6, at 8 o'clock, in the Society's house, 4 Mount Street, Dublin, when a lecture will be delivered by Dr. E. McDowell Cosgrave on the subject of "The Nerves: Their Use and Abuse."

All these meetings are open to pharmacists, students, and their friends.

THE SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.

ON Wednesday night there was a numerously-attended meeting of the members of the Sheffield Pharmaceutical and Chemical Society to hear a paper read by Mr. Preston, entitled

PRESENT-DAY INTERPRETATION OF THE PHARMACY LAWS: A REVIEW OF OUR POSITION.

Mr. R. WATTS, President of the Society, occupied the chair.

At the outset Mr. PRESTON said his intention was to review the various prosecutions, decisions, and views expressed by judges and coroners, together with the opinions expressed in the organs of the profession in the last five years. Commencing with the proceedings against Joseph Bailey in 1887, he passed in review all the more important cases in the interval, and gathered from the decisions given that a qualified man cannot give power to an unqualified man to keep open-shop, and that the sale of a poison must be made either under the direct supervision of a qualified man or by the qualified man himself. In the case of proprietary articles, it is essential that they be labelled with the name of the scheduled poison contained therein, and the name and address of the seller. In the case of supplying medicines to medical men it is essential to know them, to have a written order, and to enter the same. These precautions are also necessary in the case of the sales of poisons between one chemist and another. With regard to the Joint-Stock Acts the word "person" has a new interpretation, and has given an altered feature to their liability. He recommended his brother-pharmacists to loyally act upon the new interpretation of the Pharmacy Act, on the ground that it will be certainly for their benefit and for the greater safety of the public. The difficulties with regard to carrying out the Act are such as to terrify, and at first sight seem to be impossible to overcome, but with a closer acquaintance with them they become less formidable.

Mr. WARD said there could be no doubt that the pharmacist to-day was placed in anything but a pleasant position. The restrictions on the sale and compounding of poisons were such that it needed one to be constantly on the alert. He felt a difficulty in selling chlorodyne at all. He did not think it was requisite to label a medicine dispensed containing laudanum with the word "Poison."

Mr. HAINING was of opinion that some loophole should have been suggested by Mr. Preston for the unqualified assistant of a qualified chemist.

Mr. ELLINOR contended that the poison clauses of the

Pharmacy Act were imposed upon chemists against their will, and prosecutions under it should be made by the Government and not by the Pharmaceutical Society.

Mr. NEWSHOLME quoted the law with regard to chemists prescribing and dispensing medicines, and argued that they had not only a right to prescribe laudanum, but even prussic acid.

Mr. SHEEN (Mexborough) said pharmacists had a maximum of responsibility and a minimum of protection. He urged an amendment of the Pharmacy Act, and that the Pharmaceutical Society should make its desires known to members of Parliament.

Mr. MORRISON said there were many things with reference to the pharmacy laws that should be cleared up, and particularly with regard to prescriptions.

Mr. BRADWALL and Mr. A. R. FOX followed, and afterwards Mr. PRESTON replied on the discussion.

Legal Reports.

LIABILITY OF CARRIERS FOR DELAY.

IN the Wakefield County Court, last week, Mr. F. B. Crossley, chemical manufacturer, Wakefield, sued the Midland Railway Company for 16*l.* 10*s.*, the value of a special dye. The case had been partially heard, and was now completed. The facts were as follows:—Messrs. Baxter Brothers, of Bradford, ordered from the plaintiff's traveller, in April last, a keg of dye of special manufacture. This should have been received by the purchasers on April 16 in the ordinary course, but did not reach its destination until April 25, when it was refused acceptance.

Mr. Turner, who appeared for the defendant company, submitted (and quoted cases) that the plaintiff must prove, which he had not done, that his loss was more than the 2*l.* paid into court, after having done his best to dispose of the dye. Instead of doing this he had tried to make the railway company the purchasers. The contract on the part of the defendant company was to carry. No time was fixed for the delivery. It was the consignee's duty to realise, which he had failed to do.

His Honour pointed out that the article was not marketable.

Mr. Turner: He has never made any attempt to sell it.

The traveller admitted that something might be realised on the dye. He declined (in cross-examination by Mr. Turner) to state the price paid to the foreign manufacturers. He would write it down. [Written accordingly.] He had tried to sell it to the original dealers. They would not have it at any price. The dye, now that the season was past, was practically an unmarketable article. The quantity sent was 60 lbs., at 5*s.* 6*d.* per lb. He estimated the probable loss of plaintiff at 100*l.*, as he would very likely have sold a dozen more kegs had this one been delivered promptly.

His Honour, after looking over Mr. Turner's cases, said he must decide that the value had been reduced by 3*s.* 6*d.* per lb., and gave a verdict for the loss sustained, being 10*l.* 6*s.*, with costs.

DISSOLUTION OF PARTNERSHIP.—NOTICE TO DEBTORS.

At the Halifax County Court, on November 16, Sarah Ann Cowgill, mother and executrix of the late Brian Booth Cowgill, chemist, Sowerby Bridge, sought to recover from Richard Ingham & Son 17*l.* 9*s.* 9*d.*, balance of account for goods supplied.

It was admitted that the goods had been supplied, and the defence was that the account had been paid to Abraham Cowgill, another son of the plaintiff, who claimed to be a partner in the business, and to whom the order for the goods had been given.

His Honour gave a verdict for 11*l.* 5*s.*, deducting an item of 5*l.* odd which had been paid to Abraham Cowgill by defendants before they received notice as to dissolution of partnership.

BEECHAM'S PILLS' SAILS.

At the Eastbourne Police Court on November 18, Charles Hide, a boatman, was summoned under a by-law for painting on the sail of his boat a large advertisement, to the annoyance of residents or passengers.

The Town Clerk, who prosecuted, said the words of the advertisement were:—"The world's remedy; worth a guinea a box."

The Chairman: Are they Beecham's pills?

The Town Clerk: I presume so.

The Parade Inspector, in his evidence, subsequently said the words "Beecham's Pills" were on the sails.

Mr. Treacher (of Brighton) defended, and was asked by the Bench whether he appeared for the proprietor of the pills or the defendant.

Mr. Treacher: Well, I have received certain information from the proprietors of the pills.

After hearing the case, the Bench said if the defendant would give an undertaking that the advertisement should be discontinued they would only inflict a nominal penalty.

Defendant gave the undertaking, and was fined 2*s.*, with 18*s.* costs.

THE CONVEYANCE OF CHEMICAL MANURES.

IN the City of London Court, on Monday, before Mr. Julian Robins, Deputy Judge, Messrs. F. C. Hills & Co., 17 Philpot Lane, E.C., sought to recover the sum of 27*l.* 10*s.* from Messrs. B. & J. Shaw, of Hull.

Mr. Frederick Laing was counsel for the plaintiffs, and Mr. Scrutton for the defendants.

Mr. Laing stated that in December last the plaintiffs had several barge-loads of chemical manure waiting at East Greenwich to be loaded into a steamer and conveyed to Hull. They agreed with the defendants that the latter should send the steamship *Avalon* to Bugsley's Hole to take on board the four barge-loads. The defendants did not send the steamer within the prescribed time, owing to the captain having taken it to another wharf on the opposite side of the river, and the plaintiffs had, therefore, suffered serious loss.

The defence was that the reason the defendants' steamer did not get to its position by the time mentioned was because of the misguidance of the pilot whom the defendants took on board, but for whose fault the defendants were not responsible.

The Commissioner found for the plaintiffs with costs.

Bankruptcy Reports.

Re JOHN WILLIAM SENIOR, Barnsley, late of Ripon, Chemist and Druggist.

APPLICATION was made to his Honour Judge Bedwell at Barnsley County Court, on Thursday, November 17, for the discharge of this debtor, now employed as an assistant in a chemist's shop at Barnsley. The Official Receiver (Mr. W. J. Clegg) said the case was a very bad one. Defendant filed his petition on December 22, 1891, and stated his liabilities to rank for dividend at 112*l.* 9*s.* 9*d.*; proofs admitted, 50*l.* 7*s.* 8*d.*; number of claims not yet admitted or proved, 60. There were no assets whatever, and the Official Receiver said he had realised 4*l.* No dividend had been or was expected to be raised for the unsecured creditors. The bankrupt's assets were not equal to 10*s.* in the pound, he had kept no books, he had traded after he knew he was insolvent, and had failed to account for his deficiency. He began business in July, 1887; in July, 1889, paid a composition—he did not know how much—in July, 1891, made an arrangement for the benefit of his creditors, his debts then being 1,132*l.* 5*s.* 2*d.*, and assets 120*l.* His liabilities were made up of creditors who would not accept the deed of assignment then made, and he filed his petition to free himself from his liabilities.

Mr. Rideal, who appeared for the debtor, said the case was not so bad when it was explained. Debtor began business in

1887 at Ripon, being then 22 years of age, with 300*l.* borrowed capital. In 1889 he arranged with his creditors, paying 10*s.* to 15*s.* in the pound, the costs running the amount up to a full 20*s.* in the pound. His assets were 1,300*l.* when he made the assignment, but the trustees could not dispose of the business as a going concern, and fixtures which had cost him 150*l.* and stock which had cost him about 600*l.* went for the sum of 130*l.* The creditors in the present bankruptcy were creditors who did not agree to the assignment then executed. He was imprisoned for debt, and to free himself from his liabilities filed his petition. At present he was acting as assistant to a chemist, and getting 1*l.* a week and living rent free. He was a young married man, and he asked that his Honour would not tie him for ever from earning an honest living.

His Honour said when a man came empty-handed, without assets or any provision for his creditors, it would be a perversion of the Act of Parliament to grant him a discharge without a very satisfactory explanation.

Re SAMUEL BALME, Ravensthorpe, Medical Botanist.

THIS debtor came up for his public examination at the last sitting of the Dewsbury Bankruptcy Court. In reply to questions put by the Official Receiver, the debtor said that although he described himself as a medical botanist he in 1880 commenced a career as mesmerist and traveller about the country. He had been put to considerable expense by contracting smallpox during the epidemic at Sheffield. He had also had to pay heavy law costs, owing to a person named Duffield going to the Public Hall at Workington after debtor had been lecturing and calling him a fraud and a swindler, and asserting that he (Duffield) would end debtor's public career on that platform. He brought an action against Duffield at the Assizes, but a biassed jury threw him out of court. He was unable to lay down enough money for a new trial, so agreed to a verdict for defendant, he paying his own costs. He had been in a state of insolvency since 1885. The furniture at his house did not belong to him, as it had been purchased by his wife with money borrowed from her brother. The examination was finally ordered to be closed.

Business Changes.

MR. E. E. COMER, of 37 Hare Street, Woolwich, has disposed of his business to Messrs. Cook & Goldthorpe, of Doncaster. The transfer was negotiated by Messrs. Berdoo & Co.

MR. WILLIAM WILSON (from J. Bell & Co., Oxford Street) has purchased the business of Mr. A. G. Green, 281 Brixton Road, S.W. The transfer was conducted by Messrs. Berdoo & Co.

MR. JOHN ETTLES has purchased the business of Mr. Frederick Barry, at 11 Green's End, Woolwich. Messrs. Berdoo & Co. conducted the transfer, and valued for both vendor and purchaser.

MR. NATHANIEL CHARSLY has disposed of the business which he has conducted for the past forty years at 418 Brixton Road, S.W., to Mr. Arthur Bush. The negotiations were conducted by Messrs. Berdoo & Co.

MR. J. S. SIMCOCK, of Goswell Road, E.C., has recently opened a branch of "The Ladye Owen" Drug Stores at 58 Penton Street, Pentonville Road, N., formerly occupied by Mr. J. Bland, who has retired from business.

MR. WM. ALLAN, of Messrs. Carruthers & Allan, has taken the shop presently occupied by Mr. Young, umbrella-maker, in High Street, Dumfries, and intends opening therein in the spring. Owing to a dissolution of partnership this will change one of the oldest and most respected Scotch firms, and increase the number of chemists' shops in Dumfries to twelve.

Personalities.

MR. RICHARD SWINGBURN, chemist, has been appointed J.P. for the borough of South Molton.

ALDERMAN WILLIAM PARKINSON, Mayor of Burnley, has been placed on the Commission of the Peace for the borough.

MR. R. HARDING BREMIDGE, son of the Secretary and Registrar of the Pharmaceutical Society, has just taken the B.Sc. degree of the London University.

ACCORDING to *Pearson's Weekly*, Mr. Cockle, the well-known pill-maker, composes operas. Perhaps his is the music of the spheres which we have heard about.

MR. WILLIAM GEORGE SHARPE MOCKFORD, the financial agent whose name has been associated recently with Potsdam Reef and other mining companies, was originally a wholesale druggist.

MR. E. B. SHERLOCK, Redwood Scholar in the Pharmaceutical Society's School of Pharmacy in 1889, and Pereira Medallist in 1890, has passed the B.Sc. examination of the University of London.

MR. ROBERT GIBSON, pharmaceutical chemist, and head of the firm of Robert Gibson & Sons, medicated-lozenge manufacturer, Manchester, has just been made a magistrate of the city of Manchester.

MESSRS. PARKINSON, WELLS, PARTRIDGE, and LANDOR, all chemists' assistants, afforded considerable pleasure and amusement to their hearers, in their mandoline and guitar combination, at the Bournemouth Bicycle Club Supper last week.

THE Davy Medal goes this year to Professor François Marie Raoult, for his researches on the freezing-points of solutions, and on the vapour-pressures of solutions; while Sir Joseph Dalton Hooker, F.R.S., is to receive the Darwin Medal.

THE Kent County Council have reappointed Mr. M. A. Adams county analyst. The Chairman remarked that Mr. Adams had performed the duties remarkably well, and he thought he should be appointed for a longer period than one year.

A CIVIL-LIST pension of 75*l.* per annum has been granted to Mrs. Dittmar, widow of the late Mr. William Dittmar, LL.D., F.R.S., Professor of Chemistry in Anderson's College, Glasgow, in consideration of the distinguished services of her husband.

MR. DENNIS GREENWOOD, JUN., chemist, of Petty-cury, Cambridge, has been nominated a candidate for the vacancy on the Town Council, caused by the elevation of Mr. Cunningham to the aldermanic bench. Mr. Greenwood is the candidate of the Conservative party.

MR. W. J. BARNES, chemist, of Dover, has been presented by the members of the Dover Habitation of the Primrose League, of which he is the Ruling Councillor, with an illuminated address embodying their congratulations upon his elevation to the local bench of magistrates. The presentation was made by Mr. G. Wyndham, M.P., at the annual dinner of the Habitation.

THE late Mr. J. C. Turner, who for fifty years was dispenser at Barnstaple Dispensary, has bequeathed 750*l.* each to the London Missionary Society, the British and Foreign Bible Society, and the Irish Evangelical Society, and 720*l.* to the Religious Tract Society. An old servant receives 500*l.* and a house, and the residue goes to relatives. The value of the estate is said to be 20,000*l.*

HOW TO BECOME WEALTHY.—"A curious case occurred recently in the out-patient department of one of the metropolitan hospitals," says the *Lancet*. "A woman attending for fibrous stricture of the rectum said she had swallowed a *sovereign and a half* about a fortnight before, 'when larking.' The surgeon in attendance examined the rectum, and removed *three sovereigns* from the stricture with a pair of forceps at one grip."

New Companies.

CLARKE & Co. (LIMITED).—Capital 500*l.* in 1*l.* shares. Objects: To acquire the business of drug stores now carried on at 3 Market Place, Harrow Green, Leytonstone, and to carry on business as wholesale and retail chemists, vendors of proprietary medicines, druggists' sundriesmen, &c. The first subscribers (who take one share each) are: E. J. Allen, 3 Chapel Place, Pere Street, W., warehouseman; T. Jarrett, 41 Albert Road, Dalston, N.E., warehouseman; T. Barry, 23 Fordham Street, E., warehouseman; W. E. W. Rumsey, 11 Lupton Street, Kentish Town, chemists' assistant; G. Marchison, 91 Albany Street, N.W., accountant; H. W. Kirby, 3 Market Place, Leytonstone, clerk, and Annie Kirby, 3 Market Place, aforesaid. Registered without articles of association.

THE SCOTTISH DRUG DEPOT (LIMITED), 16 Nicolson Street, Edinburgh. Registered in Scotland to carry out the transference of the business, property, and assets of the old company registered under that name, and to carry on at any place or places within Scotland the business of wholesale, retail, and manufacturing chemists and druggists, as well as that of dealing in tea, spices, perfumery and general articles for public or domestic use. Capital 10,000*l.*, divided into 10,000 shares of 1*l.* each, with power to increase. Original subscribers, John Corstorphine, Junction Street, Leith, baker, 125 shares; R. Kerr, Bread Street, Edinburgh, grocer, 50 shares; W. G. Miller, Edinburgh, advocate, 50 shares; R. B. Wallace, Leith timber merchant, 10 shares; R. Grieve, 25 Leith Walk, Leith, bank agent, 12 shares; Rev. James Park, St. John's Parish, Leith, minister, 50 shares; G. S. Aitkin, Edinburgh, architect, 12 shares.

WORLD'S DISPENSARY MEDICAL ASSOCIATION (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Object: To provide and supply medical and surgical advice, and assistance and medicines of all kinds; to manufacture, compound, prepare, buy, sell, and deal in all kinds of medicines, drugs, and preparations, whether patented or not, and to carry on business as chemists and druggists, &c. The first subscribers (who take one share each) are:—R. V. Pierce, Bay Side, New York; L. H. Smith, M.D., 224 Elmwood Avenue, Buffalo, U.S.A.; V. M. Pierce, M.D., 65 Ashland Avenue, Buffalo, U.S.A.; B. T. Bedortha, M.D., 3 New Oxford Street, London; T. H. Callahan, M.D., 38 Orton Place, Buffalo; O. M. Shreve, M.D., 486 Pearl Street, Buffalo; and P. W. Dorris, 259 Hudson Street, Buffalo, superintendent. There shall not be more than five nor less than two directors, and the first are:—R. V. Pierce, V. M. Pierce, L. H. Smith, T. H. Callahan, B. T. Bedortha. Remuneration to be determined in general meeting. Registered office: 3 New Oxford Street, London, W.C.

MAGNETIC AND BOTANIC SCHOOL OF SAFE MEDICINE (LIMITED).—Capital, 2,000*l.*, in 1*l.* shares. Objects: To carry on the business of school or college proprietors in all its branches, and any other business that the directors may calculate to be advantageous to the company, either directly or indirectly. The first subscribers (who take one share each) are: D. Younger, 20 New Oxford Street, W.C., medical herbalist; A. Bedells, 78 Chatsworth Road, N.E., medical herbalist; R. Hoare, 92 Bartholomew Close, E.C., merchant; A. W. Maguire, 39 Devons Road, Bow, E., medical herbalist; C. Gapp, 104 Green Street, Victoria Park, E., medical herbalist; C. Norfolk, 19 Ball's Pond Road, London, medical herbalist; and V. Trimming, 96 St. Ann's Road, S. Tottenham, journalist. The first directors are D. Younger, C. Gapp, A. Bedells, R. Hoare, C. Norfolk, and A. W. Maguire. Qualification and remuneration not stated. Secretary, Rev. V. Trimming; registered office, 21 Stepney Green, London.

DEATHS.

BELLAMY.—On November 6, Robert Bellamy, chemist and druggist, Bedale. Aged 54.

BOUTTELLE.—On November 3, Harold Bouttelle, pharmaceutical chemist, Kennington. Aged 40.

GREEN.—On November 3, John G. Green, chemist and druggist, Brackley. Aged 65.

HOPPS.—On October 26, John G. Hopps, chemist and druggist, York. Aged 59.

LUCKMAN.—On October 28, William Luckman, chemist and druggist, late Manchester. Aged 66.

MURCHIE.—At Victoria Square, Lockerbie, N.B., on November 17, Mr. William Gardiner Murchie, chemist and druggist. Aged 34. Mr. Murchie as recently as October 22 took part in *THE CHEMIST AND DRUGGIST* correspondence on a homeopathic prescription. He was quite well until a week before his death, when he caught a chill, to the immediate effects of which he succumbed. He was a sergeant in the Lockerbie Company of the King's Own Scottish Borderers, and was buried with military honours on Monday.

RAMSDEN.—The death is announced, at the age of 65, of Mr. Alderman Alfred Ramsden, J.P., of Kingston, editor of the *Halifax Courier*. Mr. Ramsden was bred to the drug trade, having been apprenticed to Mr. Lofthouse, druggist, Corn-market, Halifax—the same shop that was afterwards occupied by Mr. William Dyer. Mr. Lofthouse removing, Mr. Ramsden did not finish his apprenticeship with him, but entered the service of Mr. Jabez Waterhouse, druggist, who had a shop in Northgate. When Mr. Ramsden had completed his apprenticeship, Mr. Waterhouse wished to remove to Ashton-under-Lyne, the place he came from, and Mr. Ramsden acquired the business from him. He conducted it for nine years, but not liking it, and having an inclination for newspaper work, he left it in 1856, and in the following year joined the staff of the *Halifax Courier*. "A man of refined nature, of large sympathies, genial, kindly disposed, generous, whose character was marked by an entire absence of meanness and self-seeking; a man of integrity, doing right from the very love of it, and hating all unrighteousness"; so writes a colleague of his who laments his loss.

SHARPE.—On November 4, John Sharpe, chemist and druggist, Crowle. Aged 75.

SHELEY.—Mr. Alanson Sheley, one of the oldest wholesale druggists of Detroit, died on November 9, aged 83 years. In 1859 he entered the wholesale drug-business in partnership with the late Jacob S. Farrand, and from that time until his death he was the head of the firm now known as Williams, Davis, Brooks & Co. Mr. Sheley was one of the millionaires of Detroit.

WARD.—At Liverpool, on November 24, Mr. John S. Ward, F.C.S., pharmaceutical chemist, the principal of the Liverpool School of Pharmacy, and president of the local Chemists' Association. The deceased gentleman was on the bright side of 40, and in his too short career as a teacher he had given evidence of high capabilities. Mr. Ward studied in the School of Pharmacy, Bloomsbury Square, and was a prizeman of the Pharmaceutical Society. After passing the Major he set up in business in Liverpool as a chemist, and undertook to "coach" pharmaceutical students privately. He was so successful in the latter capacity that he gave up the retail business a few years ago, and devoted his whole time to teaching. From his school several B.S. scholars have been elected, and a few have taken the Pereira or other pharmaceutical medals. Mr. Ward was a competent pharmacist, and we have in recent years published several papers from his pen. His death is a loss to pharmacy, and especially to that of Liverpool.

Gazette.

PARTNERSHIPS DISSOLVED.

Crossley, J. H., and Synnot, M., under the style of Hamer, Synnot & Co., Walton, near Liverpool, soap manufacturers.

Holtom, C. J., and Woodroffe, R. P., under the style of Holtom & Woodroffe, Ecclehill, Greengates, and Idle, Yorkshire, surgeons and apothecaries.

Johnson, W., and Robinson, J., under the style of Johnson & Robinson, Derby, mineral-water manufacturers.

Mann, T. E., and Benford, J., under the style of the East London Emery and Glass Mills, Plaistow, glass and emery powder grinder and manufacturers.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Mackenzie, William James, Holloway Road, N., doctor of medicine.

Whitworth, Alfred Ernest, trading as the Manchester and Liverpool Soap Company, Manchester, soap manufacturer.

HOW TO BECOME AN L.P.S.I.

BY A SUCCESSFUL CANDIDATE.

"WEDNESDAY, Thursday, and Friday, 5th, 6th, and 7th inst., having been appointed for your examination, you are requested to attend on the dates mentioned, at half-past 10 A.M., at 67 Lower Mount Street." So read the formal notice informing the candidates that their certificates, &c., had been accepted by the committee appointed to look into such matters, and that they might then sustain their claims to be admitted members of the Irish Pharmaceutical Society.

Precisely at the specified hour a dozen men met at the august entrance, and were promptly shown into the Registrar's office, where a dozen autographs were added to the archives of the Society.

Immediately afterwards, in the examination-room, twelve small tables were placed with chairs before them, and we sat down and waited the advent of the most important personage of the three days—namely, Dr. Ninian Falkiner, examiner in chemistry. Dr. Falkiner is a perfect gentleman in all senses of the term. After telling the men to put their names on the top of their answer-books, he distributed the questions, which have already been published in THE CHEMIST AND DRUGGIST. Immediately the sound of pens racing across papers showed work had commenced. This was broken presently by the doctor calling up a candidate from his paper for *viva voce*. We were taken up alphabetically. I came near the middle. The first question I got was, "What is the formula for butyl chloral hydrate? What is butyr of antimony? How would you prepare it? What are tests for antimony in solution? What is antimony glance? What is the formula of tartar emetic? What is the reaction which takes place when calomel is shaken up with lime-water? What with corrosive sublimate? Write them out in full. Did you ever hear of Boyle's Law, and what is it?" There were, besides, some questions on percentage composition, graphic formulae, and molecular weights. This was the bulk of the *viva voce* part, then I was allowed to go back to my paper and the next man was called.

The afternoon was devoted to practical chemistry—the analysis of three salts, and volumetric analysis. The salts I made out to be Rochelle salts, starch, and fine iron filings respectively; the solution H_2SO_4 with 21 grains acid in a fluid ounce. As soon as I had given in my answer-book I was allowed to leave.

Thursday morning was for written papers in materia medica and botany, with Dr. Montgomery, from 11 till 1. The afternoon, from 3, was *viva voce*—recognising specimens, plants, descriptions, &c. I was shown chrysarobin, iodide of potash (an extremely large crystal), gum elemi, cantharides, gamboge, ammoniacum, and several much commoner drugs; also I had to tell all I knew about them, from active principles to B.P. preparations. The plants were poppies, wild strawberry, *Colchicum autumnale* saffron, and several others, of which I knew the characteristics, but not the common names.

Having done fairly in this department, I was told I need not wait, so went away home to look over the last day's work.

Friday had a particular interest, inasmuch as Mr. T. W. Robinson, the new pharmacy examiner, was to make his *début* at 11 A.M. He made his appearance armed with a handbag and a paper parcel. The handbag contained his specimens, and the parcel his printed questions. Following the custom of the other examiners, Mr. Robinson worked in the *viva voce* with the written examinations. First he handed out a number of compound powders, then some fluid preparations, then pieces of wax, camphor, and hard paraffin, asking closely about the B.P. preparations and doses of what he exhibited. Then he took a run through dangerous doses and prescription-reading, and wound up a period of about twenty minutes by asking about the Poisons Act.

The afternoon was for practical pharmacy, and the examiner had a busy time with the "Twelve"; almost everybody had something to look for or a question to ask. But Mr. Robinson was equal to the task, and in a very few minutes every man was working as if his life depended on his success. Ointments, mixtures, blisters, suppositories, plasters, emul-

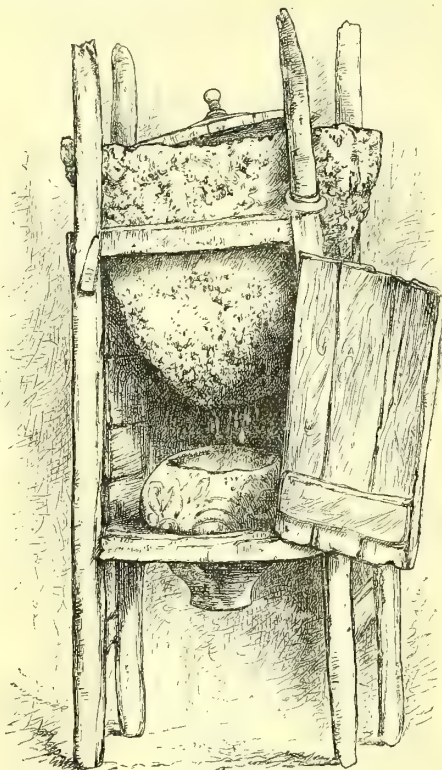
sions, pills, &c., were all in course of production. By 7 o'clock all had finished, and even the "slow man," who is sure to be found in any examination, had a fair chance. Everybody was glad when it was over, and then patience had to be exercised till 6 o'clock on Saturday evening, when the results were published at the office.

Bored and annoyed the examiners must have been very frequently, but they never lost their tempers, and preserved their gentlemanly demeanour from beginning to end of a tiring duty. During the three days several members of the Council came to see how things were going on. Dr. Duffy also called. It is a very fair examination for a man who knows his work; but if he is shaky the examiners are pretty sure to find out the weak point, and they may probe it till he winces.

[The papers set at the examination referred to above were printed in THE CHEMIST AND DRUGGIST, October 29, 1892, page 642.]

A PUMICE FILTER.

THE accompanying illustration represents a filter made from a large block of pumice. Blocks of this size, says Mr. Edward Whympere, in his recent book of travels among the Ecuadorian Andes, are plentiful in certain parts of Ecuador. The material is mainly a colourless, vesicular pumice. Much of it is quite clear, but many of the fragments have entangled within them some small microliths, and also plates of a pale greenish mica, which occurs occasionally in small, clearly-



A PUMICE FILTER AT AMBATO.

defined, pseudo-hexagonal crystals. Some of the mica has a yellowish or brownish colour.

The filter here depicted is one in daily use in the family of Señor Juan Guerrero Duprat, Minister for Foreign Affairs of the Republic of Ecuador, who let a suite of his principal apartments in his house at Ambato to the traveller at 4s. a day.

EDINBURGH INFIRMARY PREPARATIONS.

A FEW weeks ago we mentioned that Mr. Charles Arthur, Chemist to the Royal Infirmary, Edinburgh, had compiled a "Pharmacopœia" of the preparations most in use in that institution. The book is an exceedingly useful one, and has evidently been prepared with great care. We cannot better show its nature than by quoting a few of the formulæ. The "Pharmacopœia" is published by Mr. James Thin, South Bridge, Edinburgh, at 3s. 6d. (2s. 8d. net); or in Persian green leather, 4s. 6d. (3s. 6d. net).

Gargaris. Potass. Chlorat. Co.

Take of—

Chlorate of potassium	1½ drachm
Sulphate of aluminium	1½ "
Glycerine	1 oz.
Dilute hydrochloric acid	2 drachms
Solution of hydrochlorate of morphine ..	1 "
Distilled water up to	8 oz.

Dissolve the chlorate of potass. and alum in 4 oz. of the water, add the other ingredients, and make up to 8 oz. with water.

Use frequently. Astringent, antiseptic, and sedative.

Lotio Staphisagrie.

Take of—

Stavesacre seeds (in rough powder) ..	2 oz.
Acetic acid	1 "
Water	a sufficiency
Spirit of wine	2 oz.
Glycerine	1 "

Mix the acetic acid with 10 oz. of water, add the stavesacre, boil for ten minutes in a covered vessel, add the spirit of wine, stand till cold, strain or filter, add the glycerine, and make finished product 1 pint.

For destruction of pediculi.

Mist. Codeinæ Co.

Take of—

Sulphate of codeine	3 grs.
Solution of sulphate of atropine	12 minims
" " hydrochlorate of strychnine	1 drachm
Syrup of tolu	1½ oz.
Acid infusion of roses up to	6 "

Dissolve and mix.

A tablespoonful in a wineglassful of water every four or six hours. Sedative cough-mixture in phthisis.

Mist. Lobeliæ Co.

Take of—

Iodide of potassium	2 drachms
Carbonate of ammonium	1 "
Ethereal tincture of lobelia	4 "
Spirit of chloroform	4 "
Ipecacuanha-wine	1 "
Infusion of senega up to	6 oz.

Dissolve and mix.

A tablespoonful in a wineglassful of water every four hours. Useful in bronchitic asthma.

Ol. Fumigans.

Take of—

Sanitas oil	3 oz.
Carbolic acid	3 "
Eucalyptus oil	3 "
Oil of Scotch pine	1 "
" lavender	2 drachms
" lemon	2 "

Dissolve and mix.

For disinfecting and deodorising sick-rooms.

To be used by means of a fumigating-basin and spirit-lamp.

Pasta Gelatini pro Pastillos.

Take of—

Refined gelatine	1 oz.
Glycerine	2½ "
Gum acacia	2 drachms
Orange-flower water	2 oz.

Add 1 oz. of the orange-flower water to the gelatine, allow to stand till a soft mass is formed, add the gum previously dissolved in the remaining oz. of orange-flower water, dissolve by the aid of a gentle heat, then add the glycerine.

This combination forms a good basis for pastils, being easily but slowly soluble, thereby allowing any medicaments to come gradually in contact with the affected parts of the throat.

The medicines employed in the ear and throat, eye, venereal and skin, as well as the general medical and surgical departments of the infirmary are incorporated.

PILLS.

HOW THEY ARE CHANGED BY LIGHT, AND HOW TO KEEP THEM.

MR. A. C. ZEIG has some ideas on the storing of pills, and recently he gave the *Pacific Druggist* the benefit of them. Mr. Zeig, quite properly, points to the fact that pills are often kept for a considerable time, and that the druggist is apt to forget that meanwhile the ingredients of the pills may be changing and their therapeutic properties deteriorating. "A perfect coating," he says, "materially assists in keeping the mass in its proper state of preservation. The use of amber, instead of flint-glass bottles, for storing pills, is to be preferred should they be exposed to light; a wrapper or carton accomplishes the same object."

Among gelatine-coated pills most sensitive to light the following may be enumerated:—

Mercury protoiodide pills, changing from a yellow or light green to a greyish, and sometimes to a dark, colour, due to a partial decomposition of the protoiodide with separation of metallic mercury in a finely-divided condition, this change being accelerated in presence of moisture.

Phosphorus pills assume a reddish-brown colour, due to transformation of the phosphorus into the inactive amorphous variety.

Pills containing ferrous iron undergo oxidation with a noticeable change in colour, indicating an approach to the ferric condition.

Quinine pills and white pills generally, on long exposure to light, in the course of time assume a light-brown colour, due to oxidation of traces of iron naturally present in the gelatine employed for coating.

Santonin pills change in colour from white to a dull yellow, resembling picric acid.

Pills containing silver salts are naturally very sensitive to light, making the best possible protection necessary.

Calomel pills of a greyish or dark colour are sometimes met with in the market. While this change from a natural white to a dark appearance may frequently be attributed to the effect of bright light, causing partial decomposition and separation of finely-divided metallic mercury, it is more frequently due to the presence of sulphites in the gelatine used for coating, being employed by manufacturers of gelatine for the purpose of bleaching it. A careful selection of the gelatine employed for coating is therefore necessary.

The pills generally affected by an abnormally high temperature and atmospheric changes are such as embody either hygroscopic or resinous ingredients, or which, from the nature of the constituents, are quite soft, as is often the case with pills containing soap. Especially when moist air has access to them, the influence of heat from various sources, whether produced by radiation from a stove or by being in too close proximity to a lamp or gas flame, often facilitates undesirable changes in the ingredients of the mass and coating, thus causing the mass to stain through the sugar coating, or causing it to sprout, as is sometimes the case with gelatine-coated pills, rendering the coating itself more or less adhesive.

Pills containing hygroscopic ingredients—such as potassium iodide, potassium carbonate, &c.—require the closest attention in order to insure their proper preservation. By storage in bottles tightly corked, remote from any source of heat, preferably in a place where the variations in temperature are not too pronounced, any difficulties of this nature may be avoided.

ENO'S FRUIT SALT.—*New Idea* has analysed this, and reports that it contains sodium bicarbonate, 168 parts; tartaric acid, 150 parts, and Rochelle salt, 110 parts.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

PURE ACETANILIDE.

TROMMSDORFF has succeeded in producing an acetanilide which forms a colourless solution with sulphuric acid, and which is not altered by such contact at the end of ten hours. The acetanilide melts at 114°C.

ALKALOIDS OF "DATURA ALBA," NEES.

SHIMOYAMA and Koshima have examined the seeds of *Datura alba*, which are used in Japan as an anæsthetic, and have found that their properties are due to hyoscyamine, besides which alkaloid the seeds also contain a small percentage of atropine. Full details are published in *Apotheker Zeitung*.

CONDURANGIN.

CONDURANGIN is a glucoside, first obtained by Vulpinus, from the bark of *Gonolobus condurango*, and considered by some writers as identical with vincetoxin from *Asclepias vincetoxicum*. It consists, according to Carrara (*J. C. S.*, 1,352), of insoluble conduragin, a light, almost white powder which melts at 60° to 61°, and has the percentage composition $C_{20}H_{32}O_6$, and soluble conduragin, a yellowish substance melting at 134°, and having the composition $C_{18}H_{28}O_7$, but its molecular weight could not be determined.

CHRY SOPH ANIC ACID.

V. GRANDIS has prepared chrysophanic acid from chrysarobin according to Liebermann's method, and finds the melting-point to lie between 162° and 187°, although the product was repeatedly crystallised from benzene. The sublimed substance melted at 185 to 187°, and this melting-point was further raised to 190 to 191° by recrystallisation. In all other respects the specimen appeared to be identical with that described by Liebermann. The results of the elementary analysis agreed with the formula $C_{15}H_{10}O_4$.—*Journ. Chem. Soc.*

SULPHURETTED-HYDROGEN SOLUTION.

THERE is nothing so troublesome in laboratories as sulphuretted hydrogen, whether the demand for it be intermittent or constant. And how many are the forms of apparatus which have been devised to meet all requirements! There is a very simple way of getting over the trouble. Sodium sulphide is obtainable tolerably pure, it dissolves readily in water, and a solution may be made when wanted in any quantity desired. This is a perfect "sulphuretted-hydrogen solution," and as sodium is always sought for in the original solution or solid the presence of the base is no detriment in analysis.

FORMATION OF GLAUBER'S SALT.

AN interesting reaction is supposed to be at work at the kainite-mines of Kalucz, Galicia (*Journ. Chem. Soc.*, page 1,286). Glauber's salt has been found there, but as none of the superincumbent strata contain that salt, but only sodium chloride, it was supposed that the Glauber's salt had been formed by the action of rain-water percolating through the upper strata, where it dissolved sodium chloride, and then penetrating to the kainite layer, where the sodium sulphate is formed by the reaction between sodium chloride and the potassium sulphate of the kainite. This view was confirmed by a laboratory experiment.

CHALYBEATE MINERAL WATERS.

FROM observations made by J. Riban it appears that but a small fraction of the iron originally in solution in the waters of chalybeate springs so remains when bottled for sale by pharmacists. For example, Autzail water originally contains 0.0809 gramme of iron per litre, but in the bottles as sold there is only 0.0022. In Vieuh (Lardy) there is originally 0.0073, but in the bottle only 0.0011. F. Parmentier differs from Riban, it being his opinion that chalybeate

waters retain a considerable quantity of iron in solution, if bottled whilst they contain carbonic anhydride.

SUN AND SHADE.

M. L. GÉNEAU DE LAMARLIÈRE, in a communication to the Academy of Sciences on the comparative assimilation of plants of the same species, developed in the sun and in the shade respectively, has reported that a series of quantitative results showed that under similar external conditions the decomposition of carbonic acid varies in intensity, for leaves of the same species, according to the conditions of development of these leaves; and that the leaves of a species developed in the sun, all other conditions being equal, decompose the carbonic acid of the air more energetically than those developed in the shade.

A NEW "BLEACH."

A NEW bleaching-medium for silk, wool, and similar fibres has recently been introduced. This is sodium superoxide, Na_2O_2 , which is analogous to hydrogen peroxide in its properties. It is sent out in the form of a white powder readily soluble in water, and on adding acids it forms a clear neutral liquid containing peroxide of hydrogen. This can be used for bleaching by the ordinary well-known bleaching-processes. A method of working consists in taking from 10 to 30 per cent. of the sodium superoxide and adding 30 per cent. of Epsom salts, the percentages being of the weight of the fibre which is being bleached. The bleaching-process takes from two to three hours. Sodium peroxide is hygroscopic, but it is very stable. It is made in this country, we believe, by the Aluminium Company.

ANALYSIS OF LINOLEUM.

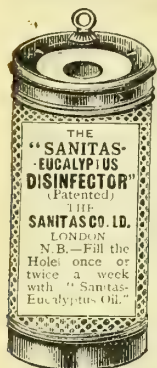
THE value of linoleum depends largely upon the amount and quality of the linseed oil which it contains, and as this oil is frequently adulterated, and the linseed oil artificially thickened by saponification with manganese oxide instead of simple oxidation, it becomes a matter of importance to determine the quality of the material by chemical analysis. In doing this it is desirable (says J. Pinette) to separate the upper layer from the painted cloth on the lower surface of the linoleum; then treat the upper part in a Soxhlet apparatus with ether to free it from oil, and examine the residue by proper methods for the other ingredients, which are substantially as given in the following results:—

	1	2	3
Moisture	3.39	3.01	3.41
Linseed oil	11.43	10.60	19.58
Cork	77.24	73.63	54.16
Silica	2.94	3.99	4.31
Alumina	1.91	4.94	0.61
Ferric oxide	1.78	1.79	8.88
Other bases	1.31	2.04	9.07
Total	100.00	100.00	100.00

QUANTITATIVE DETERMINATION OF PEPTONE.

M. L. A. HALLOPEAU, in a recent communication to the Academy of Sciences, states that the following method is superior to the polarimetric, the calorimetric, and the absolute alcohol methods. A solution of peptone, which must be neutral or very slightly acid, is precipitated by a large excess of mercuric nitrate. The white, flocculent, and bulky precipitate of mercuric peptonate is allowed to settle, and then poured on to a filter of known weight, washing with cold water until free from mercury. The increase in the weight of the filter, dried at 106°–108°, represents the weight of the peptonate of mercury; multiplying this by 0.666 gives the amount of peptone present.

The mercuric nitrate is readily obtained from the "pure" commercial nitrate. Since this contains an excess of free nitric acid, which partially redissolves the peptonate of mercury, the acid must be removed by heating the nitrate with ten times its weight of water for fifteen or twenty minutes, filtering, and heating to near boiling in a porcelain capsule. Then stir, and add a few drops of carbonate of soda until the precipitate of oxide of mercury is no longer redissolved.



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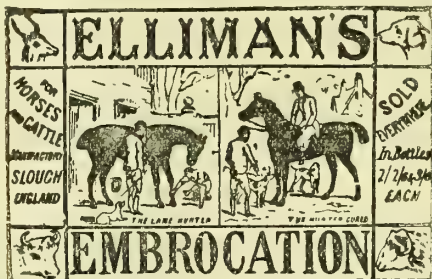
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See also page 10 (bottom folio).

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Editorial Comments.

THE CITY COURT OF ARBITRATION.

A CHAMBER OF ARBITRATION, brought into existence this week by the joint efforts of the City Corporation and the London Chamber of Commerce, aims to establish a cheap and quick

mode of settling commercial disputes. This court is governed by a committee of twelve members—one-half of them nominated by each of its parents. The chairman of the committee is Mr. Henry Clarke, L.C.C., one of the Corporation members, and among the representatives of the Chamber of Commerce we observe the name of Mr. David Howard. Sir Albert Rollitt, LL.D., M.P., &c., who is concerned in so many pies that he has good cause to quarrel with Nature for only having bestowed upon him the regulation number of fingers, is also there. The London Chamber of Commerce appears to have the sole right of nominating arbitrators, but the appointment of these gentlemen rests with the Corporation. The Arbitration Court (which sits at the Guildhall every working day when cases are down for hearing) will be open to voluntary applicants as well as for the arbitration of cases referred to it by courts of law, and its decisions, we are informed, will have the force and effect of a verdict in the High Court. When once the parties to a dispute have signed the form of submission neither can retract without the sanction of the other. Its proceedings are to be private, and no persons besides the officials and witnesses are to be allowed to be present at the hearing of disputes except such as the disputants may mutually request to be present. The parties may be represented at the hearing by a solicitor or counsel, but in this event they must give notice to the other side; or they may be represented by a clerk or other person in their actual or permanent employment, or, in the case of persons carrying on business more than fifty miles from the Guildhall, by their London agents.

The special features of the new court are to be economy and despatch. The only necessary fees, we gather, are a court fee of one guinea and an arbitrator's fee of two guineas for every case heard. This tariff only applies to cases that can be disposed of within an hour. For longer cases the arbitrator is to be paid one guinea per subsequent hour, while witnesses, lawyers, and the Court Assessor are all to be paid if they are used. The parties may select their own arbitrators from the list approved by the Corporation, or the registrar will make the selection for them. This post of registrar has been conferred, *ad interim*, upon Mr. Thomas Roderick, the Secondary of the City of London, and that gentleman will, if required, act as legal assessor, unless the disputants prefer to call in the official legal assessor of the Chamber, Mr. Philbrick, Q.C., who has "undertaken that office," and whose fee will be from 5*l.* 5*s.* to 10*l.* 10*s.* a day, according to the case. It is hoped that the bulk of the cases will be disposed of in a couple of hours each. No time is to be lost in hanging about the courts, the hour of hearing being fixed beforehand and punctually adhered to. Accommodation for the concurrent hearing of several cases will be provided, and it is officially announced that "forensic displays will not be encouraged," and also that "the arbitrators will not be fettered by the rigid rules of evidence in force in the courts of law."

These, in outline, are the rules upon which the business of the Arbitration Court will be conducted. There is pressing need for some court of the kind now created. Business men are sick of the Law Courts and the ridiculously protracted proceedings which lawyers have devised for their own benefit before a case can be brought to an issue. The forensic displays may suit very well for women squabbling about their brooches, but they are not worth the money they cost when the object is to settle one of the many disputes which must necessarily arise in the course of commercial transactions. The law societies, it is said, are bemoaning the loss of commercial business. The goose which they have treated in the past so unceremoniously no longer lays the golden eggs,

and they want to win it back to its former profitability. The schemes they are devising are absolutely valueless. The reform must be a great deal more radical than anything they are likely to propose. What is wanted is the almost total suppression of counsel, and an apprehension of the fact that it is the business of the judges themselves to unravel points in dispute.

The success of the City Court of Arbitration will depend mainly on the character of the arbitrators appointed on the panel. There are good men in all branches of business, but those who will push themselves forward are not necessarily the most capable.

The statement made, with all the appearance of a boast, that the arbitrators will not be "fettered by the rigid rules of evidence in the courts of law" is not one likely to encourage careful business people to invoke the assistance of the new court, and it will be interesting to hear what authority there is for asserting that the "decisions and awards (of the Arbitration Court) will have the force and effect of a verdict in the High Court." Of course, the two parties themselves can make a binding contract to accept anybody's decision; but the verdict can have no effect beyond that particular case, and, as we have said, it will not be largely appealed to unless confidence is established in the ability of the arbitrators. Another cause that will militate against the success of this experiment is that a large number of business people in the City, connected neither with the Corporation nor with the Chamber of Commerce, are, nevertheless, more or less actively interested in some association consisting exclusively of members of their own trades. If two Mincing Lane firms have a business dispute they either take it into court in the regular way or settle it by the forms of arbitration known to them all, and with which, so far as we are aware, no serious dissatisfaction has been expressed. Each of the large Exchanges also has its own process of arbitration, and the new court at Guildhall appears to be a not very happy compound of these unofficial tribunals and some of the forms of the statutory law.

The rule to admit counsels, solicitors, and agents instead of the actual litigants is a feature which the managers of the Court should very carefully guard if they want to maintain their institution. The lawyers will soon ruin it if they can once get possession. The promised privacy of the proceedings will be a temptation to many disputants who do not care to take all the world into their confidence about their private affairs, but it will seriously handicap the Chamber in its competition with the regular courts. Unless it advertises itself in some way or other it will soon be forgotten.

CUMULATIVE PENALTIES.

THE very confident judgment which we reported last week by Mr. Baron Pollock and Mr. Justice Hawkins in regard to penalties imposed under the Apothecaries Act, is probably more important as an indication of the tendency of the judicial mind than as a contribution to the construction of the Act. Under the statute the Society of Apothecaries had sued an unqualified dealer at Derby for three penalties of 20*l.* each for infringement of the 20th section. The three charges of acting as an apothecary had all occurred on the same day, and the County-Court Judge held that only one offence of "acting and practising as an apothecary" had been proved. He expressly based his judgment on a ruling of Lord Tenterden in 1824, in the Apothecaries' Society *v.* Bentley—a decision which the *Lancet* of last week seems to think nobody knows of but itself, referring to it as a case which "appears to have escaped the notice of all

parties concerned." The Society of Apothecaries appealed, and the judgment of the Court of appeal which we gave last week confirmed the decision of the High Court.

Obviously it requires more than a single Act to constitute a practice, but it is not quite clear that when the statute prescribes a penalty of 20% for "every such offence" it does not mean every offence of acting as an apothecary as well as every offence of practising as an apothecary. When an analogous case under the Pharmacy Act came under the ruling of the very same two Judges they decided with at least equal confidence that when that Act provides a penalty of 5% against any unqualified person who shall sell or keep an open shop for the retailing, &c., of poisons, two distinct offences were alluded to. They held that a person might be liable for selling a poison though he did not keep an open shop for so doing. It is difficult to say wherein lies the distinction between the two statutes, the expressions used in their penal clauses being curiously similar. It is to be noted, too, that the judgment applies to three actings as an apothecary all on the same day. Whether it would have made any difference if they had occurred on three consecutive days, or during three weeks or three months, we cannot say. What we note, however, particularly, is the apparent disinclination of the Judges to award cumulative penalties if they can find a way out of doing so.

Curiously enough, we published also last week the report of an undefended county-court action, in which the Pharmaceutical Society recovered judgment for six penalties of 5% each against an unqualified person, who was proved to have kept an open shop for retailing poisons on those six occasions. The Pharmaceutical Society has been for some months past making a very good thing out of these cumulative penalties. A revenue at the rate of 1,200% to 1,500% per year has been reported. We think the juxtaposition of the two cases should be evidence of the very precarious nature of that income. We are very glad to see the recently-awakened vigour exhibited by the Council in its efforts to enforce the Pharmacy Act; but we should be not at all sorry if the custom of extracting numerous penalties from a few individuals should have to be abandoned for the much fairer—and, as it appears, more legal—method of suing for single penalties from the widely-spread army of law-breakers.

THE CHEMISTRY OF GOUT AND GRAVEL.

THERE would seem to be no department of pathology in which the application of chemical science to therapeutics was so promising as that which is developed in gout and gravel. To a considerable extent the immediate causes of these most painful diseases have been traced. They may be said to be simply the mechanical results of chemical reactions occurring within the body, and at first glance it would seem to require little beyond a few analyses and test-tube experiments to discover the means of preventing, and perhaps of curing, these maladies. But Nature is not to be trapped in this easy way. So far the chemical treatment of both gout and gravel has accomplished almost nothing, and the remedies which do appear to have any controlling influence on either are entirely empirical—that is to say, they act in some manner quite uncomprehended by all our physiologists.

Discouraging though this result may be, its effect should be, and is, to stimulate and not to paralyse the advanced guard of our pathologists. The victory is so possible, and the spoil so precious, that it will certainly be aimed at by many an investigator yet.

Sir William Roberts, M.D., of Manchester, has been one of the most recent of the contestants in this hopeful field, and his contribution towards a more accurate knowledge of the conditions of the problem is a notable one. The record of his studies was made public in the Croonian lectures delivered before the Royal College of Physicians this year; and these have now been published, with additions, by Messrs. Smith, Elder & Co. It would be difficult to express too high an appreciation of the scientific method and the patient labours which Sir William Roberts has devoted to this subject. He has not hit on some lucky find, such as those which invariably reward the researches of the Kochs and Pasteurs of the day when they set forth on their remedy-seeking expeditions. But he has directed a large number of searching experiments towards the discovery of the "error" in natural processes which occasions gout in some constitutions and gravel or calculus in others; and he has distinctly advanced our knowledge in this inquiry.

Uric acid is the chemical compound which deals out the agony involved in either of the maladies named. In gout it is precipitated in the form of crystals of sodium bi-urate from the blood serum or synovia; in gravel it is deposited as free uric-acid crystals from the urine as it passes from the kidneys. By a long series of experiments and observations Sir William Roberts has apparently established the important fact that in a perfectly healthy condition of the body uric acid is invariably held in solution in combination as a quadri-urate of sodium. Dr. Bence Jones suggested this idea some thirty years ago, but did not follow it up, and, indeed, did not seem to be sure of it. It would occupy too much space to follow the author's proof of this proposition, but it may be said that if he has not developed the theory into a certainty, he has at least demonstrated its extreme probability.

This quadri-urate is the substance which is often deposited from acid urine as a granular, amorphous body, and the chemico-medical object of treatment should be to retain it unaltered throughout its passage and in the kidneys. But the compound is a very unstable one. In the presence of pure water half its uric acid is separated in insoluble and crystalline form. Sir William Roberts sets himself the task of ascertaining what are the conditions which protect this disintegration of the compound. He finds that the precipitation of uric acid from the urine is checked to some extent by the pigments associated with it, more still by the saline constituents, but above all and principally by maintaining the urine in an alkaline condition. The urine tends to an acid condition during the night and in the early morning. The principal practical outcome of these investigations, as far as the treatment of gravel and calculus is concerned, is therefore the recommendation that persons with a tendency to such complaints should so arrange their meals as to ensure as short an interval as convenient—the urine becoming always alkaline after meals—and should take 40 to 60 grains of citrate of potash at bedtime, and in severe cases another dose in the course of the night.

The prevention of the precipitation of the crystalline bi-urate from the blood, to which gouty persons are predisposed, is less definitely dealt with. The difficulty seems to be a deficient uric-acid excretory power on the part of the kidneys. The first step, therefore, should be to restrict the production of uric acid by lessening the intake of nitrogenous food. Chloride of sodium is found to facilitate the precipitation of the bi-urate, and therefore the consumption of salt with food may be restricted, though the blood will not generally take up more of this constituent than is normal to it. The author finds no chemical evidence to support the belief in the controlling influence of alkalies generally, nor in

the solvent powers of carbonate of lithia and piperazine, on the uratic deposits which these remedies have been asserted to possess. His only other practical suggestion is that gouty persons should be more liberal in water-drinking in order to dilute the solution of the urates, and thus aid the action of the kidneys. It is, in his view, the extra supply of water combined with a plainer diet, more open-air exercise, and the freedom from home worries, which renders the continental "cures" of value, rather than any special virtues in the saline constituents of the waters drunk.

COMMENTARY.

THE SUPPRESSION OF CUTTING.—In the last issue of *Fame*, the advertisers' journal, Messrs. Blondeau et Cie. record their experience in attempting to check the too reckless cutter. They say they do not object to a retailer selling at a percentage of profit which, if applied to his goods generally, would yield him a living profit on a fair turnover; but they do object to having their preparations singled out and used as a cat's-paw to sell the articles of other manufacturers, to the future detriment and damage of their business. In such a case, although they admit the force of the contention that a man, having bought one or more cakes of their soap, may do what he likes with it, they hold that the manufacturer is equally entitled to protect himself if he can. They believe the labourer is worthy of his hire, and that if a manufacturer would establish his business on a permanent basis, he should make it worth the while of all retailers to handle his goods always, and not for a little time—in other words, he should see that the retailers realise a fair living profit on every sale of his article. After explaining their plans in detail, they discuss its effect. They do not claim to have an unfailing panacea for the "cutting" of retail prices; as long as men make agreements and sometimes break them, so long will absolute certainty be impossible. But they assert that, so far, they have found the trade loyal and considerate. They only know of one extreme cutter who is not working on their lines, and he gets the goods from other dealers at retail prices. When they hear of anyone selling below the stipulated prices they write to him or send a representative to call on him. They have sent a representative, they say, from London to Scotland because one of their articles was cut 1d. By one means and another they have succeeded in keeping the price of vinolia goods from falling below the level they think should be the minimum, and they add, "while not a few important chemists have contemplated us upon our policy, the warmest and most complimentary letters have come from the cutters themselves."

AMERICAN MILLIONAIRES are somewhat numerous, for reasons which need not be discussed here. The dollar has something to do with it, but even at that we question if the United Kingdom can in five generations produce as many millionaires in the drug, chemical, and patent medicine trades as we note below. We have these facts from the *New York Tribune*:—*Drugs*: R. A. Robinson, E. J. Hart, J. Lyons, Theo. H. Eaton, Franklin King, J. S. Farrand, A. Healey, O. F. G. Meyer, R. S. Hale, Van W. Brinkerhoff, G. W. Comstock, C. Griswold, W. H. Hall, G. Kemp, D. S. Riker, L. Riker, W. S. Schiefflin, S. B. Schiefflin, H. M. Schiefflin, J. J. Baker, J. L. Thompson, Clayton French, and J. Wyeth. *Chemicals*: J. Tyson, A. Cochrane, M. Kalbfleisch, J. L. Morgan, Daniel Baugh, Mrs. J. C. Harris, C. Lennig, and W. Veightman. *Proprietary and Homœopathic Medicines*: C. Wakefield, Charles A. Vogeler, G. G. Green, Dr. R. V. Pierce, Mrs. G. S. Bacon, Mrs. J. S. Ayer, F. F. Ayer, H. S.

Ayer, G. N. Curtis, D. Jayne, Dr. F. Humphreys, W. B. Moffatt, Mrs. L. J. Pearson, H. H. Warner, J. R. Whiting, B. Brandreth, Dr. N. B. Wolfe, Mrs. H. Du Puy, Mrs. D. Hostetter, and T. Hostetter. *Glycerine*: R. G. Mitchell. *Vaseline*: R. A. Chesebrough. *Baking powder*: V. C. Price, Dr. C. N. Hoagland, and J. C. Hoagland. *Extracts*: W. W. Skiddy. *Quicksilver*: T. Bell, E. Barron, and J. Milbank. *Sulphur*: W. Gray.

VARIABLE NITROGEN.—Lord Rayleigh has made nitrogen in two ways, and is troubled with the fact that one is $\frac{1}{1000}$ lighter in atomic weight than the other. In the first method of preparing the gas the oxygen of atmospheric air was removed in the ordinary way by metallic copper, itself reduced by hydrogen from the oxide. The air, freed from CO₂ by potash, gave up its oxygen to copper heated in hard glass over a large Bunsen, and was then passed over about a foot of red-hot copper in a furnace. This tube was used merely as an indicator, and the copper in it remained bright throughout. The gas then passed through a wash-bottle containing sulphuric acid, thence again through the furnace over copper oxide, and finally over sulphuric acid, potash, and phosphoric anhydride. In the second method of preparation everything remained unchanged, except that the first tube of hot copper was replaced by a wash-bottle containing liquid ammonia, through which the air was allowed to bubble. This method was very convenient, but the nitrogen obtained by means of it was $\frac{1}{1000}$ part lighter than the nitrogen of the first method. The question is, to what is the discrepancy due? Is it possible, he asks in *Nature*, that the difference is independent of impurity, the nitrogen itself being to some extent in a different (dissociated) state?

COLOUR OF THE ALKALI METALS.—Mr. G. S. Newth reports to *Nature* that he has examined several of the alkali metals in thin layers distilled upon the edges of sealed tubes, from which all oxygen and oxidation products were most rigidly excluded, and he finds that, viewed by transmitted light, the colour of sodium is greenish-blue, inclining to green; potassium is of a magnificent rich purple colour, and rubidium forms a film which is a pure indigo blue. In the cases of sodium and potassium, the colour of the metallic sublimates is different from the colour of the vapour as seen when the metals are boiled in an atmosphere of hydrogen. Potassium, under these circumstances, yields a vapour possessing an emerald-green colour, while that of sodium which appears colourless when seen in small layers, shows a violet or purple colour when viewed through a sufficient thickness. When the liquid alloy of sodium and potassium is treated in the same way, the sublimate obtained is found to be greenish in colour nearest to the source of heat, quickly shading off to blue and purple as it is more remote from that point—indicating, apparently, that the two metals sublime separately. Lithium, cadmium, mercury, arsenic, tellurium, and selenium were also tried, but produced no colour.

"VERY 'cute little dodge of that druggist, selling me that porous plaster with the privilege of returning it if it did no good." "Well, why don't you return it?" "I can't get it off."

GROCERS AND PATENT MEDICINES.—A correspondent of the *Grocer* thinks that it is time the patent-medicine difficulty should be settled, and that the Pharmaceutical Society should declare what constitutes a poisonous patent. It is useless to defend the sale of such articles as chlorodyne by grocers, but it seems trivial to interfere with the sale of articles containing a slight percentage of opium. The patent-medicine proprietors should attempt to arrive at some satisfactory arrangement with the Pharmaceutical Society on the subject.

❖ REVIEWS ❖

AND

LITERARY NOTES.

A Short Manual of Analytical Chemistry, Qualitative and Quantitative, Inorganic and Organic. By John Muter, M.A., Ph.D., &c. Fifth edition. London: 1892. Simpkin, Marshall, Hamilton, Kent & Co. (Limited), and Baillière, Tindall & Cox. Large 8vo. Pp. 212. 6s. 6d.

WE have none too many reliable works on analytical chemistry for pharmaceutical students. This is one of the few, and, although the book is well-known through many years' use, we feel inclined to treat it as a new work, especially since many recent introductions into the *materia medica chemica* must have necessitated many alterations, and the changed aspect of the pharmaceutical examinations is compelling students to seek that thoroughness which it is always the aim of a good teacher to encourage. Dr. Muter's book may be roughly divided into four sections; first, the detection by analytical processes of inorganic bases and the inorganic and organic acidulous radicles associated therewith to form salts; second, the chemical properties of and tests for alkaloids and other organic substances of a more or less basic or definite character; third, quantitative processes—viz, volumetric and gravimetric analysis; and, fourth, special analytical and physical processes adapted to the examination of drugs, pharmaceutical and technical products, foods, water, urine, soaps, &c. If we were to analyse the book further it would be seen that it goes far beyond the scope of the two pharmaceutical examinations, and covers departments of analysis which an intelligent pharmacist can profitably cultivate along with retail pharmacy. Our object at present, however, is to indicate the efficient instruction which the manual provides for examination purposes. There is nothing of the cram kind about the method, but there is adequate systematisation, and a graduated course of exercises which is a fair encouragement of the reasoning-powers of the student and, at the same time, teaches him the distinctive properties of the substances which he may handle day by day. Some of the tables, or "charts," are of special value, and they are very numerous; many of the tests have been originated by the author, and he gives fuller attention to alkaloidal, glucosidal, and synthetical medicines than is usually the case in books of the kind. We can confidently recommend the book to Minor and Major students as a complete guide for their practical chemistry.

"*Chromas Kalicus (K₂CrO₄) beschouwd als het meest praktische Reagens op de Zuiverheid der Kinine en hare Zouten,*" door Dr. J. E. De Vrij, te 's-Gravenhage ("Potassium Chromate Considered as the most Practical Reagent to ascertain the Purity of Quinine and its Salts," by Dr. J. E. De Vrij, the Hague).

THE veteran quinologist, who in this pamphlet gives a *résumé* of his work on the chromate test for quinine and other cinchona alkaloids, has not lain idle under the adverse criticism to which his proposal was subjected when first made. There were one or two slight improvements possible in conducting the test, and these he now sets forth in the pamphlet before us. It is necessary, he points out, that the neutral chromate of potash used in the test should be chemically pure, and a solution of it is made by dissolving 5 grammes in 95 c.c. of water. Along with this in testing the alkaloids he uses a solution containing 5 grammes of sodium hydroxide in 95 c.c. of water. To perform the test in the case of quinine sulphate, take 1 gramme of the salt and dissolve it in 40 c.c. of water by heating; while hot add to the solution 6 c.c. of the potassium-chromate solution. The immediate result is that the mixture is changed into a thick sludge, and it is now set aside for some time so that complete separation may take place at a temperature not exceeding 15° C., ice being used to cool it if necessary. Then the mixture is filtered through glass wool, and a drop or two more of the chromate solution added to ensure that the whole of the alkaloid has separated, although this is a

refinement of caution. Filter through the precipitate again and to the filtrate add 9 or 10 drops of the soda solution. If the quinine is free from quinidine, cinchonidine, &c., the solution will remain perfectly clear, there being no opacity or precipitate at all at the end of a day, but percentage of impurity reflects itself in the condition of the alkaline fluid—e.g., salt which would pass the British Pharmacopœia test would give abundant evidence of impurity by a bulky precipitate on the addition of the soda. The value of the test depends upon the fact that quinidine and cinchonidine chromates are comparatively soluble salts, whereas quinine chromate is almost insoluble (1 in 2,650). The Doctor puts these facts very forcibly in his pamphlet, and as it is in Dutch this brief reference to it may be useful to those who would determine the absolute purity of quinine. The test is equally applicable to the hydrochloride and hydrobromide of the alkaloid.

Adressbuch der Chemischen Industrie des Deutschen Reiches 1892. Herausgegeben von Otto Wenzel. Berlin: Verlag von Rudolf Mückenberger, Dessauer Strasse 13.

MR. OTTO WENZEL, the compiler of this work, is the General Secretary of the Society for the Protection of German Chemical Industries, and therefore particularly well qualified to undertake the task (which becomes heavier with every succeeding issue) of compiling a complete address-book of manufacturers of and dealers in chemicals in the German Empire. The besetting drawback of most directories is the inaccuracy and incompleteness. This applies especially to English-speaking countries where registration of private firms is not compulsory, and the compiler must therefore depend upon and take for granted whatever information may be vouchsafed him upon personal application. But, far as we are able to judge, no such drawbacks cleave Mr. Wenzel's book. The work is divided into three parts treating respectively of chemical factories and laboratories, raw materials, and trading firms.

Pharmaceutical and Chemical Problems and Exercises: Metrology, Percentage and Proportion, Fortification, Dilution, Specific Weight, Thermometry, Chemical Formulas and Equations. By Oscar Oldberg, Ph.D. Second edition. Chicago, 1892: The Apothecaries' Co.

A "QUIZ" book, containing more than 2,000 questions and 900 chemical equations. It is adapted for class-work and home usage. It is a remarkable production, the selection of the questions being catholic in the extreme, as well calculated to exercise the thinking faculties of the students, and to facilitate the application of the principles which they have learnt through lectures, &c. It is intended for American students, and covers all branches of pharmaceutical knowledge.

A Handy Book on the Formation, Management, and Wind-Up of Joint-Stock Companies. By William Jordan and F. Gore Brown. Fifteenth Edition. London: Jordan Sons, 120 Chancery Lane. 3s. 6d.

THE remarkable development of the Joint-Stock system in modern business, modified as it usually is nowadays by the application of the principle of limited liability, renders the book of this kind a growing necessity. The Acts of Parliament which have been found necessary to regulate companies are now so numerous, and the application of them to the Courts so important, that the value of a codification of the law to persons interested is obvious. In the book before us this is done as completely as is necessary under ordinary circumstances, and with the utmost clearness. The duties, risks, and rights of promoters, vendors, directors, and shareholders can be readily ascertained by reference to its volume.

The Best Thing to Do. By C. T. S. Thompson. London: The Record Press, 376 Strand. 1s.

THIS is a scratched-together collection of bits of trite and quite unworthy of publication. That pork and ices are suitable for persons suffering from liver derangements, and headache may sometimes be relieved by a cup of tea,

that tea is not always readily obtainable in Continental hotels, are items of information in general circulation, but which people generally do not usually charge a shilling for. We are glad to observe that Mr. Thompson does not aim by his 53 pages to supersede the Medical Practitioner.

A Guide to General Health and Longevity. By W. Gordon Stables, C.M., M.D., &c. London: George Putman & Son, Thayer Street, W.

FOR triteness and imperfection Dr. Stables' flimsy book matches well with the one last noticed. But it has, or appears to have, a definite object, which is that of advocating the merits of Messrs. James Allen & Son's portable Turkish baths. From the advertisement point of view it is not badly done, but it is not worth paying for.

The Practical Treatment of Cholera. By G. Sherman Biggs, A.M.S. London: The Record Press. 1s.

THIS brochure contains sensible advice by a doctor who has had experience of the disease in India, and was not too proud to learn from a native doctor.

A Primer of the Art of Massage for Learners. By Dr. Stretch Dowse. Bristol: John Wright & Co.

A NEAT little book, in which the principal operations of massage are explained as clearly as they well can be by print and illustrations. The author is an enthusiast in regard to the practice, and some readers may fancy that he treats it with a little ultra respect, as, for instance, when he insists that the action of the masseur is an illustration of the transference of energy from the masseur to the person kneaded. On this principle a knock-down blow should leave the victim with the strength of his assailant.

Fever Nursing. By Mary Harris. London: The Record Press. 1s.

CONTAINS in a small compass accurate and thoughtful instructions, showing what a nurse is to do and what she should watch for in cases of scarlet, typhoid, and typhus fevers, chicken-pox, measles, and small pox.

The Physician Himself, and Things to Concern His Reputation and Success. By D. W. Cathell, M.D. (Baltimore). Philadelphia and London: The F. A. Davis Co. 11s. 6d.

THIS is the tenth edition of a book of advice, written, we suppose, by an old hand for the benefit of young ones. The author does not seek to convey medical instruction, but aims to teach that unteachable art called tact. He discourses on all the relations between the physician and his patients, pharmacists, and quacks. He is rigidly orthodox; the irregular practitioner, especially the homœopath, the prescribing pharmacist, the patient who does not pay regularly, and the one who makes too much use of the physician's prescription, all come under his lash. There is an immense lot of practical reading in the 340 pages of this book, but it must be said that the greater part of the teaching is what a gentleman does not need, and what the man not a gentleman cannot be taught.

Ringworm: Its Constitutional Nature and Cure. By J. Compton Burnett, M.D. London: The Homœopathic Publishing Co. 2s. 6d.

DR. BURNETT'S study of ringworm is interesting, original, and striking. He, of course, recognises that it is a parasitic complaint, but he does not consider it a disease of the skin any more than he would regard gout in the big toe as a disease of the toe, or a furred tongue as a disease of the tongue. He believes that the ringworm trichophyton "is not the disease itself but its organic scavenger." According to his theory, really healthy children will not catch ringworm. It is an indication of a certain strumous condition, more or less allied to tuberculosis. That condition existing, it is so far a sign of strength that the patient is able to throw it to the epidermis; and having thrown it to the epidermis it is

an advantage rather than otherwise that the ringworm parasites should appear to consume it. On this theory it is obviously the wrong treatment to attack the fungi with germicides. They are doing their best to destroy the toxic emanations; and if this good work is prevented, other illness may, and Dr. Burnett says does, in some cases at least within his knowledge, supervene. Dr. Burnett gives high potencies, that is, extremely infinitesimal doses of tuberculinum. Koch gave this in appreciable doses and killed patients with it. He did not know the homœopathic law of the opposite effects of the same remedy. By giving infinitesimal doses of tuberculinum Dr. Burnett claims to have cured a number of cases of ringworm. That is the proof by which his theory is to be tested. The cases he reports might probably be sharply criticised, and it must be admitted they are scanty enough when they are required to support so large a thesis. But any one who will read the argument will at least admit that it is ably presented, and that there may be something in it.

A Short Manual of Inorganic Chemistry. By A. Dupré, Ph.D., and H. Wilson Hare, Ph.D. Second Edition. London, 1892: Charles Griffin & Co. (L'm.). Crown 8vo, pp. xvi. + 365. 7s. 6d.

WITH the exception of a few emendations and corrections this edition is a reprint of the work which we favourably commented upon six years ago. It is unnecessary, therefore, to refer to it now at any length. It is essentially a manual for students, and is well liked by them.

Proceedings of the Pennsylvania Pharmaceutical Association.

AN excellent report of the proceedings at the fifteenth annual meeting. Attendance at these meetings must be a real treat, especially when there is a humourist for president, as was the case with this association in Shikellimy. We hope to refer to some of the practical topics in the proper section by-and-by.

WORKING-HOURS IN BONDED FACTORIES.

DEPUTATION TO H.M. BOARD OF CUSTOMS.

A DEPUTATION of manufacturers of perfumery in bond who are connected with the Essence and Perfumery Section of the London Chamber of Commerce waited upon H.M. Board of Customs, at the Custom House, on Wednesday, November 16, for the purpose of urging the Board to grant an extension of the hours during which manufacture in bond could be carried on. The deputation consisted of Messrs. James Chambers, C. A. Gosnell, E. V. Barrett, George Oppenheimer, E. F. Langdale, F. Cleaver, Thompson, Charles Fores, and J. Grossmith. Mr. Chambers having introduced the deputation,

Mr. E. V. Barrett said that they appeared there that day as a united representative body of the perfumery trade working in bond. The hours they now worked were from 8 to 4 in summer and 9 to 4 in winter. Now, if they were employers of clerical labour only, the hours from, say, 9 to 4 might be reasonable, but as employers of manual labour, he thought the hours they were restricted to were most unreasonable. They had to compete in the products they had to sell with the working population of countries abroad, where greater facilities were enjoyed. The usual hours of work where the trade was carried on out of bond were from 8 A.M. till 7 P.M. They asked to be allowed to work from 8 A.M. till 6 P.M. all the year round. The present restriction of hours caused a direct increase in the cost of production of their articles. Having shorter hours, they were bound to have more men, and if they had more men they had to have larger premises, an increased wage-roll, and an increased rental. In France and Germany the hours of labour were unrestricted, and also, he believed, in Belgium and Holland. In Paris the manufacture was carried on under a system by which they paid duty quarterly on all quantities used for home consumption. A Revenue officer took account of all

the spirit taken into the manufacturers' premises, and of the goods declared to be for export, periodically. With such facilities in France, they were not placed in a fair position to compete. Similar facilities to those now asked for had been granted so recently as April last to the outdoor service of Customs in the unloading of ships, where the importers had the privilege of requiring the presence of the Custom-house officer from 6 A.M. till 6 P.M. That had been brought about, after a year or two's trial, in the port of Hull. After consultation with the Dock Company in whose premises they carried on their business, it had been agreed that the officers of the Dock Company should stay until 6 o'clock as soon as they could get the necessary permission from the Customs, so that there was no immediate hindrance to carrying out the scheme at once if they could secure the permission of that Board. The Board had pointed out that it was open to those firms who wished an extension of the hours to adopt the alternative of working under the Excise under the new drawback regulations, but they were not able to avail themselves of that alternative—for one reason, because many of them had leases to run sundry periods up to four years. If they threw up these they should have to compromise with their landlords. At present their workmen in bond had to be transferred from one factory to another about 4 P.M. every day. If they had lengthened hours they should have two distinct staffs of men—one to be constantly employed at the bonded warehouse, and the other at the town factory. Again, the regulations which had been recently issued for the payment of drawback to those manufacturing out of bond made an allowance of 4 per cent. for waste in working. So far as the loss from maceration and manipulation of raw products was concerned, probably that 4 per cent. would just about cover it, although some of them were inclined to think that there would be a loss. The Excise authorities, however, had made no allowance for loss in strength of spirit. Their perfumes were tested for the strength of spirit by the hydrometer, but as they had to add certain things to the perfume, such as extract of vanilla, orris-root, and various resinous gums, the hydrometer did not indicate the true specific gravity, and they therefore did not get credit for all they sent out. In the case of the druggists who sent out their goods in quantities of, say, 1 lb. to 4 lbs., it was possible for the Excise officer to test, not by the hydrometer, but to take a fair sample of each article and take it to Somerset House, and discover the exact strength of the spirit, when the druggist got a full "drawback." But they were not in that position. They sent out hundreds of different kinds of bottles, so that it was impossible for the Excise officer to treat them on that basis. From a series of experiments he had made he found that the loss by the testing of the spirit was at least 2 per cent., and for that they had no allowance whatever. They were, of course, in a favoured position working with duty-free spirit.

The Chairman: Are you not in a more favoured position than those who work under the Excise?

Mr. Barrett: Yes; that is so. If we joined them we should lose 2 per cent., and that means a good deal on a large turnover.

Mr. Gosnell suggested that the Board might consider the advisability of making a temporary arrangement.

Mr. Barrett, in supporting this suggestion, pointed out that the most of the warehouses lay close together, and that there would not be much attendance required from the officers.

The Chairman said that while it might be true that not much attention would be required on the part of the Custom-house officers after 4 o'clock, it was more a matter of principle with the Board than anything else. There were something like 1,500 warehouses in the United Kingdom, and if their request was acceded to, the Board would immediately be met with similar demands from other quarters. The trade were agitating for longer hours, while the servants of the Customs were asking for shorter hours. The matter, however, would receive careful consideration, and the Board's decision would in due course be communicated to the Chamber of Commerce.

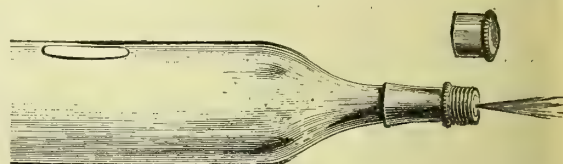
SPECTACLES are not carried by post if the fact that the parcel contains spectacles is marked outside.

Trade Notes.

WE have had a number of inquiries regarding the Druggists' Exhibition since the publication of a preliminary note regarding it in these columns. Further particulars regarding it are given in our advertisement section this week.

MR. H. J. DEACON, of Beckenham and St. Leonards, has bought from the Official Receiver, who is trustee to the estate, all the proprietary rights and trade-marks in Burgess's "Lion" ointment, pills, and nerve-tonic, formerly manufactured by Mr. E. Burgess, of Holborn. The preparations will henceforth be manufactured at 15 Bromley Road, Beckenham.

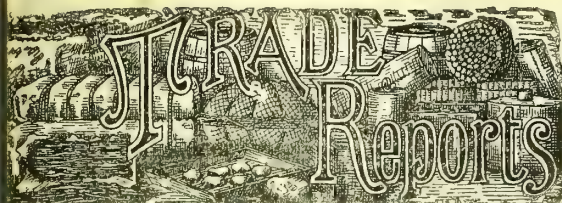
MR. B. KUHN, of 36 St. Mary-at-Hill, has been appointed sole wholesale agent for the United Kingdom and the colonies of Dr. Bengué's patent ethyl-chloride bulbs, and keeps stock of all shapes. These bulbs are intended to supersede the glass tubes of ethyl chloride hitherto used for producing local anaesthesia and as a remedy for neuralgia. Instead of breaking off the nozzle, however, Dr. Bengué's bulbs are provided with a screw metal stopper, so that the



bulb can be used again and again until the last drop of liquid has been exhausted. On removing the stopper and holding the bulb in a horizontal position the warmth of the hand is sufficient to eject a fine spray of the chloride through an imperceptible orifice, with much force, soon producing numbness in the part to which it is applied. Each tube contains about a fluid ounce of the liquid.

PEARS'S CHRISTMAS ANNUAL, 1892, is striking evidence that the company is not disposed to be any less lavish than the private firm was in the matter of Christmas literature. Last year Pears's Annual was a splendidly illustrated reproduction of Dickens's "Cricket on the Hearth," and with it three fine chromo-lithographs were presented. This year the literature consists principally of Dickens's "Christmas Carol," the never-to-be-forgotten story of old Scrooge, Bob Cratchit, Tiny Tim, and all the rest of them. This is illustrated with twenty-seven entirely new pictures by Charles Green, R.I., and with the book four coloured plates are presented, all of different characters, three from original paintings, and the fourth being a tinted representation of "The Dirty Boy." The covers of the Annual will perhaps prove the greatest attraction of the whole. One is a coloured representation of John Leech's drawing of "Mr. Fezziwig's Ball," and the other is a cleverly-designed coloured medley of a number of Pears's artistic successes. The dirty boy is carrying the half-cleaned portrait of a society beauty of last century while his grandmother is nursing the plump little baby just out of his bath, who is reaching after one of Sir John Millais' bubbles and perhaps won't be happy when he gets it. The two bare-headed monks are studying complementary colours, while a pretty girl is wishing us good morning from an open window. The Annual is well worth anyone's shilling, and will no doubt have a great sale.

THE HOLBORN GUARDIANS AND THEIR DISPENSERS.—At last the Guardians of the Holborn Union have come to see that it is desirable to separate the offices of assistant medical officer and dispenser at their Highgate Infirmary. At a meeting of the Guardians on Wednesday night Mr. Miller (chairman of the Infirmary Committee) brought up a recommendation, in which his committee withdrew the previous proposal to combine the posts of assistant medical officer and dispenser, the committee being of opinion that the sick poor would be better cared for if the posts were distinct. The Board agreed to this; and Mr. Hedley (Local Government Board inspector), who was present, apparently endorsed it.



Office to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

The London Markets.

42 CANNON STREET, E.C., November 23.

Genuine and Spurious Cubebs.

Some months ago Mr. Holmes forwarded to the Java Botanic gardens specimens of two varieties of cubebs met with in commerce, designated by him as "false" and "genuine" cubebs, and which he found to give different reactions when tested with concentrated sulphuric acid, with the request that the Director should apply these tests to the growing fruit of the two varieties. This has been done, with the result (as we learn from *Teysmannia*) that Mr. Holmes' genuine cubebs proved to be the fruit of the cubeb-bearing tree known in the Sundanese language as "Rinoe-Katoentjar," while the spurious cubebs emanated from a plant known as "Rinoe badak." The botanical names of the two plants are not given in *Teysmannia*; but the two appear to be very closely allied, and to be used indiscriminately by Java planters for the cultivation of cubebs for commercial purposes. Unfortunately the two plants, though offering slight botanical differences, appear practically identical to the untrained eye, and the difficulty of distinction is enhanced by the fact that the leaves of the cubeb-vine are extremely regular in shape. Those of the genuine plant ("Rinoe-katoentjar") are generally smaller and more oblong than those of the "false cubebs with mace-like odour." The ends of the stems and the young leaves are also of a much less pronounced violet colour.

Dutch Government Opium Detained in Constantinople.

Some time ago the Turkish Government, appointed a Medical Commission, ostensibly for the purpose of checking the importation of articles prejudicial to health. This commission was instructed to analyse imports of foods and drugs upon their arrival in the country and, if necessary, to confiscate them. Merchants complain loudly of this new law, but the officials and the smugglers appear to be highly satisfied with it. The Commission, not content with looking after foreign goods, has recently extended its "supervision" to the produce landed from one Turkish port at another for shipment. One of the results of this watchfulness is illustrated by an aggrieved correspondent of the *Levant Herald*. That gentleman writes:—

Large contracts for opium have been recently made by Constantinople merchants with the Dutch Government, with fixed deliveries at Amsterdam and heavy penalties in case of non-delivery. As this opium has been the pick of the finest qualities produced in Turkey, for which 20 per cent. above the usual price is paid, and as Smyrna is the largest opium market, the Constantinople sellers have had to secure the bulk of their stock in Smyrna, and to bring it up to Constantinople for repacking according to the requirements of the Dutch Government. On arrival of large parcels of this opium on November 3 they were seized at the Custom House on the plea that they might be adulterated, and notwithstanding the representations of the merchants that if the stuff were not given up they would fail to meet their Amsterdam deliveries, these parcels were still undelivered on November 7.

Meanwhile the merchants are losing interest on their goods, and risk

being mulcted in heavy indemnities through non-delivery of their goods in Holland at contract dates, and the whole opium trade has received a very serious shock. It is not that they fear the result of the analyses if properly conducted, but they fear the results of improper analyses and their inevitable consequences.

A Co operative Orange-flower Distillery.

The orange growers in the South of France have long been dissatisfied with the terms paid them for their produce by the local distillers, who are their only possible customers. They have, therefore, decided to form a co-operative society for the distillation of their produce and the sale of oil of neroli, orange-flower water, and the like. It is estimated that the cost of the factory to be built, with plant and other necessities complete, will be 200,000*fr.* This money the promoters hope to raise, in 100*fr.* shares, among the local growers. Each shareholder will undertake to deliver the whole of his produce to the society, and it is estimated that the output of the first season's work will be 600 kilos. of oil of neroli and 600,000 litres of orange-flower water. The sale price is expected to be 300*fr.* per kilo. for the oil, and 0 50*fr.* per litre for the water, and upon this basis the society will be able to pay the growers 0 65*fr.* per kilo. for their flowers and a dividend of 7 to 8 per cent. on the capital.

ACID (CITRIC).—A lifeless market, at 1*s.* 5½*d.* to 1*s.* 6*d.* per lb. Concentrated juice is declining, 18*l.* 10*s.* f.o.b. being asked for prompt, and 17*l.* 15*s.* to 18*l.* for December shipment.

ANISE (STAR).—On the Continent not a single case is known to exist in importers' hands, and in London there are only a few cases in second hands. The quotations in this position are, therefore, quite nominal, 125*s.* per cwt. being the last price recorded. Between 100 and 200 cases, however, are afloat, and due in the course of about ten days. It is said that the dealers in China have oversold themselves to a considerable extent. To-day's quotation is 87*s.* per cwt., c.i.f., for December-January shipment.

ARSENIC.—The market keeps very firm at 13*l.* 10*s.* per ton for white powder, landed.

BALSAM (PERU).—A considerable business has been done recently at prices advancing to 4*s.* 5*d.* per lb. for good quality. This is the closing quotation; but there is nothing left in first hand.

BROMINE.—The new German-American compact is for a term of five years. There has been no further change in the price of bromide of potassium, but American brands in second hands are offering at 1*s.* 4*d.* to 1*s.* 4½*d.* per lb. from second hands, and business has been done at those figures this week.

CALABAR BEANS.—Small sales continue to be made at 1½*d.* per lb. in Liverpool. Since then, however, 2*d.* per lb. has again been paid for a small quantity.

CAMPHOR (CRUDE).—The market remains nominally very high, but no business has been reported for several days. The last sales of Japan camphor were at the rates of 160*s.* per cwt. spot, and 150*s.*, c.i.f., for distant shipment. There are buyers of Japan camphor for September-October shipment at 155*s.*, c.i.f. terms, but no sellers.

CINCHONA.—The exports from Ceylon between January 1 and October 31 have been:—1892, 5,585,630 lbs.; 1891, 4,715,038 lbs.; 1890, 7,195,713 lbs.; 1889, 7,876,144 lbs. Next week's London sales will be rather extensive, about 1,900 bales having been declared already. The first arrivals of the new season's Wynaad cinchona are shortly due, and in the spring months resumed imports of Bolivian cultivated Calisaya may also be looked for.

CONDURANGO.—There has been another arrival of 33 packages per *Britannia* from Valparaiso.

COPPER (SULPHATE) is advancing, owing to the rumoured negotiations for a copper-syndicate. On the spot 15*l.* 10*s.* has been paid, and for forward delivery very little is offering, as much as 17*l.* 10*s.* being quoted.

GALLS.—For fair China to arrive 48*s.* per cwt., c.i.f. terms, is asked.

GAMBER.—A firm market with sales on the spot at 20*s.* 6*d.* per cwt. for whole block newly landed.

GOA-POWDER is very scarce, and chrysarobin has advanced in consequence.

GUM BENZOIN.—Our stock since last drug-auctions has been reinforced by the arrival of 57 packages *Sumatra*, 16 *Penang*, and 84 *Palembang*. No *Siam* gum has been received, however, and none will be offered at Thursday's auctions.

GUM KINO is very scarce, and 120s. per cwt. has been privately paid for good East Indian.

HONEY.—In Liverpool the article remains in good request. A parcel of fine white *Californian* honey has sold at 52s. per cwt.

INSECT-FLOWERS.—The market here is quite neglected, but in Trieste the article is rising. The present quotations from there are from 66s. to 71s., c.i.f., for closed; 52s., c.i.f., for half-closed; and 46s., c.i.f., for open flowers.

JALAP.—Privately, the market has been very firm, owners asking 1s. 8d. per lb. spot, and 1s. 6½d., c.i.f., for good Vera Cruz.

LIME-JUICE has been much quieter this week, and holders of good Jamaica would now accept 1s. 2d. per gallon, although they have refused 1s. 1½d. for a parcel.

LIQUORICE.—The gardeners in the neighbourhood of Pontefract are in the thick of the liquorice harvest, which promises to be far from satisfactory. The majority of the "quarters" are taken up after a growth of four or five years. The bad weather of the last few seasons has militated against their growth, and many of the roots are small.

OPIMUM.—Our mail news from Smyrna, dated November 11, is to the effect that all qualities of opium have advanced somewhat, owing to the persistence of the drought and the doggedness of owners, who persistently refuse to give way. Large transactions have taken place (the total quantity which has changed hands during the week amounts to about 523 cases) at 6s. 6d. to 7s. for old and new talequale and 7s. 6d. per lb. for Karahissar. The market closes very firm. With regard to the application for an opium monopoly in Turkey, a correspondent says:—"The monopoly of opium for internal consumption would not be worth the working; the monopoly for the export of opium would be a return to mediæval methods, for which any proposal would certainly be rejected by the Council of State. As a matter of fact, this body recently set its face against a monopoly of silk-worm eggs, although that industry is but an adjunct of a much larger one which would have benefited by the monopoly. It is therefore certain that the Council of State will not entertain the idea of making a monopoly of an article of international merchandise such as opium." A deputation of opium merchants, representing practically the entire trade in the drug in Constantinople, Smyrna and Salonica, has worked upon the Grand Vizier of Turkey to present a petition against the projected opium monopoly.

SHELLAC.—The market last week closed very firmly, with sales of 200 cases TN orange, November and December delivery, at 88s. per cwt. At the weekly auctions 787 cases were offered, of which 485 found purchasers at irregular rates, *Garnet* and *Button* lacs being slightly dearer; *Second orange* from 1s. to 2s. per cwt. lower. The prices paid include:—*Second orange*: Livery to fair pale flat worked at 84s. to 87s. per cwt.; fair to good bright curly, but rather out of condition, 84s. to 90s.; dark to reddish livery, 82s. to 84s. per cwt. *Garnet*: Strong, flat, unworked AC, 76s. to 77s. *Button*: Ordinary seconds, 88s.; fair thirds, 79s. per cwt. Since the auctions the demand has remained quiet, and only a few hundred cases *Orange* TN have been sold, at 87s. per cwt. for January delivery.

SODA SALTS.—*Caustic soda* is dull of sale, with some business for export from Liverpool at 9l. 10s. per ton f.o.b. for 70-per-cent. London quotes 10l. 5s., and on the Tyne the price for 76-77 per-cent. is 11l. 7s. 6d. for immediate delivery, and 10l. 10s. for next year. *Soda crystals* are worth 65s., landed (London makes 64s.), 62s. 6d. ex ship, and 55s. f.o.b. Tyne. *Nitrate* is firm at 9s. to 9s. 1½d., according to quality.

SPICES.—*White pepper* was very dull at Wednesday's auctions, and only about 50 bags Singapore were disposed of—ordinary dull to fine bold, at 4½d. to 5½d. per lb. *Black pepper* was offering plentifully, but could only be sold at lower prices. About 1,100 bags were disposed of at

an irregular decline—grey to fair Singapore at 3½d. to 3¾d., grey Aleppey at 3½d. per lb. *Long pepper* is lower, with sales at 12s. to 12s. 6d. per cwt. *Zanzibar Chillies* are also cheaper, 20 bales fair bright quality of new import bringing only 52s. per cwt. *Pimento* is flat, but shows no further decline. Three hundred bales sold at auction, at 2½d. to 3d. per lb. for medium to good. *Ginger* is very slow. At auction the small supplies of African and Cochin ginger offered were all bought in, and only a few barrels Jamaica sold, at 51s. to 56s. for common to low medium. *Zanzibar Cloves* show a further slight decline, with sales at 2½d. to 2¾d. per lb. for fair to good bright. For delivery the market is also easier. Bold *Nutmegs* are inquired for, and bring full prices; all other kinds are dull. *Mace* is also slow of sale. *Cassia lignea* remains exceedingly dull, and small sales are reported at intervals, at the rate of 22s. per cwt. for usual good quality.

TEA.—The Congou market is very dull, and but little business has been done this week. Dealers are picking up the best of what remains of the good first-crop Oonfas and Kintucks, and these kinds are getting into small compass. A further arrival of new Oolongs met with a good demand and realised full prices. Assams are lower, and some useful Pekoe Souchongs and semi-leaf teas may be bought under 7d., and find a ready sale in the country, where retailers are evidently not overburdened with these grades. Assam Pekoes from 1s. to 1s. 6d. are in large supply and very cheap. Ceylons are easier, and, with a sprinkling of second-hand tea in sale, the "sick" feeling is accentuated and the bidding very slow.

TURMERIC remains very firm at 24s. per cwt. for *Bengal* and 17s. to 18s. per cwt. for dull *China* finger and bulb mixed.

VALERIAN-ROOT.—In the Hartz district of Germany very little valerian has been cultivated this year, and at present next to no root is to be had. Of Thuringian valerian there is no such lack, but the stocks of this description are very firmly held by the growers. *Belgian* root is offering here at 30s. to 31s. per cwt.

WAX (JAPAN)—A further rise is reported, sales of good pale squares having been made on the spot at 39s. 6d. to 40s., and for shipment the price is 34s. to 34s. 6d., c.i.f.

Thursday's Market News.

42 CANNON STREET, E.C., November 24.

WE have to report a very quiet week so far as the drug and chemical markets are concerned. To-day's drug-sales were rather lengthy, and owing to the fact that under the rules precedence had to be given to a considerable quantity of Vanilla (the first arrivals of the new crop), the auctions were prolonged until 4.30 p.m. The principal changes may be summarised as follows:—*Ipecacuanha* is decidedly lower, even more so for Cartagena than for Rio root; but very little was disposed of. *Tinnevely senna* is also easier, and cod-liver oil, blue Turkey galls, ergot of rye, and Cape aloes may be placed in the same category. Cubebs were slaughtered without reserve, while at the same time (see telegram) they were cornered in Holland by a speculator. *Buchu* leaves are at famine prices. *Socotrine aloes* and *Jamaica honey* are slightly firmer. *Sumatra benzoin*, musk, and beeswax "full-up." *Rhubarb* is lower. Advances have also taken place in gum ammoniacum, kino, nux vomica, vanilla, and saffron, while menthol, star anise (on the spot), Peru balsam, *Jamaica sarsaparilla* and *hycopodium* are held for more money.

The trade in fine chemicals has been almost a dead-letter this week, and we cannot report any changes. In other branches, sulphate of copper and gambier are dearer; shellac, spices, tea, and caustic soda easier.

The Bank rate still remains at 3 per cent. The Bombay and Calcutta exchanges to-day are 1s. 2½d., bar silver is worth 39d. per oz., and Mexican dollars 38d. per oz.

New York. On November 16, the date of our correspondent's last letter, the drug market in New York was almost devoid of interesting features. The general jobbing is described as satisfactory, but no interest was manifested in large lots, and the sales were almost restricted to

rrant needs. Mexican *Vanilla*-beans are about the only American drug which commands much attention. The stocks of this drug are being steadily depleted and there is a general upward movement in the quotations on the various grades. Its command \$3.75 to \$4, while \$5 to \$9 is the range for whole beans in large quantities. There have been additional arrivals of *Balsam copaiiba*, but no sales are reported, and quotations are unchanged at 35c. to 41c. as to quality. *Horandi*-leaves have been marked up to 70c. for such small quantities as are available. HGH *Oil of peppermint* continues low of sale; sellers ask \$2.57½ to \$2.60, which is not in accord with buyers' ideas. Prime *Sassafras* oil is scarce, and 37½c. to 40c. is wanted for it. *Senega* continues firm, though quiet, 57½c. to 60c., while Mexican *Sarsaparilla* is dull and heavy 7c. to 8c. Other roots remain unchanged. *Opium* has advanced, on the strength of London cable, to \$1.70 for smugglers' opium in cases, with sales at that, and \$1.75 for broken lots, and \$2.30 to \$2.40 for powder. *Morphine* has also advanced, and Scotch and N.Y. Q. & C. is quoted \$1.40 in bulk, and \$1.70 in eighths. P. & W. and R. S. have not advanced their quotations. *Lycopodium* is lower and slier. *Short buchii* is higher, being quoted at 25c., and is scarce. *Tinnevely senna* is looking up, and the stocks are said to be concentrated and somewhat light.

ALOES.—Of *Curaçao* aloes 131 packages were offered, and sold at steady prices—good bright brown and capey mixed, 52s. 6d.; fair brown liver at 35s. to 42s.; dark fixed ditto, 30s.; fair capey, 20s.; common overheated and all, 9s. to 10s. 6d. per cwt. Of *Cape* aloes 77 boxes were offered, but the demand was slack, and prices are barely maintained. Fine bright hard quality is still held at 22s., or sold at 20s. to 21s., rather drossy mixed at 19s. 6d., and common stony at 9s. per cwt. Thirty boxes were sold. *Cocotrine* aloes are rather dearer. A few cases were disposed of, at 100s. to 102s. 6d. for fair hard brown in skins, and 62s. 6d. per cwt. for rather dark ditto. We note another rival of 25 packages *Cape* aloes from Mossel Bay.

AMBERGRIS.—Five tins were all bought in, from 100s. to 140s. per cz.

ANNATTO.—The market remains fairly steady, and a large parcel of 119 bags good bright seed from Ceylon sold at 2½d. per lb.

ANTIMONY.—Fifty cases fair crude Japanese were bought, nominally at 25l. 10s. per ton.

ARECA NUTS.—Out of a parcel of 46 bags, 10 sold at 1s. 6d. per cwt. to-day.

BALSAM (COPAIBA).—Three cases fair but somewhat cloudy *Cartagena* were bought in at 1s. 7d. per lb. Twopence was suggested as the price.

BUCHU.—The single bale of round leaves, of good flavour at yellow colour, which was offered to-day sold at 1½d. per lb.—a fresh advance of 1d. per lb.

CANNABIS INDICA.—Thirty bags dust sold to-day at very good prices—viz., 2½d. to 3d. per lb.

CARDAMOMS.—The shipments from Ceylon between January 1 and October 31 were:—1892, 296,256 lbs.; 1891, 65,263 lbs.; 1890, 270,315 lbs.; 1889, 229,879 lbs. Of 133 packages offered to-day, and very firmly held by the owners, 7 sold at an irregular advance of about 4d. on fine and 2d. on medium qualities. *Ceylon-Mysore* medium to bold good pale plump realised 3s. 5d.; medium size, 2s. 6d.; and small, 1s. 4d.; small to bold pale and long, 2s. 2d.; medium ditto, 1s. 10d. to 1s. 11d.; small, 1s. 7d.; grey small to medium long and round mixed, 1s. 7d. to 1s. 8d.; mixed sizes grey and brown, 1s. 4d.; ordinary brown, partly split and dull, from 1s. 2d. to 10d. per lb. A lot of ordinary *Aleppay*, grey colour, split, realised 1s. 1d.; and for a rather better and bolder parcel 1s. 5d. is asked; very pale to fair *Seed* sold at 1s. 4d. to 1s. 5d. per lb., showing a steady value.

CASCARA SAGRADA.—A parcel of 30 bales of good quality was bought in at 50s. per cwt. to-day. There are no buyers.

CASSIA FISTULA.—Ten baskets of lean but sound pods sold to-day at 27s. per cwt.

CHAMOMILES.—On this market there is no demand, but from Belgium higher prices are reported—viz., 78s. per cwt. for fine pale, 70s. for secondary quality, and 57s. 6d. per cwt. for dull flowers. At auction 6 bags of fair pale Belgian flowers realised 6s. 4d. per cwt.

COLOCYNTH.—A parcel of 7 cases dull broken seedy grey Turkey apple was bought in at 10d. per lb.

CROTON-SEED.—For 8 bags dull Ceylon seeds 18s. to 20s. per cwt. was paid to-day.

CUBEBS.—A large quantity was offered to-day, over 160 bags being placed on sale; 26 of these sold without reserve at 5l. 7s. 6d. (one lot 5l. 10s.). This was a parcel of all genuine rather dusty berries from Singapore, without stalks, and the price shows a decline of fully 7s. 6d. per cwt. Another parcel, very stalky brown berries, realised from 87s. 6d. to 90s. per cwt., after which a bid of 85s. was refused; the decline in value on this parcel is fully 15s. per cwt. We hear that in Holland a large business has been done during the last two days at much higher prices, chiefly in consequence of orders from the States. One bag of cubeb-stalks sold here at 10s. per cwt. to-day.

DRAGON'S BLOOD.—Out of a parcel of 3 cases soft and good heavy lump one sold at 8l. 10s. per cwt. Another lot of 3 cases dull finger, partly broken, brought 105s. per cwt., without reserve.

ERGOT OF RYE.—*Russian* is being offered privately at 1s. 8d. per lb., c.i.f. London, without success. The market is generally much weaker. The best parcels in sale had not yet been offered when our report closed, but among several odd lots which had passed under the hammer no single one had succeeded in attracting buyers. Good sound Belgian and *Russian* mixed ergot was bought in at 2s. 3d. to 2s. 6d. per lb.

GALANGAL.—Two bales sold to-day at 23s. per cwt.

GALLS (TURKEY).—There has been a little more demand for blue *Bassorah* galls lately, but at somewhat lower prices, which holders have shown themselves willing to accept; 55s. per cwt. is now the price for good quality. Smyrna blue galls may be had at the same price.

GAMBOGE.—Firmly held and in fair demand. Of 22 packages offered to-day 16 sold at 12l. 5s. per cwt. for good broken pipe of orange fracture; 11l. 5s. to 11l. 12s. 6d. for fair-coloured soft pieces to rather dull mixed broken pipe; and 10l. 5s. to 10l. 15s. for pickings.

GUARANA.—Four shillings per lb. is the price at which sales are reported to be made privately. At to-day's sales a package was bought in at that price.

GUM ACACIA is still arriving plentifully at Liverpool from Suez, and about 50 serons *Gehzirah* gum have been sold there at steady prices. Considerable sales of *Niger* gum are also reported to have been made. At to-day's drug sales several parcels were offered, but next to nothing sold. For *Turkey sorts*, pale hard glassy, 65s. would probably be accepted; but fine soft pale sorts are worth as much as 75s. per cwt.; small grey glassy picked gum brought 110s. per cwt.

GUM AMMONIACUM.—The market is rather higher—52s. per cwt. being now the price for good pale sorts, slightly blocky mixed. At to-day's auctions 2 cases were sold at that price.

GUM BENZOIN.—*Sumatra* gum is in demand, with sales at high prices. Sixty-nine cases offered to-day were mostly disposed of at 7l. for good pale almondy seconds with small red borders, 6l. 12s. 6d. to 6l. 17s. 6d. for more false-packed ditto. For a parcel of common thirds with very little almonds 48s. per cwt. is asked. Several lots of *Palembang* gum also sold, the commoner kinds at rather easier rates; medium to good bright realised from 35s. to 45s., common from 20s. to 22s. per cwt. Of *Penang* gum a parcel of good glassy almondy but very false packed brought 5l. 5s. per cwt.

GUM GALBANUM.—One bale of good clean genuine partly blocky gum sold to-day at 1s. 6d. per lb.

GUM GUIACUM.—Only very common qualities were offered to-day, and for these there is not much demand. Of 21 boxes, 10 sold at 9d. for fair rather drossy mixed block, and from 5d. down to 3d. for broken block, dusty, woody, and drossy.

GUM MYRRH.—Steady, with sales of 10 bales good pale sorts at 80s. per cwt. at auction to-day.

IPCACUANHA.—Only 30 serons *Rio* root out of our now considerable stock were placed on sale to-day. The first two holders were unwilling to sell at any decided decline on the nominal value, and bought in every bale; but the third owner sold freely, and succeeded in placing all he had to sell at a reduction of 4d. to 5d. per lb.: rather thin to fair stout mixed sound selling at 7s. 5d. to 7s. 7d.; one good lot at 7s. 9d. per lb. Of *Cartagena* root 20 packages were offered, part of which sold at about 1s. decline; good stout but damaged at 4s. 6d. to 4s. 7d. per lb. Seven bales of the spurious root (*Psychotria emetica*), of which a large parcel was recently landed in Liverpool, were offered, but could find no buyer. There were also 77 lbs. of slightly-damaged root from Singapore (cultivated, it is said, in the Botanical Gardens there), but these were not yet sold when we went to press.

KOUSSO.—Of this article, which has now become almost obsolete here, about 165 lbs. were offered to-day—partly in bundles and loose, which was bought in at the nominal price of 2s. 6d. per lb., and partly in powder, guaranteed pure, of which a parcel was bought in at 3s. per lb. No bids were made.

MUSK.—Our stock has now, it is said, been very much reduced, and the importers foreshadow higher prices if any demand should set in. At auction to-day first pile Tonquin pods were slow of sale, small to bold thin grey skin and under-skin fairly dry, being bought in at 70s. per oz., and only 2 caddies selling, subject to approval, at 64s. per oz. for thin grey and brown skin with heavy under-skin, small to bold rather broken pods; of third-pile pods 9 caddies sold, small to bold rather skinny and unsightly, but dry and more or less spurious at 26s. to 27s. per oz. A few tins of China Cabardine brought 2s. 6d. per oz.

NUX VOMICA.—A parcel of 248 bags fair pale seed from Cochinchina realised 11s. 6d. per cwt.

OILS (ESSENTIAL).—A newly-imported parcel of 20 cases (each of two 35-lb. tins) from Sydney sold to-day at 2s. 6d. per lb., which was rather cheap as compared with the figures at which other parcels were bought in. Among the imports this week are 7 cases *Eucalyptus* oil from Natal. A parcel of 10 cases unworked *Cassia* oil was bought in at the sales at 3s. 3d. per lb. It was subsequently reported sold. Several parcels of Spanish oil of *Red thyme* and *Rosemary* were offered; the best of these sold at 2s. per lb. for the former, and 1s. 11d. per lb. for the latter, without reserve. We hear that in China, according to cablegrams received this week, no cassia oil whatever is to be had. Oil of *Anise* is offering from China at 1s. 4½d. per lb. c.i.f., bids of 1s. 4d. per lb. were cabled out this week, but have been rejected. A parcel of 12 cases of oil of *Pimento* from Jamaica was bought in to-day at 3s. per lb., a bid of 2s. per lb. having been refused. For 9 cases (each of 36 bottles) of *Cajuput* oil from Singapore a bid of 2s. 6d. each is to be submitted. For white Singapore oil of *Nutmegs*, 3½d. per oz. would be accepted. American oil of *Peppermint* is very dull of sale; a great deal has lately been sold for arrival, and 11s. 10½d. per lb. would be taken on the spot. Wayne County oil in tin may be had at 9s. 9d. per lb. The price of Cocking's Japan peppermint oil has been raised to 10s., and of the same brand of *Menthol* to 14s. per lb.

OPIUM.—The London market this week has been very quiet, and no change in price has occurred. Small sales of *Persian* are reported, at from 8s. 6d. for ordinary up to 10s. 6d. for fine quality; and for *Salonica* opium 10s. 3d. has been paid for good old crop. For the rest the quotations remain practically the same as last week. Fine *Karahissar* has sold to some small extent at 8s. 3d. per lb.

RHUBARB is lower and rather neglected; 18 chests were offered to-day, but only two-thirds of these had been reached when we closed our report. Of this quantity 29 cases were disposed of at rather lower prices (especially for Canton root)—namely: *Shensi* bold round, fair coat, three-fourths pinky, one-fourth dark, at 2s. 2d.; ditto, medium size, at 1s. 8d.; and small druggists' at 1s. 11d. (subject); bold flat, fair coat, three-fourths pinky, one-fourth dark, 2s. 1d. per lb. *Canton* flat, small to medium fair coat, even pinky

fracture, rather spongy, 1s. 4d. to 1s. 4½d.; round small to medium coat, half pinky and half grey fracture, rather rough, 1s. 1d. to 1s. 3d.; good flat round mixed pickings, 1s. per lb.

SAFFRON.—A telegram has been received this afternoon from Spain, saying that the market there is rising rapidly, and quoting second to best Valencia at 25s. 6d. to 27s. per lb.

SARSAPARILLA.—Genuine grey *Jamaica* is exceedingly scarce, and there are only 2 bales of this kind left in the warehouse, for which 1s. 7d. per lb. is wanted. Of *Honduras* root 13 bales were bought in to-day at 1s. 6d. per lb. *Lima* *Jamaica* was also bought in at the rate of 1s. 4d. per lb. for sound. Some common to fair native *Jamaica* sold at from 1s. 1d. down to 10d. per lb.

SENNA.—The market in Tinnevely senna is rather unsettled, and there is a general feeling that we shall shortly have larger arrivals than have yet been received. At the auctions to-day about 450 bales were offered, nearly the whole of which sold at irregular but generally at rather easier rates. The bulk consisted of very ordinary quality, but the prices paid were from 7d. to 8½d. per lb. for medium to bold greenish, partly yellow; 4d. to 5d. for small and medium, partly specky; 2d. to 3½d. for ordinary dull small and grey mixed; and down to 1d. per lb. for very common stinky. *Tinnevely* pods realised 2½d. per lb. *Alexandrian* senna is neglected, and no sales of any consequence were made to-day; broken leaf is worth 6d. per lb., siftinge 2½d.

VANILLA.—The first arrivals of the new crop were offered at auction to-day and met with very good competition, prices being on an average fully 1s. dearer, though good qualities realised about 1s. 6d. advance: fine, 7 to 8½ in., brought from 16s. to 19s.; good chocolate, 6 to 8½ in., 9s. to 16s. 6d.; 5 to 8 in., 10s. to 11s.; and ordinary common to foxy down to 2s. 6d. per lb.

WAX (BEES').—All varieties were in limited supply to-day, and the recent advance was well maintained. *Jamaica* wax sold at 7l. 10s. to 7l. 15s. for good red to yellow, and at from 6l. 15s. to 7l. 10s. for ordinary dark to fair. A few parcels of *Madagascar* realised 100s. to 105s., mixed to good pale *Australian* 5l. 17s. 6d. to 6l. 5s., and bleached white Calcutta 7l. per cwt.

THE DUTCH MARKET.

AMSTERDAM, November 17.

THE cinchona bark auctions to be held in Amsterdam on December 8 will consist of 80 cases and 4,801 bales (about 391 tons), divided as follows:—From Government plantations 65 cases and 372 bales (about 37 tons); from private plantations 15 cases and 4,429 bales (about 354 tons). This quantity contains: *Druggist's Bark*—*Succirubra* quills, 64 cases; broken quills and chips, 134 bales and 15 cases; root, 54 bales. *Manufacturing Bark*—*Ledgeriana* quills, 290 bales; broken quills and chips, 3,203 bales; root, 576 bales. *Officinalis* quills, 1 case; broken quills and chips, 30 bales. Hybrid broken quills and chips, 475 bales; root, 39 bales.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday night.

SINCE last Thursday one hundred cases of the usual kind of manufacturing opium have been sold here at the rate of 7s. 5d., and afterwards of 7s. 4d. per lb. f.o.b. This is an advance of 6d. per lb. upon the prices quoted in my last message. Rains have fallen in the lower districts, however, and the market is expected to decline.

A CUBE SPECULATION IN HOLLAND.

(Telegram from our Correspondent.)

AMSTERDAM, Thursday.

A SPECULATOR has bought up all the cubebs which were to be had in Amsterdam. He now holds the stock at an advance of 40 per cent. upon the previous rates.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Conditions of Labour in Pharmacy.

SIR,—I read with much amusement your correspondent's letter on the subject of indoor berths, and am sure that many chemists' wives would, with me, advise "A Man of the World" to devote his energies towards making himself efficient in his business, instead of giving his attention to such trivial matters as the making of his bed, &c.

My experience has taught me that the more incompetent the assistant, the more he complains of the household arrangements, &c., and when the chemist can find that young men, to whom he now has to pay 60%, 70%, and 80% per annum indoors, are capable of making an ordinary mixture and taking charge of the business for only a few hours at a time, then there may be a chance of their getting more consideration shown them—though I fail to see what is to become of a dispensing business if young men and master are to take their dinner-hour, afternoon smoke, and siesta, as your correspondent proposes. Doubtless he would have prescriptions treated as of secondary importance.

It is very few chemists who can so indulge themselves, and it is little enough time indeed that they can give to their wife and family during this dearth of good assistants.

When I was married it was my first aim to treat our assistants exactly as members of the family, and they were invited on Sunday afternoons to join us at dessert. This, and many other like privileges, I very soon found so abused that it was most unpleasant to ourselves to continue them, and young men have only themselves to blame for the loss of such considerations.

When we get gentlemen in the drug-trade, chemists' wives will be ready to treat them as such, but whilst young men show such a marked preference for associating with the servant, the lady of the house must decline to treat them as her equals.

Yours truly,

A CHEMIST'S WIFE. (172/31.)

SIR,—Every assistant must admire the manly way in which Mr. Sangster defends the indoor system from an employer's point of view. Therein lies the difficulty—that awful night-bell! I do not agree with him, however, that it is the assistant's fault, as a rule, if he is not comfortable. I have been employed in two indoor situations in a large provincial city where I was the only assistant. Every night after the shop was closed I was expected to answer the bell. Even on my Sunday "off" if, the weather being inclement, I stayed indoors, I had to answer it. Now, this should not be. Why should an employer not take his share of night-work? Why should the weary assistant who has, perhaps, been in the shop for three or four hours longer than his employer, have to do all the tramping about to the clanging of the bell? It is surely not too much to be at liberty every alternate night without begging it as a privilege. Why should it not be a right? Let all assistants, however, remember the beautiful words of Russell Lowell—

They are slaves most base

Whose love of right is for themselves, and not for all their race.

Then, are all the night-calls for really necessary medicines?

From my own experience I should say less than 5 per cent. are. Employers should stop this, and it is only by combination that it can be done. As matters stand, if Mr. Jones refuse to supply a bottle of hair-oil after hours, Mr. Smith will be all the more happy to do so.

Query: How can assistants lead the Society by joining it? They would have no vote.

I fully endorse "Man of the World's" remarks re "Mrs. Chemist." Undoubtedly she is the *bête noire* of the indoor man in a large majority of cases. She treats him as an interloper in the household, even more so than the humble "slavey." Everything is done to make him feel that he is in the way. It seems ungallant to thus attack the ladies, but there is only too much foundation for the accusation. I write from bitter experience, not from hearsay. Of course, there are grievances on both sides, and I have seen assistants whom I would not have in my house at any price.

I am, yours truly,

ROHAMI. (170/67.)

A Day's Dispensing.

SIR,—Whilst *la grippe* was so prevalent the early part of this year our daily output consisted of from one hundred and twenty to one hundred and forty prescriptions, each one being finished off "à la Française."

When I add that there are only three of us here, and that we had counter-duty to attend to as well, it may even surprise our larger brethren "The Stores."

Yours truly,

Croydon, Nov. 19.

OLD TIMES. (170/32.)

SIR,—On reading the letters of your correspondents on this subject, one is at first inclined to see a great discrepancy between them, for while one thinks from fifty to sixty a day's work, the other calculates about thirty. The difference is not far to seek. The one talks of "prescriptions" but the other of "items," and unless a man has been in a store, he cannot grasp the full meaning of this last word. I doubt whether "F. J. F." would have done his seventy-three in a day had they included such items as a gross or two of pills (perhaps pearl-coated), three dozen powders, or three to six dozen cachets. These things are by no means rare, nor is it an exceptional thing for a man to find at the end of the day four to six hundred pills on his list as part of that day's work.

Then, again, the hours are different. When I was at the stores we were expected to do the proverbial "sixty" between 9 A.M. and 6 P.M. For a "store" dispenser to do his "sixty" (or, counting copiers, finishers, &c., an average of about thirty-two all round) is, as "C. P." puts it, "down-right slavery." After twelve months of it the state of my hands would have qualified me to pass for a carpenter or other mechanic, had I aspired to such great things.

But to your original question. My experience is that if a man in an ordinary retail business gets through forty to fifty a day, including copying and finishing, he has done a fair day's work.

Yours truly,

November 21.

W. H. (171/19.)

SIR,—The greatest number of prescriptions I have ever dispensed is sixty-two—nearly three-fourths of which were new—including copying the new and repeating the repeats, and writing all labels and envelopes for same, besides attending at front counter when occasion required and dispensing for own prescribing cases—ninety-four being the number one day, with an occasional help at copying and writing of labels.

Yours faithfully,

Kensington, W.

G. W. E. (163/13.)

Questionable Postcards.

The Hampstead and Earlsfield gentlemen appear to have been somewhat industrious. The former wrote to Mr. J. W. Smith, of Stony Stratford, who, in reply, sent an old almanac of Silverlock's for 1890, in which many things are advertised "which," Mr. Smith adds, "I do not put up, but,

of course, soon could do, and stamp them too." To that the following reply was received:—

West Hampstead,
November 7, 1892.

DEAR SIR,—My letter must have miscarried. I wrote asking the prices of—

1. Anti-cholera medicine,
2. Digestive pills,
3. Chilblain-liniment, and
4. Toothache-tincture,

which are referred to in your small calendar for 1893. Will you kindly state prices?

Yours, &c.,

A. W. S.—.

Mr. Smith's price, 1s. 1½d., seemed to frighten off the inquirer, who has not since been heard of.

Messrs. Palmer & Son, Ramsey, tell us that they supplied the gentleman with two bottles of their proprietary medicines, duly stamped, as always sold over their counter. Messrs. Palmer "consult Mr. Alpe's 'Handy Book' on all occasions before introducing any new medicine."

Mr. J. H. Longman, of Littlehampton, received one of the Earlsfield postcards, which had been posted at Wandsworth. Replying to a similar request, a Newhaven correspondent (170/8) sent a calendar, wherein "several preparations were advertised, two of which were priced at 1s. They were undoubtedly liable to stamp-duty, and were stamped. The following day he received a letter containing a postal-order for both of the above. They were sent. The curious part is that those priced at 1s. 1½d. were overlooked; but prices were asked of other preparations unpriced in the calendar. Chemists should learn from this to send their calendars, price-lists, &c., to protect themselves from this person, who is no doubt an Inland Revenue officer, who sits in his drawing-room and sweeps the country by the aid of a directory."

We have similar information from other parts of the country [Mr. H. Copestake, Bagshot; Mr. C. Whitcombe, Petworth, &c.], but, so far, no victims.

"Only One Student."

SIR,—At a recent meeting in Manchester surprise was expressed that, after a large number of circulars had been sent out inviting students to attend the classes for pharmacy, &c., at Owens College, only one student appeared! Is it not surprising that even one should turn up for the classes, when we look at the state of things in that town? In the street in which the college stands, within the last few weeks, three chemists' shops have been given up; another, not far from the college, has been sold by auction; and a fifth chemist, not far out, has announced his intention to close his shop. The town contains a number of drug-stores, fitted up so exactly like a high-class chemist's establishment as to deceive ninety-nine out of every hundred passers-by. These not only use the familiar window-globes, but have screens inside the shop labelled "Dispensing Department," and have their shelves filled with bottles to imitate a chemist's shop, and sell poisons and dispense prescriptions containing scheduled poisons.

It is hard to see where students are to come from when chemists require to advertise in the papers for six months and more for apprentices; nor is it surprising, in view of the violent and unfair competition of the numerous drug-stores and cutting grocers, that parents should hesitate before allowing their sons to enter a calling which requires a long and expensive training, and offers in return nothing better to look forward to than a "portionless old age."

Yours truly,

A DOCTOR'S SON. (163/1)

A Steamy Window Application.

A Country Chemist (158/3) sends us a cautionary notice respecting somebody who is selling an article in 1s. 6d. bottles, to rub over windows to prevent them steaming. Our correspondent simply states that the thing is "all rot." We have no opportunity of checking this assertion. If the makers will send a sample to us we will try it and report exact results. Meanwhile we may advise any chemists to whom the article is offered to test it before buying.

The Croydon Pharmacopoeia.

In reply to 123/33, the following "probabilities" are ventured:—

The names	What they mean
Oil of astick	Arsenic or vitriol
" aaron	Creeping leopard's-bane (<i>Aronicum scorpioides</i>)
" aspes	Oleum scorpionum
" ackham (?) or agram (?)	Agrimony or acorum (sweet flag)
" beed	Biellium carrot (<i>Daucus gummifer</i>)
" oxleys	Oxlip
" blue astick	Blue vitriol (?)
" clarrance	Clary (<i>Salvia verbenaca</i>)
" scagden	Alliteration of "scanden"—shepherd's needle or Venus's comb (<i>Scandix Pecten-Veneris</i>)
" may	Bay
Tinct. gladmar	Gladwin (<i>Iris fetidiissima</i>)
Oil of acklen (?)	Arachen or arachis—ground nut (<i>Arachis hypogaea</i>)

Query: What is "Unicorn-root"?

J. C. M., JUN. (32/100.)

Birmingham.

The names	What they mean
Oil of aaron	Oil of arum (cuckoo-pint)
" aspes	" aspen (ol. populeum)
" astick	" mastic
" sent	" Saint John's (wort)
" beed	" bays (ol. laurinum)
" may	" mace

The above are more or less conjectural, of course. The oil of aaron, however, is certainly oil of arum.

C. C. BELL.

The names	What they mean
Oil of aaron	Oil of heron (in practice generally ol. amygd. dule.)
" aspes	Probably oil of hyssop
" oxleys	Ol. feniculi
" man	" succini
" aspes	Adder oil, possibly
" dragon	Ol. lateris (what this is I don't know)
" duty	" rhodei
" may	" carni (?)

These oils are usually wanted strong smelling and in small quantities, and it is safe to charge prices as fanciful as the names. One can conjure largely with ol. cassiae, cymin, anisi, feniculi, *et hoc genus omne*, and make a pretty penny. The "horsey" think they can tame unruly horses by a use more or less liberal, of these perfumes.

Ticehurst.

E. CORKE.

The Stability of Hydrogen Peroxide.

SIR,—I would be glad to know of some means of rendering peroxide of hydrogen more stable. I do not stock large quantities, for the simple reason that after having opened the bottle the remainder is considerably weakened, and sometimes ½ lb. becomes completely inert. I am aware that such a thing could be remedied by bottling it in small bottles, but that might be rendered unnecessary if the solution of hydrogen were made in something other than distilled water. Perhaps some gentlemen may be inclined to experiment with it. The results would be interesting, and, I hope, beneficial to the trade generally.

SPATULA. (166/11.)

Long Directions.

SIR,—In reference to your Hobart correspondent's dispensing query, I think there can be little doubt that "C. S. Ashton's" plan of using two bottles in a cardboard box is the correct one. But admitting the directions were intended for a 2-dr. bottle, it is rather surprising to me that none of your correspondents have thought of the possibility of the patient's sight not being so good as theirs, and that they might find it difficult to decipher such microscopic writing. No doubt such must frequently be the case. I

therefore think a better plan would be to go back to the old method of tying the directions around the neck of the bottle, written on a tally, or on a label stuck on to a tally. It seems to me the dispenser's object should be to make things as plain as possible for the patient.

Yours faithfully,

OVER TWENTY-FIVE YEARS IN THE TRADE. (155/3)
South Devon.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Potassium Iodide and Nitrous Ether.

101/12. *F. W. V.*—Aqueous mixtures containing the above without an excess of alkali to neutralise the nitrous acid, liberated by spirit of nitrous ether in presence of water, contain free iodine. Your prescription cannot, without alteration, be dispensed in any other than the iodated state.

Dangerous Physic.

SIR,—I wonder what the majority of your correspondents would do with this prescription? It was evidently a copy which was handed to me; the original was written in Calcutta and dispensed without scruple, or so I was told by a man for whose wife it was intended:—

Ext. ergotæ liq.	..	..	..	..	3viij.
Tr. ferri perchlor.	..	..	..	..	3ij.
Liq. strych.	..	..	..	..	3ij.
Syr. limonis ad	..	..	..	..	5vj.

A teaspoonful as a uterine tonic three times a day.

Pil. aloes et myrrh.	..	..	..	..	3j.
Ol. sabinæ	..	..	..	..	℥xxiv.
P. acaciæ	..	..	..	..	q. s.
In pil. xij.					

Two at bedtime, after a hot hip-bath.

Yours faithfully,

OVER TWENTY-FIVE YEARS IN THE TRADE. (155/3.)
South Devon.

A Salicylate and Nitrous Ether.

166/38. *Quinine* wants to know how he can prevent the deep-red coloration in the following mixture:—

Sodii salicyl.	..	..	..	..	9ij.
Tr. quin. ammon.	..	..	..	..	3v.
Mucil. acaciæ	..	..	..	..	3iv.
Vin. colch.	..	..	..	..	3ss.
Spt. æth. nit.	..	..	..	..	3ij.
Aque ad	..	..	..	..	3x.

3j. bis die.

It cannot be done. See "Art of Dispensing," page 132. Spirit of nitrous ether decomposes sodium salicylate, but in the present case the ammonia will prevent it.

A Pill Query.

SIR,—What is the best way of making the following pills?—

Irudin	..	..	..	..	gr. xij.
Ol. caryoph.	..	..	..	..	gtt. iij.
Ext. hyos.	..	..	..	..	gr. vj.

Ft. pil. vj. j. o.u.s.

I have tried soap, gum, and the usual excipients, but they turn out an unsatisfactory pill.

Yours faithfully,

SOMERSET. (167/63.)

21/11. *Limonis*.—The precipitate is quinine citrate, and it is slightly coloured when fresh infusion is used.

163/21. *D. E. O'Donnell* (Brompton).—The "aqua menthæ" question was fully discussed in THE CHEMIST AND

DRUGGIST, vols. xxxiii. and xxxiv. Peppermint-water is voted by the majority to be the thing.

A Cinchona-mixture.

SIR,—I am most anxious to have an opinion as to what should be the appearance of the prescription as below. I have frequently dispensed it as a muddy mixture, but a customer has had it made up elsewhere as a clear wine-red solution. I have myself sometimes turned it out almost clear, except for the murkiness caused on adding spt. ammon. arom., and after a day this mixture has become quite muddy.

I maintain that spt. ammon. arom. will cause the mixture to be muddy if the tinct. cinchonæ is made with 4 oz. of the red bark to 1 pint proof spirit, as ordered in B.P. But if the tincture is not up to standard, the mixture may be dispensed clear.

Liq. strychnin.	..	..	..	..	℥lxxx.
„ potassæ	..	..	..	..	3ss.
Spt. ammon. ar.	..	..	..	..	3ss.
Æth. chloric.	..	..	..	..	3iss.
Tinct. cinchonæ	..	..	..	..	3j.
Aque ad	..	..	..	..	3viij.

M. Ft. mist.

DUBLIN. (167/18.)

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY, pp. 161-9.

161/51. *Codeia*.—A proprietary medicine containing codeia must bear a "poison" label.

164/23. *B. Strogwitz*.—(1) A pharmacist holding a Russian qualification could not act as a chemist and druggist in this country without passing the Minor examination. The Board of Examiners would most probably not require him to enter for the Preliminary examination, but he would have to produce evidence equivalent to the examination, which the Council of the Pharmaceutical Society would consider in the first instance. (2) In many States of North America the Russian qualification would be accepted. See our issue of September 24. (3) It would be illegal for him to sell poisons and call himself a chemist and druggist, or the like, in any circumstance.

161/50. *Pax Vobiscum*.—(1) The preparations which you name are not scheduled poisons, and an unqualified man may sell them. (2) It is possible that under section 12 of the 1852 Pharmacy Act the Pharmaceutical Society could stop any unqualified person calling his shop a pharmacy. "Dispensary" or "apothecaries' hall," are designations commonly used by such persons. (3) Minor candidates are expected to know the proportion of the active ingredients in compounds.

166/4. *Bleach*.—The risk in using names remotely resembling others that are registered, and for similar articles, is that colourable imitation is easily dropped into. You must assure yourself that you are not on that track. With the name alone we think you are safe.

165/30. *W. E. S.*—A similar question has been answered several times lately. We say that the matter is doubtful until a Court of Justice gives a decision upon it, but see pages 90 and 91 of "Pharmacy and Poison Laws."

238/4. *J. A. D.*—Ether prepared from methylated spirit may legally be used internally.

163/29. *Inquirer*.—The Shop Hours Act applies to the errand-boy if he is under 18. You must not employ him more than seventy-four hours in a week, that period to include meal-times.

169/20. *A. Z.*—(1) It is not necessary to have a lawyer to draw up an apprenticeship indenture (printed forms being obtainable), but if there is any sum of money involved, in the shape of a premium, the proper and business-like way is to get a lawyer to do it. (2) Premiums for indoor situations vary from 25*l.* to 200*l.* for four years. Outdoor apprentices generally pay no premium.

166/8. *Lex*.—Cocaine hydrochlorate, like other poisonous vegetable alkaloids, comes into the first or poison-book part of the poisons schedule.

167/9. *Inquirer*.—The stipulation in regard to Minor candidates is that they shall have been engaged for three years in dispensing medical prescriptions. That does not mean indentures. See our Educational Number, September 17.

167/44. *Pharmacy*.—You may.

167/29. *N. A.*—The sale of seidlitz powders of the same ingredients as the B.P. but of less weight is illegal, unless the fact is expressly stated to the customer, or a label to the same effect used.

238/6. *P. S.*—The hair-restorer is neither a medicine nor a medicament, nor is it recommended for the prevention, cure, or relief of any ailment. It is not chargeable with duty. See Alpe's "Handybook," page 65.

167/46. *F. R. B.*—Messrs. Newbery & Sons publish in their catalogue a list of the best-known medicated wines, distinguishing between those which can only be sold by vendors holding a wine-licence and those which can be sold by unlicensed vendors. The wine you name can only be sold by a licensed dealer.

170/26. *Lassie*.—The proprietors of Clarke's blood-mixture have advertised in THE CHEMIST AND DRUGGIST for some months that that preparation contains no poison; and the proprietor of Owbridge's lung- tonic informs us that "the lung- tonic they now send out does not contain a scheduled poison."

Law and Radix.—We decline to deal with anonymous communications.

MISCELLANEOUS INQUIRIES

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, p. 317.

For all particulars regarding Educational and Examination matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4*d.* each.

112/1. *Strathbrock*.—The Condition powder for Poultry appears to consist of powdered liquorice (undecorticated), 6 oz.; powdered gentian, capsicum, and fenugreek, of each 1 drachm. Mix, and bring up the colour with a sprinkling of black antimony.

151/20. *Bridgewater*.—Confectioners' Orange-colouring Powder.—The sample which you send is a mixture of aniline orange ii. with common salt, and some sulphate of soda. About 1 part of the dye to 7 parts of the salt.

410/92. *Ambleside*.—White Embrocation for Horses and Cattle.—The following formula approximately represents the composition of the sample which you have sent:—

Eggs	..	..	..	..	..	3
Oil of turpentine	..	..	..	..	..	10 oz.
Spirit	..	..	..	..	..	2 "
Acetic acid	..	..	..	..	..	4 "
Water to	..	..	..	..	..	50 "

Rub up the eggs in a large mortar, and to them add 1 oz. of turpentine; mix thoroughly, adding 1 oz. or so of water, and so on turpentine and water alternately until the whole of the turpentine has been used 'up. Now transfer to a W.Q. bottle and shake well; dilute the acid and spirit with 15 oz. of water, add that little by little, and finally make up to 50 oz. with water.

122/45. *Troubled*.—The tooth-soap is one made by compression, the constituents being chalk, rose-pink, soap, and oil of rose geranium. Better ask Messrs. Bronnley & Co. to match it.

158/50. *R. B.*—Solution of potash is the best "ink" to write with on the blue-dyed paper. It is a little slow compared with ammonia, but the latter is not permanent.

149/63. *Fenugreek*.—The Rabbit and Poultry Food seems to consist of ground cotton-cake, bran, and fenugreek.

151/18. *Impudence*.—The Powder for Washing Children's Hair is powdered stavesacre.

2910/92. *H. R. S.*—The Flavour is a solution of oils of lemongrass and cassia in tincture of tonka bean. We can detect nothing else in it. Perhaps there is a little benzoin.

162/45. *Ocum*.—Colouring of Egg powder.—Your sample gives the unmistakable reactions of turmeric. The colouring seems to be added as a tincture to the rice-flour, which is then dried, and the tartaric acid and bicarbonate of soda finally added.

101/192. *Polish*.—The Brown Polish for steelwork (which you say keeps the steel bright at very high temperatures) seems to be a mixture of fine emery with stearin—about 4 of the former to 1 of the latter. No. 2 powder is calcined shells, a commonly used article.

168/35. *Query*.—Washing-cream.—From an examination of your sample we concoct the following formula:—

Yellow soap	..	..	..	..	..	$\frac{1}{2}$ lb.
Turpentine	..	..	..	..	..	8 oz.
Strong solution of ammonia	..	..	..	..	..	1 pint
Water	..	..	..	..	..	1 gallon

Shred the soap and dissolve it in half a gallon of the water by heating. With a pint of this when cold emulsify the turpentine, add the rest, shake well, then the ammonia and the remainder of the water.

165/25. *Rana*.—Medical Preliminary Biology.—The book which you want is the "Text-book of Elementary Biology," by H. J. Campbell, M.D., senior demonstrator of biology in Guy's Hospital. (Swan Sonnenschein, 6*s.*)

108/37, *F. A.*, and 310/92, *J. R. T. (Lancaster)*.—Sorry we can make nothing of your samples.

165/3. *H. S. F. Brown*.—To mend the ether bag make a solution of part of the indiarubber sheeting in carbon bisulphide, warm the bag and the piece of sheeting by dry heat carefully applied, and unite with the solution, immediately pressing in a warm atmosphere. It is exceedingly difficult, even for expert hands, to satisfactorily repair old indiarubber apparatus.

168/23. *T. Lineey.*—Pomade Hongroise.—The following makes a nice article:—

Powdered white Castile soap	..	..	3½ oz.
Glycerine	..	..	3 "
Mucilage of acacia	..	..	10 "
Water	..	..	6 "
White wax	..	..	9 "
Perfume oils	..	..	1 drachm

Dilute the mucilage with the water, and rub up the soap with the mixture. Shred the wax and place it in a large basin with the glycerine. Add the soap mixture and heat in a water-bath, stirring constantly until perfectly uniform. Then add the oils, and bottle.

168/15. *W. H. Burrell.*—Estimation of Urea.—Allen's nitrometer may be used conveniently for the hypobromite method. The solution of hypobromite is made by adding 1 c.c. of bromine to 10 c.c. of soda solution (2 to 5 of water). Having filled the nitrometer with brine, run into it 5 c.c. of the albumen-free urine, wash the cup with water, and allow the washings also to run in; then allow about 8 c.c. of the hypobromite solution to flow in, close the nitrometer, mix the fluids thoroughly, and after five minutes read off the volume of nitrogen. Calculate the percentage from the factor, 37.1 c.c. of N = 0.1 gramme of urea. We give a list of books on urine-testing in the 1892 DIARY.

156/15. *Hector.*—Frothing Hair-wash.—The following may suit you:—

Carbonate of ammonia	..	..	3ss.
Solution of ammonia	..	..	3iij.
Tincture of quillaia	..	..	3vj.
Bay rum	..	..	3j.
Water to	..	..	3xij.

Mix.

156/7. *J. T.*—Stramonium Asthma-paper:—

Stramonium	..	..	..	Oz.
Henbane	..	..	..	1
Lobelia	..	..	..	1
Nitrate of potash	..	..	..	1
Water	..	..	..	30

Boil down to a pint and strain. While the strained decoction is hot saturate blotting-paper with it.

169/54. *Lux.*—You will see from an advertisement in the forthcoming DIARY that a firm offer assistance in regard to the compilation of such books. We think you will get what you want by addressing them; if not, write to us again.

170/23. *Lux Mundi.*—You should add the potass. carb. to the dry myrrh in making Mist Ferri. Co. That is where you have acted wrongly.

164/24. *A. P.*—No; expressed oil of almonds.

164/38. *Fyfe (Kirkcaldy).*—You send no name, and the post-mark on your card is dated Edinburgh. It is things like that which necessitate correspondence rules, and our sticking to them.

163/65. *Newton.*—The title which you name is a proprietary one. You will find a formula for a similar preparation in THE CHEMIST AND DRUGGIST, December 7, 1889, page 813.

101/63. *Emperor.*—You will find all about how to buy a microscope and use it in THE CHEMIST AND DRUGGIST, September 19, 1891.

166/21. *Inquirer.*—Give the Gold Labels a coat of a varnish composed of equal parts of Canada balsam and turpentine.

163/9. *X.*—An all-round Indigestion Mixture is a large order. Try the following:—

Glycerin. pepsin	..	..	3vj.
Acid. hydrochlor. dil.	..	..	3j.
Liq. strychninae.	..	..	℥xxxvj.
Tr. chloroformi co.	..	..	3iij.
Aq. ad.	..	..	3vj.

M.

Dose: A tablespoonful in half a glassful of water immediately before food.

222/5. *J. A. C.*—To Fasten White Enamel Letters on Glass make a very thin paste of calomel and mucilage. Spread this thinly on the letters and press upon the glass so that as little as possible of the cement is left between the glass and the letters.

162/17. *R. C. S.*—Euo's Fruit Salt:—See page 770.

163/2. *Poor Law Dispenser.*—(1) We do not know. Apply to the Secretary, Board of Trade, Weights and Measures Office, Palace Yard, S.W. (2) Women are admitted to the assistants' examination of the Apothecaries' Society. (3) We should think that the conditions of your appointment do not preclude you tutoring students after your official work is done. We know of dispensers who fill in their time in a similar manner with the knowledge of the guardians.

227/34. *Ignoramus.*—Gray's supplement is worth about 15s. We have known copies to be sold for 10s. 6d., and also a guinea.

227/17. *A. C.*—Graph Composition—THE CHEMIST AND DRUGGIST, February 13, 1892, page 248.

165/16. *R. O.*—(1) Phenolphthalein is in the Appendix to the Pharmacopoeia. See also THE CHEMIST AND DRUGGIST, November 28, 1891, page 774. (2) Liquor Potassæ.

157/20. *G. E. B.*—"Periodate crystals" is a proprietary preparation. The statement that Sir Andrew Clark recommends it is without foundation.

158/57. *Enterprise.*—We should be glad if you would point out wherein the formulæ for concentrated waters are unsatisfactory as compared with proprietary preparations.

166/5. *A. H.*—Lotion for Bruises in Horses.—When the skin is broken the following is a satisfactory application:—

Plumbi acet.	..	..	3ss.
Aluminis	..	..	3ss.
Acid. boric.	..	..	3ss.
Aq. ad	..	..	Oj.

Dissolve the alum and boric acid in half the water, and the sugar of lead in the rest. Mix the solutions.

162/61. *Unguento.*—Dr. Tilbury Fox's Ointment for Acne:—

Ol. cadini	..	..	3ss.
Adipis præparat.	..	..	3j.
Ft. ung.	..	..

164/40. *California.*—There are no books on the subjects that we know of.

159/53. *Anglo-Hibernian.*—The activity of the aloes will be little affected by the potash. The same remark applies to the second question. If an alkali is to destroy the properties of aloes it must be present in at least the same proportion; but, as a matter of fact, carbonates have only a modifying action.

164/46. *E. H. J.*—Chisel and mallet are used for engraving silver and gold.

161/59. *Wam.*—Winter Cream.—The following is a formula with quince mucilage (which is made by boiling 2 oz. of quince-seed in 32 oz. of water down to 16 oz. and straining):—

Glycerine	3j.
Perfume essence	3ij.
Spirit	3vj.
Quince mucilage	3ij.

Add the glycerine to the mucilage, mix, and then add the spirit and perfume (jockey club, white rose, or any other pleasing odour.)

165/51. *N. Field* (Cape Colony).—You will be eligible for the Bell Scholarship Examination in 1895 if you are then a subscribing student of the Society and can show that you have served for three years with a pharmaceutical chemist, or chemist and druggist on the British register, whether in England or in the colonies. You can only be elected a student by passing the Preliminary examination or its equivalent. See our issue of September 17, p. 440.

160/66. *Inquisitive.*—We cannot oblige.

170/49. *Pony.*—The suggestion is ridiculous, and if carried out it would be an offence against the Cruelty to Animals Act.

138/43. *R. W.*—The best method for obtaining Copies of Medallions is by electrotyping. The process is simple, but would occupy too much space to describe sufficiently in these columns. You will find all particulars in "Watt's Electro-metallurgy" (3s. 6d.), along with useful and practical formulæ for the various solutions, and formulæ also for materials suitable for casts both "metallic and otherwise."

157/44. *Sbi.*—We have looked through German medical literature of the past few years, but can trace no formulæ of Billroth's or Von Bergmann's for iodoform solution.

158/10. *Ginger.*—(1) Carboic acid which in the course of two years separates into two layers—one brown and the other milk-white—contains some traces of impurity, and can scarcely be regarded as B.P. Acid containing impurities always become more or less highly-coloured on exposure to light. (2) Composition-powder:—

	Os.
Bayberry bark	4
Pinus canadensis.. .. .	2
Ginger	2
Cayenne	½
Cloves.. .. .	¼

All in fine powder, and mixed.

159/46. *A. B. Smith.*—Bisulphide of carbon is used in Australia for driving rabbits out of their holes.

160/5. *Mack.*—The best Gold Ink is made by triturating gold-leaf with a sufficiency of gum-water. There are plenty of good substitutes for pure gold—Dutch-metal powder, and the like.

160/4. *Antipyrin.*—We can give you little information regarding the compounding of Water-colour Paints. The respective dry pigments are well levigated, and made into a paste with equal parts of isinglass and gum mucilages.

157/32. *T. H. R.*—Thanks.

166/63. *C. H.*—Caustic soda is the best and cheapest alkali that you can use for removing grease.

160/55. *Major.*—Chilblain Liniment.—See THE CHEMIST AND DRUGGIST, December 12, 1891, page 862, and many other back numbers.

160/53. *Boston.*—Composition Essence.—Take 1 lb. of composition-powder and macerate in a pint of proof spirit, 10 oz. of water, and 5 oz. of glycerine for a week. Strain and press. Boil the marc in 2 quarts of water containing 2 drachms of carbonate of potash to half the bulk, and when cold add the tincture, 5 oz. of proof spirit, and chloroform-water to 4 pints.

160/57. *R. C. H.*—To ascertain the amount of fat in Superfatted Soaps, shred 100 grains of the sample, and dry at a temperature of 110° C. for two hours. Reduce to fine powder; mix with an equal weight of clean sand, and exhaust with ether by percolation. The percolate on evaporation and drying at 100° C. gives the weight of fat in 100 grains of the sample.

211/12. *Tooth.*—The solution of cocaine used in Tooth-extraction contains ⅓ grain of the hydrochlorate in 8 minims of water. Half of this is injected into the interior of the root of the tooth, and the rest into the exterior, care being taken to get the needle of the syringe as near the socket as possible, and to allow the solution time for absorption. This time is at least three minutes. If the patient shows signs of cocaine-poisoning, amyl nitrite should be inhaled, and a little brandy swallowed.

216/5. *C. F.* (Paris).—Paste-paints are mixtures of the dry pigments levigated along with boiled linseed-oil and a small percentage of turpentine. You may consult Riffault's treatise on the manufacture of colours, also Spon's "Workshop Receipts," vol. ii. (5s.).

161/7. *Crystals.*—Perhaps your customer means sodium phosphate (a mild laxative) by Pile Crystals. We have not heard of the name before.

167/12. *F. R. E.*—A 3-grain Ergotin Pill is equal to about 40 minims of the official liquid extract—that is, in an average way. We are not surprised that pill-makers have given widely different replies, for the yield of ergotin varies much. What is the average that you get from the replies?

Information Supplied.

The Syrup of Figs you asked about (October 15, 1892, page 598) I have been asked for here. It is said to be a continental preparation, sold in America with label printed in four languages.

Boulogne, October 30.

PROSPER H. MARSDEN.

[The syrup is a proprietary preparation, made by the California Fig Syrup Company.—Ed. C. & D.]

Tooth-paste in Bulk.—We have forwarded to the inquirer the replies received.

Information Wanted.

Replies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

190/80. Metal cases for graph composition: name of maker wanted.

190/80. Hand-grenade bottles, also cages for same: names of makers wanted.

167/18. What is "tinct. petrolei"?

168/57. Peak's asthma-cure—where obtainable?

164/42. What is "theodeine brine-powder"?

163/38. Name and address of the maker of "Carbo-eucalyptine" sanitary tablets.

158/13. Stoneware ink-bottles—who makes?